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2006

# Unravelling the Myth around Open Source Licences - An Analysis from a Dutch and European Law Perspective

Lucie Guibault, *Dalhousie University Schulich School of Law*  
Ot Van Daalen, *University of Amsterdam*



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UNRAVELLING THE MYTH AROUND  
OPEN SOURCE LICENCES

An Analysis from  
A Dutch and European Law Perspective

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INFORMATION TECHNOLOGY & LAW SERIES ⑧

# UNRAVELLING THE MYTH AROUND OPEN SOURCE LICENCES

An Analysis from  
A Dutch and European Law Perspective

Lucie Guibault

Ot van Daalen

*Institute for Information Law  
University of Amsterdam*

T•M•C•ASSER PRESS

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**ABBREVIATIONS**

AA	Ars Aequi
AfP	Archiv für Presserecht
ALAI	Association Littéraire et Artistique Internationale
AMI	Auteurs, Media- en Informatierecht
API	Application-programming interface
ARRvS	Afdeling Rechtspraak Raad van State
BC	Berne Convention
Berkeley Tech. L.J.	Berkeley Technology Law Journal
BGH	Bundesgerichtshof
BIE	Bijblad bij de Industriële Eigendom
BSD	Berkeley Software Distribution
CANOS	Catalogus Nederlandse Open Standaarden
Cardozo Arts & Ent. L.J.	Cardozo Arts & Entertainment Law Review
CC	Civil Code
CDDL	Common Development and Distribution License
CD-ROM	Compact Disk Read Only Memory
Chi. Kent L. Rev.	Chicago-Kent Law Review
Colum. L. Rev.	Columbia Law Review
Colum. Sci. & Tech. L. Rev.	Columbia Science & Technology Law Review
CPI	Code de la Propriété Intellectuelle
CVS	Concurrent Versions System
ECLR	European Competition Law Review
EEA	European Economic Association
EC	European Community
EIPR	European Intellectual Property Review
EPC	European Patent Convention
EPO	European Patent Office
FAQ	Frequently Asked Questions
FLA	Fiduciary Licence Agreement
Fordham Intell. Prop. Media & Ent. L.J.	Fordham Intellectual Property, Media & Entertainment Law Journal
FSF	Free Software Foundation
Ga. St. U.L. Rev.	Georgia State University Law Review

Geo Mason L. Rev.	George Mason Law Review
GPL	General Public Licence
GNU	Abbreviation for ‘GNU is not Unix’
GRUR	Gewerblicher Rechtsschutz und Urheberrecht
GRUR Int.	Gewerblicher Rechtsschutz und Urheberrecht Internationaler Teil
Gw	Grondwet
Hous. L. Rev.	Houston Law Review
HR	Hoge Raad – Dutch Supreme Court
ICTU	Stichting ICTU (informatie, communicatie, technologie en de overhead)
IDA	Interchange of Data between Administrations
IER	Industriële Eigendom en Reclamerecht
ifrOSS	Institut für Rechtsfragen der freien en Open Source Software
IIC	International Review of Industrial Property and Copyright Law
Ind. L.J.	Indiana Law Journal
InvW	Invorderingswet
ISS	Information society service
IST	Information society technologies
ITRB	Der IT Rechtsberater
JAVI	Juridische Aspecten van Internet (Jurdisch Tijdschrift voor Internet en E-business)
LGPL	Lesser GPL
Marq. Intell. Prop. L. Rev.	Marquette Intellectual Property Law Review
Mich. L. Rev.	Michigan Law Review
Mich. Telecomm. Tech. L. Rev.	Michigan Telecommunications & Technology Law Review
MPL	Mozilla Public Licence
NBER Working Paper	National Bureau of Economic Research
NCSA	National Centre for Supercomputing Applications
NJ	Nederlandse Jurisprudentie
NJB	Nederlandse Juristenblad
NJV	Nederlandse Juristenvereniging
NLLGG	Nederlandse Linux Gebruikers Group
NPL	Netscape Public Licence

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NTBR	Nederlands Tijdschrift voor Burgerlijk Recht
OJ	Official Journal
Or. L. Rev.	Oregon Law Review
OSD	Open source definition
OSDL	Open Source Development Lab
OSI	Open source initiative
OSOSS	Open Standaarden en Open Source Software
OSRM	Open Source Risk Management
OSS	Open source software
Pres. Rb.	President Rechtbank (President of the District Court)
Rich. J.L. & Tech.	Richmond Journal of Law & Technology
RvdW	Rechtspraak van de Week
RM Themis	Rechtsgeleerdheid Magazijn Themis
SME	Small and medium enterprise
Stan. L. Rev.	Stanford Law Review
Stan. Tech. L. Rev.	Stanford Technology Law Review
Stb.	Staatsblad
St. Louis U. Pub. L. Rev.	St. Louis University Public Law Review
Tex. Intell. Prop. L.J.	Texas Intellectual Property Law Journal
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
UCC	Uniform Commercial Code
U. Ill. L. Rev.	University of Illinois Law Review
UNCTAD	United Nations Conference on Trade Development
U. Pitt. L. Rev.	University of Pittsburgh Law Review
Utah L. Rev.	Utah Law Review
Va. J.L. & Tech.	Virginia Journal of Law & Technology
VOSN	Vereniging Open Source Nederland
WIPO	World Intellectual Property Organisation
Yale L.J.	Yale Law Journal
ZUM	Zeitschrift für Urheber- und Medienrecht

## Chapter 1

# INTRODUCTION

Open source software is actually as old as the software industry, but its use is becoming more and more widespread among businesses, governments, and the public at large. Open source software licences are based on two fundamental principles: the possibility for users to use the software for any purpose and to modify and redistribute it without prior authorisation from the initial developer. Some open source software licences, like the General Public Licence (GPL), also impose a corollary obligation on the licensee: to make the source code available to other developers.<sup>1</sup> The idea behind this form of licensing is that when programmers can read, redistribute, and modify the source code for a piece of software, the software evolves.<sup>2</sup> Perhaps more than any other type of software, open source software is, as a result of its characteristic licensing scheme, the engine of collaborative creation. The very fact that the software may be freely used, modified and redistributed encourages subsequent developers to make their own contribution to an existing piece of software, by correcting errors, or by enhancing the software's capabilities and efficiency. Open source software may be developed in a closed setting, but it may also consist of a patchwork of different contributions originating successively from a number of unsupervised and unrelated developers, who are often scattered across different locations in the world. The modifications brought to the initial software can then either be distributed as a separate programme or be integrated into the original software.

Within a few years, the 'open' method of development and distribution of computer programs has imposed itself as a powerful social ideology. The philosophy behind open source licensing has also inspired the development of numerous other 'open' licences and 'open' projects, where the principles of open source are applied in the fields of music, media, encyclopaedia and science. The mechanism for achieving this goal is through a standardized licensing infrastructure. The open source movement is so powerful in fact that even

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<sup>1</sup> Free Software Foundation Europe, <<http://fsfeurope.org/documents/freesoftware.html>>.

<sup>2</sup> Open Source Initiative, <<http://www.oss1.nl/opensource.org/>>.

the software giant Microsoft felt the pressure to offer open and royalty-free documentation and licences for the Microsoft Office 2003 XML Reference Schemas, which provide developers and representatives of business and government a standard way to store and exchange data stored in documents.<sup>3</sup> Microsoft's release of the Office 2003 XML Reference Schemas does not qualify as 'free' or 'open source' software, for the accompanying licence does not grant the user the required freedom to use, reproduce, modify and redistribute the software. Nevertheless, Microsoft's gesture does give an indication of the increasing pressure of disclosing software standards within the community of software developers. Other important 'proprietary' software companies are slowly following Microsoft's footsteps and disclosing certain components of their products to the open source community.<sup>4</sup>

The use of open source software licences has given rise to new, viable, and attractive business models for the distribution of software products. In view of its commercial potential, established companies are investing important capital and labour resources in the development of open source operating systems and applications. Open source licences cover thousands of projects, including the heart of the Linux operating system, the Firefox Web browser, the Apache server software collection and soon, Sun Microsystems' Solaris version of Unix. Open source software owes its attractiveness to the very principles put forward by its proponents: software users and developers savour the political freedom granted under the licence to use and modify the software as they wish.<sup>5</sup> The principles underlying the open content movement have been embraced by a large and varied public worldwide, including in the Netherlands, ranging from governments, to businesses, individual users and institutions. To some extent, however, the open source ideology may be victim of its own success, for the number of different open source licences has dramatically increased over the past couple of years, giving to rise to compatibility and transparency problems.

A number of legal challenges need to be addressed in order to ensure the most efficient deployment of open content licences in the Netherlands, not least because most open source licences originate from the United States. This study intends to give an overview of the current legal situation regarding the use of open source software licences and to investigate how the most commonly used open source software licences measure up to Dutch and European

---

<sup>3</sup> 'Microsoft geeft ontwikkelaars meer inzicht', 8 February 2005, WebWereld, available at <<http://www.webwereld.nl/nieuws/20737.phtml>> (Consulted, 6 March 2005).

<sup>4</sup> S. Shankland, 'Adobe releases open-source interface software', 2 March 2005, CNET News.com.

<sup>5</sup> Pearson 2000, p. 152.

law. How does the distinct production and distribution model of open source licences fit in the current legal framework? Does the current legal environment support the use of open source licences or does it rather impede their use? In this last case, would some adaptations to the law or to the licence terms be appropriate?

At the outset one remark concerning the terminology should be made. Software for which the source code is available for use, copying, modification, distribution, and re-use is either referred to as ‘free software’ or as ‘open source software’. In the following pages, we will refer simply to ‘open source’ software licences, since the expression ‘open source’ appeals the most to the imagination in reference to this type of software.

This study is divided into seven chapters. Chapter 2 draws a portrait of the origins and fundamental principles of the open source movement, while chapter 3 makes a brief overview of the current practice with respect to the production, distribution and use of open source software. Chapter 4 analyses the problems that arise from a private law perspective. It discusses the legal nature of a typical open source software licence agreement, and attempts to identify the parties to such a licence. This allows us to gain better understanding of the manner in which open source software licences are concluded between the parties and to consider whether the formation of such agreements generally meets the criteria of the law. We then turn to the analysis of the validity under Dutch civil law of a number of clauses that one encounters in open source software licences and that are known to differ from those of conventional software licences. Since a review of all the clauses contained in these licences would go far beyond the bounds of this study, we limit our analysis to the examination of the key clauses: the share-alike clause, the warranty disclaimer, the limitation of liability, and the termination clause.

Chapter 5 concentrates on the issues of copyright law. The open source software ideology, far from rejecting the rules of copyright law, relies on the application of these rules to set their own ‘open’ terms of use of protected software. The key terms in open licences have been designed to take account of the fact that the traditional distinction between creators and users of works has essentially vanished thanks to the digital networked environment: users are creators and vice versa. To accommodate the incremental development of creative works, the licences grant users the freedom to use, reproduce, modify the software, and the freedom to distribute or re-distribute the work. How do these freedoms fit in with rules on copyright? Considering the manner in which open source software is developed and used, three main aspects deserve our attention: first, the question of joint authorship with respect to software created by more than one author; second, the permitted uses under the most common open source

licences; and third, the licences' different obligations regarding the respect of moral rights. Chapter 6 examines the implications of the recognition of the patentability of software-implemented inventions for the development of open source software. To this end, we briefly consider the patent protection as it is currently granted in the Netherlands with respect to computer-implemented inventions, as well as the most relevant provisions of the proposed European directive on the patentability of computer-implemented inventions. In a subsequent subsection, we take a look at the reaction of some open source software developers in order to counter potential patent infringement claims from third parties. This includes the development of a patent strategy and the drafting of specific language such as the one appearing inside the GPL, and the MPL.

After having examined the rights and obligations of the respective parties under the most commonly used open source licences, chapter 7 takes a brief look at the issue of the enforcement of these licences. Who has standing to sue, in the case of a work created by multiple decentralised authors? Considering that the open source ideology is based to a large extent on peer review, how are open source licences typically enforced in practice? Finally, chapter 8 will summarize the main conclusions of this study, and offer in chapter 9 a set of recommendations for possible adjustments to certain licence terms.

In view of the proliferation of licences that are nowadays considered to fall under the definition of 'open source', it is not our intention to examine every single one of them. Instead, we shall concentrate in chapters 4, 5, and 6 on the provisions of the GNU GPL, the BSD, and the MPL. Moreover, it is not the ambition of this study to make an exhaustive review of all possible fields of the law that may have an impact on the use of open source licences. For example, issues of competition law, public procurement law, tax law, and private international law are left for a subsequent study. In addition, due to the nature of the publication process, several factual point in chapters 2 and 3 may have changed since the time of writing. Chapters 2 and 3 were written by Ot van Daalen initially in the Dutch language and later on translated into English by Ms. Leslie Hugenholtz. The authors would like to thank Eric Idema, student assistant, for his contribution in the research and the writing of parts within chapter 4. Special thanks go to Professor Edgar Du Perron (Faculty of Law, University of Amsterdam), Dr. Axel Metzger (Institut für Rechtsfragen der Freien und Open Source Software, Hamburg), Georg Greve (Free Software Foundation Europe), Bart Knubben (Programma OSOSS, Netherlands), Margreet Groenenboom (Nauta Dutilh/IViR) and Coen Pustjens for their comments and suggestions regarding earlier drafts of this study.



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## Chapter 2

# ORIGINS OF OPEN SOURCE

Open source licences have existed for more than twenty years. Nevertheless, the general public have only recently become more familiar with them. Moreover, the philosophy behind open source licensing has inspired the development of numerous other ‘open’ licences and ‘open’ projects. The principles of open source are applied in the fields of music, media, encyclopedia and science.<sup>6</sup> Developments such as these are, in Benkler’s words, examples of a ‘commons based peer production’, a new and distributed model of information production in existence due to a global communication network enabling non-professionals to make joint contributions to various projects with relatively little effort on their part.<sup>7</sup> Software is considered to be one of the most important and early examples of this type of production mode. As Moglen writes in his Metaphorical Corollary to Faraday’s Law: ‘if you wrap the Internet around every person on the planet and spin the planet, software flows in the network.’<sup>8</sup> Over the past twenty years there has been a steady growth in the number of computer programs that are performing a variety of social functions and that are brought out under licences widely different from ‘commercial software’ licences, both in a practical and in a theoretical sense. In this chapter, a description of the history and background of these licences is given, as well as the most important characteristics distinguishing open source licences from other kinds of software licences. Furthermore, several practical aspects of open source software (OSS) will be discussed, such as its production and distribution methods, and its users. Finally, attention will be paid to OSS in the Netherlands.

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<sup>6</sup> See for example Creative Commons (licenses for music and other content) at <<http://www.creativecommons.org/>>, the Public Library of Science (free access to scientific publications), at <<http://www.publiclibraryofscience.org/>>, and the Wikipedia (open encyclopedia), at <<http://www.wikipedia.org/>>.

<sup>7</sup> See Benkler 2002.

<sup>8</sup> Moglen 1999.

## 2.1 BACKGROUND: THE OPEN SOURCE LICENCE ENVIRONMENT

For a good understanding of open source licensing, one needs to have a clear picture of the environment in which open source licences have originated. The open source licence environment will be described later on. First, let us briefly describe the relevant technology, before examining the main events in the history of open source licensing.

### 2.1.1 Technological background: source code and object code

Computer software is primarily distributed in either source code (machine code) or object code (binary code).<sup>9</sup> The terms binary code and object code will be used interchangeably. A computer program written in source code can be read and adapted by its users but it cannot be used on a computer without transforming the source code into object code. Object code cannot be comprehended by its users without great difficulty. The process by which object code is transformed into source code is called compilation.

The distinction between source code and object code came into being in the 1970s, at which time nearly all computer programs were written in computer languages requiring compilation. Over time, computer languages not requiring compilation have also been developed. With respect to the latter type of computer languages, compilation takes place during the execution of the source code.

The availability of source code plays an important role in open source licensing. This is illustrated by use of the term ‘open source’, which refers to the openness of the source code. The availability of source code enables us to study and modify the way in which software works. It furthermore makes possible the provision of interoperable programs. Open source licences use a functional definition of source code because computer languages will undoubtedly change in the future. The most important open source licences define source code as: ‘the preferred form of the work for making modifications to it.’<sup>10</sup>

Software can be distributed in binary form and in source code. Binary software distribution has the advantage that the software can be used directly on the computer onto which the software has been copied. Source code, on the other hand, must first be compiled before the software can be used.

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<sup>9</sup> See for a concise overview Stallman 2003, pp. 3-5 and for a Dutch overview De Cock Buning 1993.

<sup>10</sup> See Art. 3 of the GNU Public License 2.0, Art. 1.1 of the MPL 1.1 and Art. 2 of the Open Source Definition (hereafter OSD). As a sidenote, the OSD is not a license. See section 2.1.7.

### 2.1.2 Technological background: the structure of a computer programme

Computer programs with a certain degree of complexity consist of different computer files. These files contain the commands that need to be carried out by the computer. Computer programs are preferably created in a modular form, in order to prevent the unnecessary reinvention of the wheel. Modular computer files that perform general functions are called ‘libraries’.

### 2.1.3 Philosophical background

The philosophical roots of open source licensing can be found in the culture of computer users of the 1960s and 1970s. This culture, the culture of an elite group of mainframe users, was characterized by a set of social codes, which would later be called by Levy ‘The Hacker Ethic.’<sup>11</sup> The Artificial Intelligence Lab of the Massachusetts Institute of Technology is one of the most important breeding grounds of this culture.<sup>12</sup> In The Hacker Ethic the following central principles are found:

1. Access to computers – and anything which might teach you something about the way the world works – should be unlimited and total;
2. All information should be free;
3. Mistrust authority – promote decentralization;
4. Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position;
5. You can create art and beauty on a computer;
6. Computers can change your life for the better.

When examining the licences in the following paragraphs, we will make frequent reference to these principles, in particular to the ones listed under points 1, 2 and 3.

The open source culture is characterized by the emphasis placed on openness and sharing. It is a technomeritocratic culture based in academia and science.<sup>13</sup> The importance attached to the sharing of information can partly be traced back to an academic tradition that has been developed during the En-

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<sup>11</sup> See *above* others Levy 2001, pp. 40-49, and generally Himanen 2001.

<sup>12</sup> Levy 2001, pp. 40-41.

<sup>13</sup> Castells 2001, p. 39.

lightenment.<sup>14</sup> One of the reasons for the creation of ARPANET during the 1960s was the belief that the linking of groups of computer users would facilitate the sharing of software and expertise.<sup>15</sup> This aside the fact that calculation power was scarce in those days led to so-called timesharing, which can also partly explain this emphasis on sharing.<sup>16</sup>

Over the years, a form of interaction has developed between the users representing this culture and their technological environment. A good example of this kind of development is the creation of the Internet. The first network computers used the Unix operating system, and the tradition of the Unix users has influenced the development of the Internet.<sup>17</sup> At the same time, the 'Unix tradition' has contributed to the creation of the open source movement. According to Castells, a rapid spread of communication protocols on the Internet would not have been possible without the open, free distribution of software and the co-operative use of means which characterizes the culture of early computer users.<sup>18</sup>

A number of important developments in the history of the open source movement will now be discussed. These historical developments are also an illustration of the philosophical principles underlying these licences.

#### 2.1.4 The GNU: General Public Licence

The most frequently used open source licence, the GNU General Public License (GPL), is also the most 'genuine' open source licence. Although there existed certain informal licences characterized by a similar spirit before the making of the GPL, they embodied a less pronounced codification of the underlying principles.

The history of the GPL begins with Richard Stallman who was working in the field of computer programming in the late 1970s at the previously mentioned Artificial Intelligence Lab. Starting in the early 1980s Stallman was increasingly confronted by a living and working environment not embracing these values.<sup>19</sup> The computers on the AI Lab were closed to others through the use of passwords. Computer programmers of the AI Lab were employed by commercial software companies restricting the free sharing of produced software. Hardware producers operated their products with software without supplying the

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<sup>14</sup> Castells, citing Tuomi 2001.

<sup>15</sup> See Tuomi 2001, p. 2.

<sup>16</sup> Raymond 1999, p. 10.

<sup>17</sup> See Castells 2001, p. 14.

<sup>18</sup> Castells 2001, p. 24.

<sup>19</sup> See DiBona, Ockman & Stone 1999, pp. 53-54, and Levy 2001, pp. 415-430.

source code to users. Software was sold under restrictive licences discouraging the sharing of software.

As a result of these developments, Stallman was confronted by a ‘stark moral choice’: would he too follow the commercial road and create software that he would not be able to share with his fellow programmers or would he end his career as a programmer?<sup>20</sup> He decided to circumvent this dilemma and develop an operating system that would again make it possible to work with others on the development of software. He called this the ‘GNU’ project, a recursive abbreviation of ‘GNU is Not Unix’. He left his job at MIT in January 1984 and he started to develop software on a voluntary basis in order to revive his old community.

In the course of 1984, he published the GNU Manifesto in which he describes the driving force behind his work:

‘GNU, which stands for Gnu’s Not Unix, is the name for the complete Unix-compatible software system which I am writing so that I can give it away free to everyone who can use it. (...) I consider that the golden rule requires that if I like a program I must share it with other people who like it. Software sellers want to divide the users and conquer them, making each user agree not to share with others. I refuse to break solidarity with other users in this way. (...) Copying all or parts of a program is as natural to a programmer as breathing, and as productive. It ought to be as free. (...) GNU is not in the public domain. Everyone will be permitted to modify and redistribute GNU, but no distributor will be allowed to restrict its further redistribution. That is to say, proprietary modifications will not be allowed. I want to make sure that all versions of GNU remain free.’<sup>21</sup>

He calls this form of software ‘free software’. Free Software is, according to Richard Stallman, “free as in “free speech”, not as in “free beer”.”<sup>22</sup> The Dutch translation of this term would be ‘vrije software’. With this choice of words he wants to emphasize the freedom given to the software users. In 1985, he established the Free Software Foundation (FSF), creating an institutional framework for the development of free software, and in particular of the GNU project.

One of the first attempts of Stallman to lay down these principles in a licence resulted in the development of the GNU Emacs Licence. Stallman used this licence for the distribution of Emacs, a text editing program which he had

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<sup>20</sup> DiBona, Ockman & Stone 1999, p. 55.

<sup>21</sup> See also Richard Stallman, ‘Initial Announcement’ at <<http://www.gnu.org/gnu/initialannouncement.html>>.

<sup>22</sup> See Richard Stallman, ‘The Free Software Definition’, at <<http://www.gnu.org/philosophy/freesw.html>>.

created. The GNU Emacs Licence allowed users to redistribute and change Emacs under the condition that modifications would have to be published and brought out under the same licence.<sup>23</sup> Stallman distributed Emacs by sending a copy on tape at a price of 150 dollars.

In February 1989, Stallman produced the first version of the GPL.<sup>24</sup> This licence is in many ways similar to the GNU Emacs License, with the exception that a user who has been changing software under the GPL is not obliged to publish any changes he has made. Because of its ‘Big Brother’ nature Stallman decided not to include this obligation in the GPL.<sup>25</sup>

In June 1991, a second and more recent version of the GPL was published.<sup>26</sup> While the text of this later version of the GPL has been changed, its spirit has remained the same. The ‘share and share alike’ or ‘copyleft’ aspect of the GPL is its most important functional characteristic. According to this stipulation, modifications to the code are allowed but must be distributed under the GPL. The GPL can be considered a success, for it is used in the majority of open software projects worldwide. Furthermore, the FSF has become an important player in the software market. Since the establishment of the FSF, the Free Software Foundation Europe and several national Free Software Foundations have come into being.<sup>27</sup>

However successful the GPL has been over the years, the transformation and globalisation of the OSS industry has rendered a revision of the text of the licence necessary. In a recent document exposing the philosophy of the FSF behind the adoption of a third version of the GPL, Stallman and Moglen explain:

‘The Free Software Foundation has never been reluctant to point out that its goals are primarily social and political, not technical or economic. The Foundation believes that free software – that is, software that can be freely studied, copied, modified, reused, redistributed and shared by its users – is the only ethically satisfactory form of software development, as free and open scientific research is the only ethically satisfactory context for the conduct of mathematics, physics, or biology. The Foundation, and those who support its broader work, regard free software as an essential step in a social movement for freer access to knowledge, freer access to facilities of communication, and a more deeply participatory cul-

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<sup>23</sup> Williams 2002, p. 124 and Levy 2001, p. 416.

<sup>24</sup> GNU General Public License Version 1, at <<http://www.gnu.org/copyleft/copying-1.0.html>>.

<sup>25</sup> Williams 2002, p. 127.

<sup>26</sup> GNU General Public License Version 2, June 1991 at <<http://www.gnu.org/licenses/gpl.txt>>.

<sup>27</sup> See <<http://www.fsf.eu.org/>>.

ture, open to human beings with less regard to existing distributions of wealth and social power. The free software movement has taken advantage of the social conditions of its time to found its program on the creation of vast new wealth, through new systems of cooperation, which can in turn be shared in order to further the creation of new wealth, in a positive feedback loop.<sup>28</sup>

Another sign of success is that despite its widespread use, the GPL has not yet been litigated extensively.<sup>29</sup> In May 2004, the District Court of Munich rendered the first decision worldwide on the validity of the GPL.<sup>30</sup> Moglen, lawyer at the FSF, states that at least 10 times a year he confronts users in breach of the GPL, yet these cases have never been taken to court, since ‘the users in question know that they would lose their case.’<sup>31</sup> The FSF offers little insight into the breaches that take place but based on the information available on the internet, one can conclude that breaches may occur at the level of both hardware and software (re)distribution. In most cases, it involves not giving sufficient access to the source code.<sup>32</sup>

### 2.1.5 The BSD distribution

The GPL creates a legal framework for the production of software in a collective and distributed manner. The production of the BSD operating system is an example of a similar production model, but without the legal framework, that existed before the introduction of the GPL.

In 1973 Bell Labs, a research laboratory, which was part of the AT&T company, was working together with the University of Berkeley, a customer of AT&T, in the joint development of the Unix operating system.<sup>33</sup> AT&T distributed the Unix with source code to Universities. Because Berkeley had access

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<sup>28</sup> R. Stallman and E. Moglen, ‘GPL Version 3: Background to Adoption’, 9 June 2005, available at <<http://www.fsf.org/news/gpl3.html>>

<sup>29</sup> See *Progress Software Corp. v. MySQL AB*, 195 F. Supp. 2d 328, 329 (D. Mass. 2002) and *Planetary Motion, Inc. v. Techsplosion, Inc.*, 261 F.3d 1188 (11<sup>th</sup> Cir. 2001). A search on Slashdot on ‘Violation of the GPL’ from 1 January 2001 to 22 December 2003 will result in a number of examples of legal disputes between software producers and claimants with respect to open source software. The GPL also plays a role in the current dispute between SCO and IBM. See for a good overview <<http://www.groklaw.net/>>.

<sup>30</sup> Landgericht Munchen, 4 May 2004, (*Netfilter/Sitecom*), available at <[http://www.jbb.de/judgment\\_dc\\_munich\\_gpl.pdf](http://www.jbb.de/judgment_dc_munich_gpl.pdf)>. This decision is examined more closely in section 7.2 *infra*.

<sup>31</sup> See Moglen 2001a and Moglen 2001b.

<sup>32</sup> See FSF Seminar. GPL Compliance Case Studies and Legal Ethics in Free Software Licensing at <<http://www.sfs.or/licenses/210104-seminar.html>>.

<sup>33</sup> DiBona, Ockman & Stone 1999, pp. 31-46.

to the source code, it was able to apply subsequent improvements developed by Bell Labs to Berkeley's own system. At the same time, researchers at Berkeley managed to add important new elements to the Unix-version of AT&T. In turn, the company allowed Berkeley to distribute its versions of AT&T Unix as long as these modified versions did not contain 'proprietary information' belonging to AT&T Unix.<sup>34</sup>

The first Berkeley distribution of Unix, the 'Berkeley Software Distribution' (BSD) was put together in 1977 by a Berkeley student, Bill Joy. Because it included code of AT&T Unix it could only be licensed to licensees of AT&T Unix.<sup>35</sup>

The AT&T Unix code was eliminated in later versions, at the request of BSD users. In June 1989 Berkeley distributed Networking Release 1, the first 'freely redistributable code from Berkeley'. A licensee could redistribute this code in adapted or unadapted binary form or in source code, without the need for permission or the payment of a fee. The copyright provision in the source code had to remain intact and it had to mention the software's contributors.

At the same time the Berkeley Software Design Incorporated (BSDI) launched a commercially supported version of this distribution. Unix System Laboratories, an AT&T subsidiary responsible for the exploitation of Unix, started a legal action against BSDI and Berkeley alleging infringement of copyright and trade mark rights. The District Court for the District of New Jersey partly rejected the claim on 30 March 1993.<sup>36</sup> As a result of this judgment, the BSD distribution system was changed in conformity with the judgment. It subsequently has been used as the foundation for a number of free operating systems – FreeBSD, OpenBSD and NetBSD – that have been published under the BSD licence.

The licences under which these free BSD distributions have been published are open source licences, but they differ from the GPL in one aspect. There is no obligation to deliver the source code should one decide to distribute the software only in binary code. In paragraph 2.2, the differences between the licenses will be discussed in greater detail. Between the conditional freedom of the GPL, and the unconditional freedom of the BSD licences, we find the MPL.

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<sup>34</sup> *Unix System Laboratories, Inc. v. Berkeley Software Design, Inc.*, 27 U.S.P.Q.2d 1721, 1722-1723 (D.N.J. 1993).

<sup>35</sup> Amicus letter of the University of California, 1 July 1993 in *Unix System Laboratories, Inc. v. Berkeley Software Design, Inc.*

<sup>36</sup> *Unix System Laboratories, Inc. v. Berkeley Software Design, Inc.*, 27 U.S.P.Q.2d 1721 (D.N.J. 1993).



### 2.1.6 The Mozilla Public Licence

At the start of 1998, Netscape decided to make its source code available to users as well as its object code.<sup>37</sup> An important question which had to be answered was under which licence the software would be published.

The existing licences had a number of disadvantages, according to Netscape.<sup>38</sup> The BSD licence created the risk that changes made to the software would not be given back in source code to the developer community. Using the GPL would also be problematic since numerous third parties owned copyrights on specific parts of Netscape and the GPL dictated that these parts would have to be published under the GPL as well. In addition, American export regulations on cryptographic software prohibited the distribution of parts of Netscape in source code. Finally, Netscape made use of the code in other products, such as the Netscape servers, but it did not want to provide its users with the source code of these products.

In order to surmount these problems, Netscape created the Netscape Public Licence (NPL).<sup>39</sup> An important difference between the GPL and the NPL is that it is permitted to include a source code in a larger system without the need to license the entire system under the NPL. Furthermore, Article 3.6 of the licence states that it is allowed to distribute the covered code in executable form only if the requirements of section 3.1-3.5 have been met for that covered code, and if the licensee includes a notice stating that the source code version of the covered code is available under the terms of the Licence, including a description of how and where the licensee has fulfilled the obligations of section 3.2.<sup>40</sup> In reaction to criticism directed against the way the NPL allowed contributions to the code to be published under another licence, Netscape developed the MPL. The NPL and the MPL are largely the same with the exception that the NPL grants Netscape additional rights. These rights are granted in the part called 'Amendments' and they give the possibility to publish Netscape code under a different licence. Important provisions of the MPL will be treated in paragraph 2.2.

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<sup>37</sup> See on this subject DiBona, Ockman & Stone 1999, p. 198. See Hecker 1998 with respect to leading to the decision by Netscape.

<sup>38</sup> See the Mozilla FAQ at <<http://www.mozilla.org/MPL/FAQ.html>>.

<sup>39</sup> See Arts. 1.7 and 3.7 of the NPL and the MPL.

<sup>40</sup> See the text of the licence in annex to this study.

### 2.1.7 The Open Source Definition

The most recent and extensive formalisation of the principles at the base of open source licensing is the Open Source Definition (OSD). While the OSD builds on the ideas of Stallman, the OSD is the more direct result of a policy document of the Debian GNU/Linux distribution, the Debian Free Software Guidelines, written by Bruce Perens.<sup>41</sup> The Debian Project established these guidelines in July 1997 in order to determine whether a software license was 'free' and whether software under this license could be included in the Debian distribution. In order to achieve this, a number of criteria were developed, such as whether the licence allowed unlimited redistribution and adaptation of the software.

Eric Raymond, a spokesman of the open source movement, expressed his concern at this time to Perens with respect to the emphasis placed by Stallman on the concept of freedom. This emphasis on freedom would limit the use of OSS in the business community. Because of this, Raymond proposed to present Stallman's concept under the name 'open source'. As a consequence Perens and Raymond established the Open Source Initiative (OSI), which has been actively educating people on the use of OSS in commercial environments. In addition, the OSI certifies whether a certain licence is 'free'.

The certification takes place using the OSD, which is inspired on the Free Software Guidelines mentioned above.<sup>42</sup> The OSI has listed more than 45 different licenses that fall under the OSD.<sup>43</sup> According to the OSI, a license is regarded as 'open source' when the following ten criteria are met:<sup>44</sup>

1. Free Redistribution of software is mandatory;
2. Access to source code and its free redistribution is mandatory;
3. Modifications are allowed and should be brought out under the same licence;
4. Distribution of source code may only be restricted if contributions are made in the form of separate patches;
5. The licence must not discriminate against any person or group of persons;
6. The licence must not discriminate against fields of endeavour;

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<sup>41</sup> DiBona, Ockman & Stone 1999, p. 173

<sup>42</sup> As McGowan rightfully observes Lerner and Tirole characterize the OSD and the Debian Social Contract unjustly as a license. McGowan 2003 and Lerner & Tirole 2000, p. 7 and 9.

<sup>43</sup> <<http://www.opensource.org/licenses/index.php>>.

<sup>44</sup> <<http://www.opensource.org/docs/definition.php>>.

7. The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional licence by those parties;
8. The licence must not be specific to a product;
9. The licence must not restrict other software;
10. The licence must be technology-neutral.

The OSD has become a widely cited standard for determining which licences are ‘open source’. Most people consider today the terms open source and free software to be synonymous. Stallman does not agree with the way in which these terms are used interchangeably, since in his opinion the term ‘open source’ does not place enough emphasis on the freedom of the user.<sup>45</sup> Stallman advises to use both terms at the same time.

## 2.2 THE CORE STIPULATIONS OF OPEN SOURCE LICENCES

As mentioned earlier, an important number of licences deserve the qualification ‘open source’. Because the majority of these licences are used exclusively for one software project while their content and purpose is often similar, they will not be discussed separately. An attempt will be made to describe the most important aspects of open source licences. Attention will be paid to specific problems that may arise when the most popular licences are used. We will first discuss the licences that are important in either a quantitative or a qualitative sense.

### 2.2.1 The use of different licences

#### *Seen from a quantitative standpoint*

Most OSS is published under the GPL. This can be inferred from statistics produced by FreshMeat, the largest on-line catalogue of Unix and cross-platform software published under an open source licence.<sup>46</sup> Nearly 70 per cent (68.05 per cent) of the catalogued projects (totalling 35.973) are published under the GPL. Slightly more than 5 per cent (5.85 per cent) of projects are brought out under the Lesser GPL (LGPL). The LGPL is further discussed in

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<sup>45</sup> See Richard Stallman, ‘Why Free Software is better than “Open Source”’, at <<http://www.gnu.org/philosophy/free-software-for-freedom.html>>.

<sup>46</sup> <<http://freshmeat.net/stats/>>, lastly visited on 4 January 2005.

paragraph 4.1.1. The BSD licence comes third with a use of 3.58 per cent while other licences have a user percentage of 2.55 per cent or less.

These figures are confirmed by other research. Lerner and Tirole in May 2002 have analysed SourceForge, a web site offering free space to projects developing programs through the Internet.<sup>47</sup> Based on this study it appears that more than 70 per cent of software is brought out under the GPL. The LGPL is used for 10 per cent of the projects and the BSD license is currently used for 7 per cent of the projects. The figures mentioned above are in accordance with the results of research done by Evans and Reddy.<sup>48</sup>

In both studies the percentages have not been weighed: no distinction is made based on the amount of computer code or the number of developers that are involved. A survey was conducted to categorise the use of licenses according to the amount of code distributed.<sup>49</sup> This study has been carried out making use of the RedHat distribution version 7.2, a compilation of OSS that is distributed via the Internet and CD-ROM. In this study, the number of lines in the source code of all files was counted, it was then checked under which licence this code was brought out. It appears that 50 per cent of the total amount of code lines is licensed under the GPL. Second, comes the MIT licence, a BSD-type licence that is used for 8 per cent of code lines. The third place is occupied by the LGPL, used for 7.5 per cent of code lines.

### *Seen from a qualitative standpoint*

A qualitative analysis with respect to the licences under which important software is brought out is also informative when researching the use of OSS licences. However, the question should be considered as to what software should be included in this study, since nowadays thousands of software projects are brought out under open source licences. Therefore any listing of important software in this respect might be considered arbitrary.

The Internet is largely based on OSS, and this software can be a starting point for this discussion. Sendmail, the most widely used mailserver on the Internet, is brought out under a BSD-type licence.<sup>50</sup> Apache, the most common web server, is brought out under the Apache Software Licence, also a BSD-

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<sup>47</sup> Lerner and Tirole 2002, pp. 21-23.

<sup>48</sup> Evans and Reddy 2003, pp. 354-355.

<sup>49</sup> Wheeler 2001.

<sup>50</sup> In 2001, the market share of Sendmail was 42% according to a survey done by Daniel Bernstein. See <<http://cr.yip.to/surveys/smtpsoftware6.txt>>.

type licence.<sup>51</sup> BIND (Berkeley Internet Name Domain), the most commonly used domain name server, is also distributed under a BSD-type licence.<sup>52</sup> The commonly used programming language Perl is published under the GPL and the Artistic Licence. The frequently used database server MySQL is put out under the GPL.

A significant part of servers on the Internet operate on the GNU/Linux system. The Linux kernel is published under the GPL.

Three other open source operating systems, FreeBSD, OpenBSD en NetBSD are made available under a BSD licence. Since, as will be discussed in paragraph 2.2.3, the BSD licensee is allowed to distribute derived software in a binary form without the obligation to supply users with the source code as well, some commercial suppliers prefer to base their products on one of the three operating systems mentioned above.

In the desktop environment, Mozilla, a web browser published under the MPL, is worth mentioning. OpenOffice, an important example of an open source office environment, is distributed under the Lesser General Public Licence and the Sun Industry Standards Source Licence.

Let us now examine the most important characteristics of the open source licences mentioned above.

## 2.2.2 Freedom as a key requirement

As has been pointed out in paragraph 2.1.4, the protection of freedom for computer users was the most important reason for creating the GPL. The Free Software Definition lists the four aspects characterising OSS:<sup>53</sup>

1. The freedom to run the program, for any purpose.
2. The freedom to study how the program works, and adapt it to your needs. Access to the source code is a precondition for this.
3. The freedom to redistribute copies so you can help your neighbour.
4. The freedom to improve the program, and release your improvements to the public, so that the whole community benefits. Access to the source code is a precondition for this.

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<sup>51</sup> Research by Netcraft in November 2003 shows that Apache had a market share of approximately 65%. According to <[www.netcraft.com](http://www.netcraft.com)> Apache's marketshare was 68,4% in januari 2005.

<sup>52</sup> A survey done by Bill Manning during 1999 and 2000 showed that 95% of the domainname servers can be classified as versions of Bind, see <<http://www.isi.edu/~bmanning/in-addr-versions.html>>. This figure will not have changed dramatically.

<sup>53</sup> The Free Software Definition, see <<http://www.gnu.org/philosophy/free-sw.html>>.

The freedom to study the functioning of the computer program, to adapt it to your needs or improve the program and to release improvements to the public cannot exist without free, unlimited access to the source code. Consequently, instead of 'free software' the expression 'OSS' may be used. Nevertheless, factual access to the source code does not imply that it is legally permitted to change or distribute software. Microsoft, for example, grants governments and businesses access to its software source code with its 'shared source' initiative. But these parties are not always permitted to modify and redistribute the software in question.<sup>54</sup>

The freedoms mentioned above are included in the open source licenses which are considered to be the most important, and they are also part of the OSD. Article 0 of the GPL guarantees the right to use the computer program for any purpose. Based on Articles 1 and 3 of the GPL, the licensee has the freedom to copy and distribute the program. Article 2 of the GPL enables the licensee to copy and distribute the program in an adapted form. To safeguard these principles the GPL requires software producers to give users free access to the source code, a requirement discussed in the next paragraph.

Article 1 of the OSD states that a license may not restrict redistribution. According to Article 3, the redistribution of modified software and derived works must be permitted. Articles 6 and 8 of the OSD stipulate that licences cannot restrict the way the software will be used with respect to certain fields of endeavour and must not depend on the program's being part of a particular software distribution. In Articles 2.1 and 2.2 of the MPL, licensees are given the freedom to use, reproduce, modify, display, perform, sublicense and distribute the Original Code (or portions thereof) with or without modifications as long as any modification which a licensee created or to which a licensee contributed is made available in source code form (Art. 3.2).

The BSD licence does not contain such a requirement. It only grants the permission to use and distribute the software in an adapted or unadapted form.

### 2.2.3 The importance of openness

As has been noted before, without real access to the source code the freedoms described earlier cannot be exercised effectively. With access to the source code it is much easier to study and to modify computer software. As a result, some open source licences require that the distribution of software in binary

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<sup>54</sup> Microsoft Shared Source Initiative Overview, November 2002, at <<http://www.microsoft.com/resources/sharedsource/Initiative/Initiative.msp>>.

form should be accompanied by the source code. This leads to a number of questions.

First, what is the meaning of the term ‘source code’? As has been pointed out in paragraph 2.1.1, licences use a functional definition of source code. Article 3 of the GPL defines source code as ‘the preferred form of the work for making modifications to it.’ Article 1.1 of the MPL gives the same definition of the term. The explanatory note belonging to Article 2 of the OSD uses a similar definition: ‘We require access to unobfuscated source code because you can’t evolve programs without modifying them. Since our purpose is to make evolution easy, we require that modification be made easy.’

Secondly, how must the source code be made accessible? This question also concerns a functional requirement meant to facilitate the way software is studied and modified. Article 3 of the GPL states that the binary code of a computer program may be distributed, when:

- a. It is being accompanied by the complete corresponding machine-readable source code on a medium customarily used for software interchange; or,
- b. It is being accompanied by a written offer, valid for at least three years, to give any third party, for a charge no more than the cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed on a medium customarily used for software interchange; or,
- c. It is being accompanied by the information a licensor received as to the offer to distribute corresponding source code. (This alternative is allowed only for non-commercial distribution and only if the licensor received the program in object code or executable form with such an offer, in accord with subsection b above.)

With regard to Internet distribution, as long as source code and binary code are available at the same place it is permitted to provide them separately so that the binary code can be copied without copying the source code. According to Van Wendel de Joode, De Bruijn & Van Eeten this provision will be changed in the next version of the GPL to make the distribution of source code and object code from different web sites possible.<sup>55</sup>

Another question that needs to be answered is how the distribution in binary form should be regarded. This problem is mostly limited to the sphere of web applications accessible via the Internet. Web applications are partly operated

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<sup>55</sup> Van Wendel de Joode, De Bruijn and Van Eeten 2003, p. 76.

on the computer of the user and partly on web servers. This requirement may be considered unreasonable if a company does use a web application brought out under the GPL but does not share software improvements, even though it would not have to under the current GPL.

Version 3.0 of the GPL should solve this problem.<sup>56</sup> In the meantime, a company that has been confronted with these problems has developed a licence approved by the FSF, the so-called Affero licence.<sup>57</sup> This licence, which is based on the GPL, states in Article 2(d) that it is not permitted to remove the facility to gain access to the source code from your modified version of the program or work based on the program. A web server published under the Affero licence has to offer the possibility to gain access to a source code, and a licensee is not permitted to remove this option in modifications of the software. Whether distribution on the intranet should or should not be considered a form of distribution in the sense of the GPL is another question in this regard and it has not yet been answered conclusively.

Article 3.6 of the MPL states that the distribution of software in a binary form is permitted on the condition that it is accompanied by a statement that the software is available in source code. The conditions under which this software should be made available in source code are described in Article 3.2. The source code must be made available either on the same media as the executable version or must remain available for at least 12 months following the first time this was the case or at least 6 months after a subsequent version has been made available via a mechanism accepted in the society of software developers.

The OSD does not require that an open source licence stipulate that the source code of modifications be made available. Article 2 of the OSD only states that the original program should be made easily accessible in source code, preferably via the Internet, and does not require that the source code be delivered in binary form in the case of redistribution. The BSD licence, which does not contain the above obligation, can therefore be considered an open source licence according to the OSD.

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<sup>56</sup> Van Wendel de Joode, De Bruijn and Van Eeten 2003, p. 76. See also E. Ries, 'Sneak preview of GPL v. 3: More business friendly' at <<http://www.Newsforge.com/article.pl?sid=00/11/01/1636202>> and E. Ries, 'Sneak preview of GPL v. 3, part 2: System libraries and patents' at <<http://www.Newsforge.com/article.pl?sid=00/12/14/1910252>>.

<sup>57</sup> See <<http://www.gnu.org/press/2002-03-19-Affero.html>> and <<http://www.affero.org/oagpl.html>>.



#### 2.2.4 The share-alike clause: an important ingredient of open source licences (copyleft)

Open source licensees are granted a great measure of freedom. To protect this freedom some licences include a share-alike clause stipulating that software modifications brought out under a certain licence may only be distributed under that same licence. The FSF calls this type of licences where derivative works should be released as free software, ‘copyleft’.<sup>58</sup> The rationale behind these clauses is expressed in the preamble of the GPL: ‘to protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights.’

Articles 1, 2 and 3 of the GPL require that modified and unmodified versions of a work should be distributed under the GPL. Article 3.1 of the MPL stipulates that the modifications, which a licensee creates or to which a licensee contributed, are governed by the terms of this Licence. Article 3.6 of the MPL on the other hand states that it is possible to bring out modified or unmodified code in executable form under a different licence as long as a notice is included stating that the Source Code version of the Covered Code is available under the terms of the MPL. This enables companies to bring out public contributions under the MPL under a commercial instead of an open source licence. According to the BSD licence, the redistribution and use of a (modified) work in source and binary forms is permitted as long as the software is brought out under the same licence. The OSD does not require the use of such a clause: Article 3 of the OSD only stipulates that the licence must *allow* modifications to be distributed under the same terms as the original software.

Should a problem occur in a link within the chain of licensees, this may have consequences for other parts of the chain as well. Open source software licences include clauses meant to prevent these problems. Article 4 of the GPL states, for instance, that activities in breach of the GPL will automatically terminate the licence, but it clearly states that this will not result in the termination of licences of other licensees as long as they remain in full compliance. Article 6 states that in case of redistribution the licensee automatically receives a licence from the original licensor. The MPL stipulates in Article 3.4 under c that those contributing program code to a project will declare that they have sufficient rights to grant the rights conveyed by the licence. According to Article 8.4 of the MPL, in case the licence of another licensee is terminated, all end user licence agreements shall survive termination.

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<sup>58</sup> McGowan 2003, p. 2.

The manner in which open source licences should be declared applicable to software is another question that might be raised. The answer partly depends on the appropriate private law rules. Generally, however, licences contain provisions covering this aspect of open source licensing. Distribution of GPL software is permitted, according to Article 1 of the GPL as long as the distributor ‘conspicuously and appropriately publish(es) on each copy an appropriate copyright notice’, and references to the GPL are left intact. The FSF gives advice as to the manner in which one needs to apply the GPL on software.<sup>59</sup> According to the FSF a copyright notice should be included in the source code of each file:

Copyright © yyyy name of author

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

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Does it concern an interactive program? Then, only a short notice needs to be shown:

Gnomovision version 69, Copyright © year name of author

Gnomovision comes with ABSOLUTELY NO WARRANTY: for details type ‘show w’. This is free software, and you are welcome to redistribute it under certain conditions; type ‘show c’ for details.

With respect to this, McGowan wrote the following guidelines: ‘the key is to give users notice of the GPL terms in a way that they cannot help but see them, or make a conscious choice to skip over them, before they begin using the code.’<sup>60</sup> McGowan believes that when the code is circulated among developers familiar with the norms and practices of OSS, a reference to the GPL com-

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<sup>59</sup> Free Software Foundation, ‘How to Apply These Terms to Your New Programs’ at <<http://www.sfs.org/licenses/gpl.html#SEC4>>.

<sup>60</sup> McGowan 2003, p. 11.

bined with a link to a web page posting its full terms may already suffice.<sup>61</sup> As a matter of fact, not everyone uses these guidelines when publishing his or her software under the GPL, as will be shown in paragraph 2.4.1.

In this respect, the Python Licence is interesting. Python is a programming language and also a series of programs interpreting the programming language. These programs are published under the Python Licence, a licence formulated by the employer of the most important computer programmer of the project, Guido van Rossum. Between the FSF and Python's proprietors, there was disagreement as to the compatibility of the Python Licence with the GPL. The FSF did not support the way users had to be informed about the licence in earlier versions of the licence: users first had to accept the licence via a web site.<sup>62</sup> In recent versions of the Python Licence, this requirement has been removed.

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<sup>61</sup> McGowan 2003, p. 12.

<sup>62</sup> See 'Guido van Rossum Unleashed', *Slashdot*, 20 April 2001 at <<http://interviews.slashdot.org/article.pl?sid=01/04/20/1455252&mode=thread&tid=156>> and 'FSF Response to the 2.1 License' at <<http://www.python.org/2.1/fsf/html>>.



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## Chapter 3

# OPEN SOURCE IN PRACTICE

As noted previously, a legal framework for on-line, worldwide production and distribution of information products such as software has been created based on open source licensing.<sup>63</sup> Raymond compares this distributed, uncontrolled production model to the development of a ‘bazaar’ and he contrasts this method of development with more controlled production models such as the construction of a cathedral.<sup>64</sup> This chapter examines several practical aspects of OSS, such as its production and distribution methods, as well as its users. It also considers OSS in the Netherlands.

### 3.1 THE PRODUCTION OF OPEN SOURCE SOFTWARE

The first essential question concerns the precise meaning and definition of a ‘software project’. A program used on a computer presents itself to the user as just one object, but beneath this object more than one function is carried out and one software project will consist of more than one file. Therefore, the theoretical possibility exists that part of a software project is distributed from a certain location while another part of the same project is distributed from another location. In practice, however, a software project will generally be distributed from only one web site. It is possible that some confusion exists concerning which of the distributed versions of a project should be called the ‘official’ version. According to Raymond, ‘[t]he owner(s) of a software project are those who have the exclusive right, recognized by the community at large, to re-distribute modified versions’.<sup>65</sup> This right can be obtained by starting a project, taking over a project or reviving a project abandoned by the previous owner.

The most commonly used development model for these kinds of projects can be described as follows. Several developers make available a basic outline

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<sup>63</sup> Compare Diamond and Torvalds 1999, p. 225.

<sup>64</sup> See Raymond 1999.

<sup>65</sup> Raymond 1999, p. 89.

of a software project via the Internet, in source code and possibly in object code. This enables other computer programmers to study the code. If part of the software can be improved, a computer programmer can write new code replacing or changing the old code, for instance via the Internet. This is called a patch. He can integrate the improved code in the original software that was downloaded from the Internet. To the developers of the original code the programmer can suggest to replace the original code by the patch. The latter option should be preferred. It will prevent the distributor of the patch from having to change his computer code whenever the original software is modified. Furthermore, he will no longer have to depend on the unpredictable ways of programmers of the official distribution with respect to guaranteeing the functionality of his patch. In some cases, however, a conscious choice is made to exclude special software from the official distribution. This is the case with cryptographical modules that due to export regulations cannot be distributed to all foreign countries without government authorization. Other examples are the Linux kernel patches of Alan Cox, developer of the Linux kernel, which are generally more experimental than the official kernel and which are made available on a separate part of the original kernel web sites.<sup>66</sup>

The heart of distributed software development is formed by the code archive. The code archive is a computer program enabling users to propose changes to the software.<sup>67</sup> In the archive, a record is also constituted of the proposals made by potential contributors at a certain time as a result of which certain changes can be reversed, should they prove impractical or undesirable. An example of the way this procedure has worked in practice is the incident of 5 November 2003, when a programmer tried to introduce a so-called 'backdoor' in the source code of the Linux kernel.<sup>68</sup> The maintainers of the kernel noticed this, and reversed the amended kernel code. The code archive enables the joint development of software. Different versions of the software can be developed simultaneously and no developer can exercise complete control over the contributions of others.<sup>69</sup> However, prior admission to the code archive is necessary in order to be able to propose changes.

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<sup>66</sup> See <<http://www.kernel.org/acpatch.html>>.

<sup>67</sup> An example of this is Concurrent Versions System (hereafter CVS).

<sup>68</sup> See <<http://kerneltrap.org/node/view/1584>>.

<sup>69</sup> Van Wendel de Joode, De Bruijn and Van Eeten 2003, p. 16.

### 3.1.1 The layered structure of OSS production

The production model of OSS has, according to Van Wendel de Joode, De Bruijn and Van Eeten a layered structure.<sup>70</sup> Software users form the outer layer. Those who inform the community of a certain software problem form the next layer. The following layer consists of writers of a number of patches capable of solving problems regarding the software. Software developers, whose contribution is mentioned in the description of the software, the so-called ‘credited developers’, form the fourth layer. In the same layer are developers qualified to make modifications in the code archive, developers with a so-called ‘committer status’. Occasionally there will be a fifth layer, as in the case of the Apache project, consisting of developers with further-reaching powers and tasks.

In his book, Grassmuck describes a similar centralized structure.<sup>71</sup> The centre of control within the software project, the core team, usually takes decisions concerning the general development of the project. The core team generally consists of people who have put the most time or effort into the project. The core team of Apache consists of approximately 22 members. The core team of Xfree86 counts approximately 11 members.

The distributed organisation runs parallel to the modular structure of the software. The parts of a software project that can be developed separately, the so-called modules, are usually assigned to a maintainer. Maintainers are responsible for co-ordinating the contributions made by their module’s developers, motivating the group and keeping the group intact. Changes in the source code are proposed by maintainers to the core team and are then put into source code.

Decisions concerning the development of a project are generally based on rough consensus. Nevertheless, it will not always be possible to reach consensus. Since the licences contain few restrictions on the use and redistribution of OSS, it is possible that several code developers might want to start a new version of the software project. This phenomenon is called forking, the splitting of a project into several parts. The danger of forking has been a powerful incentive towards arriving at consensus within the original project. The phenomenon of forking occurred when the BSD operating system split into three parts, FreeBSD, OpenBSD and NetBSD.

Three examples of open source production models are discussed below.

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<sup>70</sup> Van Wendel de Joode, De Bruijn and Van Eeten 2003, p. 18.

<sup>71</sup> Grassmuck 2003, p. 237.

### *The Linux kernel*

The Linux kernel is an important and frequently used OSS project. The fame of the Linux kernel is such that some mistakenly believe the Linux kernel to be a synonym for the term ‘OSS’ in general. The Linux kernel is also a good example of the production of OSS in practice.

The first versions of the Linux kernel were written by Linus Torvalds, at the time a student of the University of Helsinki. Although Torvalds witnessed a lecture of Richard Stallman at his University in 1991, his decision to bring out the Linux kernel under the GPL was inspired by the publication of the GNU C Compiler under the GPL.<sup>72</sup> He decided to bring out version 0.12 of the Linux kernel under the GPL and publish it on the Internet.<sup>73</sup> Soon users of the kernel mailed improvements to Torvalds, which he incorporated into the software. He placed the revised versions of the kernel on the Internet. The subsequent Linux kernel versions have all been brought out under the GPL.

Around the year 2000, there were approximately 3000 developers of Linux in more than 90 countries. More than 40,000 people have contributed to the development of the kernel. Torvalds administers every contribution: ‘he acts as a filter on all patches and new features – rejecting, accepting, or revising as he chooses.’<sup>74</sup>

According to Moon & Sproull, software developers can have different roles. The two most important are the roles of credited developer and maintainer. The first category of developers is responsible for specific parts of the Linux kernel and they are named in the maintainer file, first established in February 1996.

At first, Linux was updated by Linus Torvald and others via e-mail, after it was decided in 1995 not to use CVS (Concurrent Versions System), an OSS code archive.<sup>75</sup> Later it was decided to support the development of Linux using BitKeeper, another code archive. The hierarchy and organisational structure is reflected in the powers of the various developers with respect to the code archive. Those having the right to contribute code to the core repository stand high in the hierarchy.

Different people are responsible for the maintenance of different kernel versions.<sup>76</sup> Anyone can suggest a modification to the kernel on the mailing list. This does not imply, however, that it will be integrated in the official source

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<sup>72</sup> Diamond and Torvalds 2001, pp. 58-59.

<sup>73</sup> Id., p. 96.

<sup>74</sup> Moon and Sproull 2000, p. 7.

<sup>75</sup> Shaikh and Cornford 2002.

<sup>76</sup> See the linux-kernel mailing list FAQ, at <<http://www.kernel.org/pub/linux/docs/lkml/>>.



code. The Frequently Asked Questions (FAQ) states on this subject that first one has to examine which maintainer is responsible for that part of the code. If the patch works as it should, it can be mailed to the maintainer and to the mailing list. Should the patch need to be handled without delay it can be mailed to Torvalds himself who will accept patches he considers to be ‘obviously correct’, which have been approved by the maintainer or which have been tested extensively. Should a modification not fall under the responsibility of a maintainer then an attempt can be made to bring it under the attention of Torvalds via his mailing list or via one of his close assistants. The FAQ states:

‘Note that Linus operates like a black box. Do not expect a response from him. You will need to check patches he releases to see if he applied your patch. If he doesn’t apply your patch, you will need to resend it (often many times). If after weeks or months and many patch releases he still hasn’t applied it, maybe you should give up. He probably doesn’t like it.’

Not every open source project is as dependent on the moods and manners of just one person. Other successful open source projects have been structured on a different type of organisational model.<sup>77</sup> An example can be found in the organisational model of Apache.

### *Apache*

Apache has for a long time been the most widely used web server on the Internet. Apache is a successful open source project that has been brought out under the Apache Software Licence, an application of the BSD licence.<sup>78</sup> The Apache server originated from the web server developed by the National Centre for Supercomputing Applications (NCSA), which was distributed under an open source licence.<sup>79</sup> The moment the development of the NCSA web server came to a standstill, after an important developer had left the organisation, people were looking for alternative ways to apply certain improvements.

In order to achieve this, a web site and a mailing list were created in which 8 core developers of Apache took part. According to Fielding ‘enlightened self-interest’ was the most important reason for this form of co-operation. It was

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<sup>77</sup> Moon and Sproull 2000.

<sup>78</sup> The license can be found at <<http://www.apache.org/LICENSE.txt>>. See on the development of the Apache server Fielding 1999 and <<http://httpd.apache.org/ABOUT-APACHE.html>>. See also Mockus, Fielding and Herbsleb 2003; and the Apache History Timeline at <<http://apache.org/history/timeline.html>>.

<sup>79</sup> See <<http://hoohoo.ncsa.uiuc.edu/docs/COPYRIGHT.html>>.

more efficient to bundle and co-ordinate the contributions of various developers than to develop and distribute them separately.<sup>80</sup> Over time, improvements were bundled and the Apache server came into being.

In the Apache project, the decision-making process concerning the adoption of proposed contributions in the official distribution is quite formal and regulated. First, changes must be proposed on the mailing list so that members of the Apache Group can vote for or against them. The Apache Group consists of core developers who direct the project.<sup>81</sup> Meanwhile the Apache Group in 1999 was replaced by the Apache Software Foundation and modifications are judged on their merits after they have been added to the code archive.<sup>82</sup>

The size of the core developer group varied from 8 to 25 members in 2000.<sup>83</sup> A modification of the official code only occurs if a total of 3 votes in favour and no dissenting votes have been cast. For other types of decisions, a majority is needed as well as at least 3 votes in favour. Today almost 400 people contribute code to the Apache server.<sup>84</sup>

### *Mozilla*

Another interesting example of OSS development is the Mozilla project.<sup>85</sup> The decision of Netscape to make available the source code of its web browser and accompanying programs led to the creation of a new web site, Mozilla.org.<sup>86</sup> This web site functions as a virtual meeting point of computer programmers working on the development of the browser, offering server space and mailing lists as well as a database with a compilation of bugs in the software. The official version of the Mozilla project is distributed via Mozilla.org.

In the Mozilla project, the responsibility for the maintenance of different modules is given to different people. Contributions to the modules are mailed to the module manager for admission and he will then send them on to the Mozilla team. In case a module manager has less experience, the developers will thoroughly check whether the supplied code is meeting Mozilla quality standards. The mailed improvements will subsequently be applied to the code and the modified code will then be published on the web site.

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<sup>80</sup> Fielding 1999, p. 52.

<sup>81</sup> <[http://httpd.apache.org/ABOUT\\_APACHE.html](http://httpd.apache.org/ABOUT_APACHE.html)>.

<sup>82</sup> <<http://www.apache.org/foundation/faq.html>>.

<sup>83</sup> Mockus, Fielding and Herbsleb 2000, p. 265.

<sup>84</sup> Mockus, Fielding and Herbsleb 2000, p. 267.

<sup>85</sup> See in this regard Mockus, Fielding and Herbsleb 2002.

<sup>86</sup> See <<http://www.Mozilla.org/mission.html>>.

The maintainers of the Mozilla.org web site regard the system as self-regulating. Anyone claiming to be more prepared for the job of module manager can ask Mozilla to be appointed as module manager. This usually takes place after discussing it with the current module manager. Finally, Mozilla.org decides who should become the module manager involved in the distribution of Mozilla. Nevertheless, it is important to note that it is still possible to start one's own distribution authorized by Mozilla's open source licence.

Problems of a practical nature prevent a fork from occurring too frequently. The costs involved with changing to another form of distribution can be high and the number of programmers available to run both projects is limited. Theoretically the risk of a fork has a regulating effect.

### 3.1.2 The status of OSS developers: employed, freelancer, student and unemployed

Research done by the Institute of Infonomics shows that nearly two thirds of open source project developers have the status of employee whilst 14 per cent are considered as a freelancer.<sup>87</sup> One fifth is formed by developers who are unemployed or are still attending University.

It is often the case that companies let their employees or freelancers write code, which will later on become a contribution to an OSS project. In this manner Red Hat, an OSS distribution company, has delivered important contributions to existing OSS such as Apache and GNOME.<sup>88</sup> The company has also hired Alan Cox, one of the most important developers of the Linux kernel, to work on the Linux kernel.<sup>89</sup> Linus Torvalds has started working at the Open Source Development Lab (OSDL), a consortium of software producers, such as Hewlett Packard and IBM, devoting himself on a full time basis to the control and development of the Linux kernel.<sup>90</sup> The MMBase project that has originated in the Netherlands uses freelance developers for the writing of necessary software that would not be developed on a strictly voluntary basis.<sup>91</sup>

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<sup>87</sup> See International Institute of Infonomics, University of Maastricht & Berlecon Research 2002, part 4, p. 13.

<sup>88</sup> See <<http://www.redhat.com/about/mission/leadership/development.html>>.

<sup>89</sup> See <[http://www.redhat.com/advice/ask\\_alancox.html](http://www.redhat.com/advice/ask_alancox.html)>.

<sup>90</sup> See the press release of OSDL, 'Linux creator Linus Torvalds joins the OSDL', 17 July 2002 at <[http://www.osdl.org/newsroom/press\\_releases/2003/2003\\_06\\_17\\_beaverton.html](http://www.osdl.org/newsroom/press_releases/2003/2003_06_17_beaverton.html)>. See also Gary Rivlin, 'Leader of the Free World', *Wired* 11/11 at <<http://www.wired.com/wired/archive/11.11/linus.html>>.

<sup>91</sup> According to Jo Lahaye in his talk on MMBase on the Open Source Ervaringen ('Open Source Experiences') congress in Rotterdam, 20 January 2004.

Even when a contribution has been developed by a company employee, the contributed code has to be licensed under a license compatible with the licence under which the rest of the project's code is being licensed. To make sure that there will be no misunderstandings on this matter, the FSF suggests the inclusion of a copyright waiver in the explanatory notes accompanying a code developed by an employee in the course of his employment or a student at University. As explained in more detail in paragraph 7.1 of this book, this principle can also be found in the Fiduciary License Agreement of FSF Europe of which Article 2 sub 3 stipulates that anyone transferring his or her copyright has to make sure that his or her employer is not the owner of such a right with regard to codes produced in an employment relationship.

### 3.1.3 Dutch contributions to open source projects

Until now, little research has been done on the contributions made to OSS by Dutch computer programmers. According to a study conducted by Tuomi, of the 418 contributors to the Linux kernel (2.5.25), 18 were Dutch computer programmers.<sup>92</sup> Other research has shown that 6.5 per cent of the open source community consists of Dutch computer programmers.<sup>93</sup> As a result, the Netherlands occupied the 7<sup>th</sup> place on the list of countries that have made contributions to open software projects in 2002.

A project with apparent Dutch origins is the programming language Python. This language has been developed by the Dutch computer programmer Guido van Rossum. Today Python has outgrown its Dutch roots as a total of 500 people of different nationalities have contributed to its development.<sup>94</sup> Another project that has owed its existence mainly to Dutch contributions is MMBase. This program has been developed by the Dutch broadcasting association VPRO and has been adopted by numerous companies and municipal governments to manage their web sites, as will be discussed in paragraph 3.3.2 below.

## 3.2 THE DISTRIBUTION OF OSS IN PRACTICE

In practice OSS is distributed in various ways. However, a distinction can be made between on-line distribution, which takes place via the Internet, and off-line distribution.

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<sup>92</sup> Tuomi 2002b.

<sup>93</sup> International Institute of Infonomics, University of Maastricht & Berlecon Research 2002, part 4 pp. 15-16.

<sup>94</sup> This has been taken from the Misc/ACKS file of Python version 2.3.3.

### 3.2.1 On-line distribution

The Internet is the most frequently used distribution channel of OSS. On-line software catalogues such as FreshMeat, SourceForge and The Free Software Directory offer an overview of most OSS that is currently available.<sup>95</sup> These web sites provide each program with a short summary of its functions and they have links to the licence under which the program is published. An example of a page of such a software catalogue is shown in the picture below.

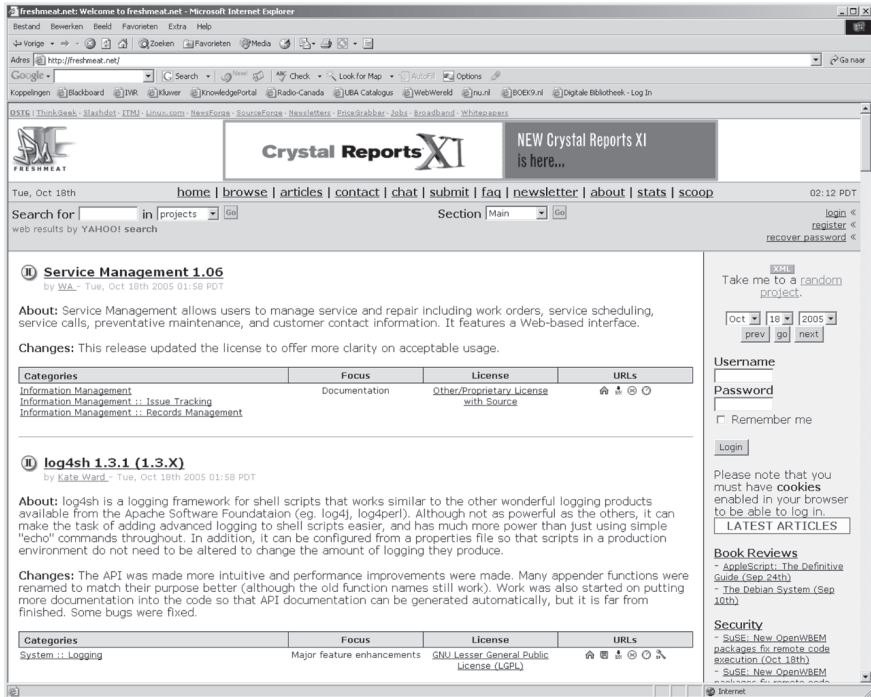


Figure 1: [www.freshmeat.com](http://www.freshmeat.com)

The software that is made available can also be downloaded without visiting the catalogue web sites, namely via web sites of the ‘official’ developers of the software. These on-line distribution methods are characterized by limited contact with the intermediary making the software available, as will be illustrated in the next two examples.

<sup>95</sup> See <<http://freshmeat.net/>, <http://www.sourceforge.net/> and <http://www.gnu.org/directory/>>.

### *The Linux kernel*

An official version of the source code of the Linux kernel is made available via the web site `kernel.org`. Here the opportunity is given to download the software concerned without the prior need to accept a certain agreement. The kernel is offered in source code in a compressed file. After being uncompressed several directories are created in which parts of the kernel are placed, using names such as `lib`, `kernel` and `security`.

In the top directory, there is a file named `COPYING` in which the GPL is included, with the following addition at the beginning of the file:

‘NOTE! This copyright does *\*not\** cover user programs that use kernel services by normal system calls – this is merely considered normal use of the kernel, and does *\*not\** fall under the heading of “derived work”.

Also note that the GPL below is copyrighted by the Free Software Foundation, but the instance of code that it refers to (the Linux kernel) is copyrighted by me and others who actually wrote it.

Also note that the only valid version of the GPL as far as the kernel is concerned is – this – particular version of the license (i.e., v2, not v2.2 or v3.x or whatever), unless explicitly otherwise stated.

Linus Torvalds.’

A file called `COPYING` can also be found in the directory `/fs/hfs` (this contains the GPL). In the directory `arch/sparc/lib/` there is a file called `COPYING.LIB` that contains the LGPL. A file in the directory `sound/oss/` includes a file called `COPYING` containing the GPL.

The main directory contains a file called `CREDITS` listing the main contributors to the kernel. The list is organised alphabetically based on the surnames of the contributors, whereby their name, e-mail address and a short description of the contribution are included. Apart from that, there is another file called `MAINTAINERS` in which the names of those considered responsible for the several kernel parts are mentioned. These people must be contacted should one wish to make a contribution to that specific module. Finally, this directory contains a file called `README` giving a concise description of the software and of the method to compile it. Under the heading ‘What is Linux?’ mention is made, among other things, of its distribution under the GNU General Public License.

The kernel consists of more than 12000 files, part of which is documentation.<sup>96</sup> Of the approximately 12000 files, some 1311 files contain the term

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<sup>96</sup> The figure 12090 has been found by giving the command: ‘`find * I grep-v ^d I wc-l`’.

COPYING (the name of the file containing the GPL).<sup>97</sup> In the ‘kernel’ directory containing system independent files, none of the 47 files refers to the GPL using the term COPYING. In the ‘lib’ directory, which also contains system independent files, only 2 out of 40 files refer to the GPL using the term COPYING.

To examine each file with respect to the use of differently formulated references to the GPL would go beyond the scope of this book, but we can safely conclude that not every kernel file contains a GPL reference. Even in the more important code, such as the code in the lib directory, references to the GPL cannot always be found. For some short three-sentence files this would not be required since they are not original enough to enjoy copyright protection. Should they be compiled, the GPL does not come into play.

### *The Apache server*

The official version of the Apache server is available on [httpd.apache.org](http://httpd.apache.org). A hyperlink on the left of the homepage called ‘License’ refers to a web page on which the Apache Software Licence has been published. On the homepage, it is possible to make a hard disk copy of the source code of Apache without the licence, in this case version 2.0.48.<sup>98</sup>

After decompressing the file, several directories and in the main directory a file called LICENSE have been created. This file contains the Apache Software Licence. In the directory, a file called ABOUT-APACHE contains a short history of the server, but does not explicitly state that the software is being licensed under the Apache licence. The file in question does explain why Apache is ‘free’. In addition there is a file in the main directory called CHANGES that contains a list of all the changes made to the software since 18 March 1995 (version 0.2) and a file called INSTALL that describes the method to be used to install the computer program. Both files do not mention the licence under which Apache is distributed. The file README contains a reference to the file LICENSE under the heading Licensing.

The project consists of 2100 files, part of which is documentation.<sup>99</sup> Approximately 700 files contain a reference to the Apache Software Licence.<sup>100</sup> Even the more important code of the project does not always contain a reference to the licence under which it is brought out. Of the 176 files in the direc-

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<sup>97</sup> The figure has been found by giving the command: ‘grep -r COPYING \* I wc -l’.

<sup>98</sup> The file that has been downloaded is called [httpd-2.0.48.tar.gz](http://httpd-2.0.48.tar.gz).

<sup>99</sup> The figure 2162 has been found by giving the command: ‘find \* I grep -v ^dl wc -l’.

<sup>100</sup> The command is: grep -r “Apache Software License” \* I wc-l.

tory called ‘server’, 67 contain references to the Apache Software Licence. In the directory called ‘modules’, 129 out of 483 files contain such a reference. Some of the files containing no more than three lines contain no reference to the Apache Software Licence probably because of their small size. When the software is compiled no mention is made of the licence.

### 3.2.2 Off-line distribution

#### *The Debian DVD*

Today software stores sell compilations of OSS with a user-friendly installation, so-called distributions, on CD-ROM or DVD. Examples of these distributions are the Red Hat, Suse, and the Debian distribution, which will now be discussed.

While this article was being written, DVDs were on sale containing the Debian distribution version 3.0r0 ‘Woody’. These DVDs are sold in a plastic box wrapped in foil. At the back there is a description of the software and the hardware to be used. In addition, the following text can be found:

‘This software comes with no warranties. The programmers who have created this software have done so for the benefit of the community. No guarantee is made as to the suitability of the software for any given purpose. However, since the software is free, you are empowered to modify that software to suit your needs and to enjoy the benefits of the changes made by others who have extended the software in this way.’

In the box there are two discs. One is a DVD containing data on both sides. One side contains the source code of the programs. The other side contains the binary code of the programs. The box also contains a CD-Rom containing an update of the software on the DVD.

Both sides of the DVD can be read by loading the DVD. In the main directory of both sides of the DVD there is a file called README.txt. This file contains a description of the Debian CD and instructions for the installation of the software. In the file there is a paragraph containing the following text:

‘You are completely free to manufacture and (re-)distribute CD-ROMS of the Debian GNU/Linux Operating System, like this one. There is no charge from us (but of course donations are welcome).

For all needed information, and contact addresses, please refer to <http://cdimage.debian.org>.’

In addition, the text contains the following warning:



‘...this is an unofficial CD of the current development version of the Debian system. This means that all sorts of bugs may be present anywhere in the system.’

Finally in this file several references can be found to other DVD files including information on how the distributor may be reached.

A file called README.html contains similar information. In this directory other files can be found describing where copies of the DVD Debian distribution can be obtained and the way users can obtain certain cryptographical software from the US. On both sides the DVD is divided into directories. On the side containing binary software, software-packages that can be installed can be found, stored in a certain file format. On the side containing the source code software packages are stored in a compressed format. The compressed files can be copied, uncompressed, compiled and installed without the licence being shown on the user’s computer screen. The procedure is similar to the procedure involved in installing the package on the Internet.

### *Embedded open source software*

For the sake of completeness, a remark must be made concerning the distribution of OSS incorporated in hardware. This may involve a complete distribution that has been installed on a computer as well as OSS distribution via a DVD-player. The installation of a complete open source operating system in computers has not yet become a widespread phenomenon in the Netherlands. In view of the lack of current examples, this distribution form will not be discussed any further.

## 3.3 THE USE OF OPEN SOURCE SOFTWARE

As discussed in previous sections, OSS is widely used in many sectors. The next paragraphs will give an overview of this development.

### 3.3.1 Considerations with respect to the use of open source licences

The considerations of licensors and licensees determining their use of open source licenses vary.<sup>101</sup> Evans and Reddy have distinguished the following considerations:<sup>102</sup>

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<sup>101</sup> This issue differs from the issue pertaining to what motivates a computer programmer to deliver a contribution to an open source project. The latter question will not be discussed any further. See for an overview Bonaccorsi and Rossi 2003, p. 5; Raymond 1999; and Lerner and Tirole 2000, p. 14.

<sup>102</sup> Evans and Reddy, pp. 378-383.

1. Security, stability and privacy;
2. Cost savings;
3. Independence with respect to the software supplier;
4. Stimulating innovation;
5. Stimulating competition;
6. Stimulating national industry;
7. Ideology.

This list has been compiled for the purpose of discussing government initiatives stimulating the use of OSS. These considerations will also play a role in a commercial setting.

The OSI lists the following considerations with respect to the use of open source licenses for software production:<sup>103</sup>

1. Development speed;
2. Lower overhead;
3. Closeness to the customer;
4. Broader market;

Occasionally, companies will publish software under an open source licence giving in to the pressure exercised by the open source community. An example of this is the disagreement that occurred as a result of the growing use of the Qt-library that had been previously licensed under a license considered insufficiently free for free software development purposes. Trolltech, the developer of Qt, then decided to bring out Qt under three licenses: the Qt License, the GPL and a commercial licence.<sup>104</sup> The user can choose under which licence he or she will use the software.

For the developer the most important disadvantage of using an open source licence is the relative loss of control over the licensed product. Another commercial disadvantage could be the impossibility to charge fees for software use (charging is possible for the distribution). In the end the decision to bring out software under an open source licence, or not, will depend on the situation in question.

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<sup>103</sup> See OSI 'Open Source Case for Business', <[http://www.opensource.org/advocacy/case\\_for\\_business.php](http://www.opensource.org/advocacy/case_for_business.php)>.

<sup>104</sup> See Trolltech, 'Trolltech offers a choice in licensing with the addition of GPL licensing for the upcoming release of Qt', 4 September 2000, at <<http://www.trolltech.com/newsroom/announcements/00000043.html>>.

### 3.3.2 Governments

One of the most talked-about developments in the use of OSS is taking place at a governmental level.<sup>105</sup> Many countries are either currently considering the use of OSS, are favouring such a use, or are requiring the use of OSS. A list of all these countries has not been included in this study, as it would go beyond its scope.<sup>106</sup> Important developments in this area, however, will be discussed below. Incidentally, the use of OSS is generally associated with the use of open standards, standards which, simply put, can be used by anyone. While the reason for using either OSS or open standards is often the same, open standards need to be distinguished from OSS. In the context of this study, only OSS will be discussed.

#### *International context*

A number of surveys of legislative bills and regulations that are meant to stimulate the use of OSS by various governments around the world have been conducted.<sup>107</sup> Among others Australia, Brazil, China, Italy, Singapore, Spain, Taiwan, Venezuela and Peru are taking measures on a national, municipal, or local level encouraging or requiring the use of OSS. France and Germany have made statements expressing their preference for the use of OSS by their respective governments.<sup>108</sup> In Munich the city council on 28 May 2003 went as far as to decide to exclusively use Linux on all desktops and laptops.

National governments of a number of countries value the use of OSS for stimulating the growth of Third World countries. Consequently, UNCTAD has devoted a separate chapter of its 'E-commerce and development Report 2003' on the implications of free and OSS for ICT policy and development. During the World Summit on the Information Society of the United Nations and the

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<sup>105</sup> See on this subject Evans and Reddy 2003; Suzor, Fitzgerald and Basset 2003; Hahn 2002 and Schmidt and Schnitzer 2003. See also European Commission 2003, p. 9.

<sup>106</sup> See however: Center for Strategic and International Studies, *Government Open Source Policies*, Federal Policy and Open Source Software, 13 December 2004, available at <[http://www.csis.org/tech/OpenSource/0408\\_ospolicies.pdf](http://www.csis.org/tech/OpenSource/0408_ospolicies.pdf)>.

<sup>107</sup> Evans and Reddy 2003, pp. 371 and further. See also Schmidt & Schnitzer 2003; Fitzgerald 2002, p. 7; and Suzor, Fitzgerald and Basset 2003. See MITRE, 'Use of Free and Open-Source Software in the U.S. Department of Defense' at <<http://www.egovos.org/pdf/dodfoss.pdf>> for an American policy document on the use of open source software in the US Department of Defense.

<sup>108</sup> The French government has placed a publication in the French and English language on the internet educating the public on which licenses to choose, see ATICA, *Guide to choosing and using free software licenses for government and public sector entities*, at <[http://www.adae.pm.gouv.fr/upload/documents/free\\_software\\_guide.pdf](http://www.adae.pm.gouv.fr/upload/documents/free_software_guide.pdf)>.

International Telecommunication Union, attention was paid to this aspect of OSS as well.<sup>109</sup>

### *Europe*

On a European level there does not exist a set of concrete rules and regulations with respect to the use of OSS. One of the policy objectives of the e-European action plan 2002 has been ‘to (p)romote the use of OSS in the public sector and e-government best practice through exchange of experiences across the Union (through the IST and IDA programmes).’<sup>110</sup> These aims have been reiterated in the e-Europe action plan of 2005.<sup>111</sup> In light of this European policy, various research projects, ordered by the European Commission, have been conducted on OSS.<sup>112</sup>

As a result of these efforts, the bureau for the Interchange of Data between Administrations (IDA) recently published the Open Source Migration Guidelines, an extensive document that formulates a set of guidelines for the migration towards OSS.<sup>113</sup> Furthermore, the IDA has published the results of a report on the use of OSS in the public sector in addition to a report on the joint use of OSS.<sup>114</sup> Furthermore, mention should be made of the report of the Working Group on Libre Software and the research of the Institute of Infonomics, both of which were carried out under the authority of the European Commission.<sup>115</sup>

Facilitating the development and the use of OSS is indeed a high priority of the European Commission, which transpires at different levels. For instance, the Commission required, in the context of its ongoing antitrust investigation, that Microsoft offer more-flexible licensing terms for certain computer code. However, the company continues to balk at sharing information that will allow OSS to flourish, one of the chief goals of the long-running antitrust case. The

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<sup>109</sup> See United Nations Conference on Trade and Development, *E-commerce and development Report 2003*, at <<http://r0.unctad.org/ecommerce/>>, and consideration 27 of the Declaration of Principles Building the Information Society: a global challenge in the new Millennium, WSIS-03/GENEVA/DOC/4-E 12 December 2003.

<sup>110</sup> See *An Information Society for All, Action Plan prepared by the Council and the European Commission for the Feira European Council 19-20 June 2000*, Brussels 14 June 2000, p. 23.

<sup>111</sup> See *eEurope 2005: An information society for all, an Action Plan to be presented in view of the Sevilla European Council, 21/22 June 2002*, Brussels 28 May 2002, COM(2002) 263 def., especially pp. 10-11, 16 and 18.

<sup>112</sup> Evans and Reddy 2003, pp. 372-373.

<sup>113</sup> IDA 2003.

<sup>114</sup> IDA 2001 and IDA 2002.

<sup>115</sup> Working Group on Libre Software 2000 and International Institute of Infonomics, University of Maastricht & Berlecon Research 2002.

European antitrust authority has demanded that Microsoft share with rivals the computer codes they need to write software that can communicate well with Microsoft's ubiquitous products.<sup>116</sup> It will be interesting to see how the tug of war between the European Commission and Microsoft will evolve over the coming months.

### *The Netherlands*

In 2000 the Dutch government adopted the resolution proposed by Vendrik ('motie Vendrik'), in which the Dutch government is requested to ensure that in 2006 all software used in the public sector is in line with open standards.<sup>117</sup> With respect to the public sector a request was also made to stimulate the distribution and development of software with an open source code and to formulate a number of concrete and ambitious goals in order to achieve this. With respect to this, it should be noted that this does not concern software distributed under an open source license but rather software with an 'open' code. Nevertheless, reference is implicitly made to OSS, considering the previous report of Vendrik and Van Tilburg in which the conditions of OSS licensing is explicitly regarded as one of the reasons for embracing this policy.<sup>118</sup>

The Open Standaarden en Open Source Software (OSOSS) program plays an important part in the realization of these ambitions.<sup>119</sup> The program is carried out by ICTU under the authority of the Ministry of Interior Affairs and the Ministry of Economic Affairs. The program forms a part of the national software policy, which is based on the following two general principles:<sup>120</sup>

1. The application of open standards wherever possible.
2. Considering open source software as an alternative option when deciding on government purchases.

A number of activities are carried out by the OSOSS. First of all, the OSOSS educates the public on the use of OSS. With the publication of the Catalogue of Dutch Open Standards or CANOS ('Catalogus Nederlandse Open Standaarden')

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<sup>116</sup> European Commission, 'Commission concludes on Microsoft investigation, imposes conduct remedies and a fine', Press Release, IP/04/382 Brussels, 24 March 2004.

<sup>117</sup> Kamerstukken II (Parliamentary notes II), 2002/03, 28 600 XII, No. 30.

<sup>118</sup> Vendrik and Van Tilburg 2002. Tweede Kamer (Aanhangsel van de Handelingen) 2004-05, KVR22205, No. 903, 15 February 2005, pp. 1915-1916. <Parliamentary history >

<sup>119</sup> See <<http://www.ososs.nl/>>.

<sup>120</sup> Accompanying letter with the 'Programma Open Standaarden en Open Software voor de overheid', 19 February 2003, (RE) bzk030075.

practical meaning is given to the general aim of stimulating open source standards within the Dutch government. Furthermore, contact between service providers and departments of government is made possible by the OSOSS, the Overheid Software Uitwisselplatform (The Governmental Software Exchange-platform) has been created and government institutions are given the opportunity to exchange OSS. Finally, a survey of current open source applications has been put together and made available by the OSOSS.

In December 2003 the OSOSS published the results of research on the use of open standards and OSS by the Dutch government<sup>121</sup> The researchers came to the conclusion that 85 per cent of governmental organizations is already using one or more open source systems. The most important reasons for deciding on the use of OSS were the enormous dependence on software suppliers and the fact that license fee costs were absorbing a relatively large part of the ICT budget.

At the municipal level, the use of OSS is being considered or is already being used. The city of Amsterdam has started an open source pilot project. The city was already using Web-in-a-box, a program that has been developed to professionally support governmental subdivisions of Amsterdam and the Amsterdam public services to build their own web site. This software is based on the MMBase program.<sup>122</sup> The city of Leeuwarden has started to use MMBase as well.<sup>123</sup> An external consultant has been appointed to adapt the package to the wishes of the city government.

In this regard, it can be noted that the government is a software user that is making contributions towards software development. Parts of MMBase consist of contributions made by the municipality of Amsterdam.<sup>124</sup> In the future, we might see governments operating as both producers and distributors of software.

### 3.3.3 Businesses

Dutch companies are increasingly making use of OSS. At the same time it is difficult to measure the use of OSS since it cannot be based on the number of licenses sold and because no hard data exists. On an infrastructural level –

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<sup>121</sup> Ghosh and Glott 2003.

<sup>122</sup> See <<http://www.mmbase.org/>>.

<sup>123</sup> This could be concluded from a presentation given by a representative of the city of Leeuwarden at the 'Open Source Ervaringen' (Open Source Experiences) congress held in Rotterdam on 20 January 2004.

<sup>124</sup> This was shown in a presentation by Jo Lahaye on MMBase at the Open Source Ervaringen congress on 20 January 2004.

Internet services and database servers – it can be assumed that an important part of the software used is open source. In addition, large companies such as Rabobank and Shell make use of specialized OSS.<sup>125</sup>

### 3.3.4 Individual users

Finally a small segment of current consumers are using OSS. Google has given an indication in that direction with respect to the number of visitors using an open source operating system: in August 2003, 1 per cent of Google's visitors used an open source operating system.<sup>126</sup> Mozilla, an open source web browser, enjoys a market share among Google visitors of approximately 5 per cent.

### 3.3.5 Organizations

OSOSS is fulfilling an important function in the education of government institutions on the use of OSS. The Dutch Open Source Society ('Vereniging Open Source Nederland' or VOSN) has the same function with respect to Dutch businesses. The VOSN is a Dutch organisation, which, according to its statutes, tries to encourage the development and the professional use of open source products in the Netherlands. More than 60 companies have become members of this organization, among others multinationals such as IBM and Hewlett Packard, but above all Dutch organizations such as VPRO Digitaal (part of VPRO broadcasting association) and the TU Delft (Technical University of Delft).<sup>127</sup>

In the Netherlands, the 'Nederlandse Linux Gebruikers Groep' or NLLGG has been created to bring together Linux users in order to encourage mutual support, to promote Linux and the underlying Linux philosophy, according to the official aims of the NLLGG.<sup>128</sup> In order to achieve these goals, the NLLGG organizes meetings, maintains a web site and offers mailing lists.

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<sup>125</sup> A Rabobank presentation on the same congress (*above*) of 20 January 2004, see also Paul Krill, 'Shell, IBM tout grid, clustering' *InfoWorld* 26 June 2003, at <[http://www.infoworld.com/article/03/06/26/Hnibmshell\\_1.html](http://www.infoworld.com/article/03/06/26/Hnibmshell_1.html)>.

<sup>126</sup> See <<http://www.google.com/press/zeitgeist/zeitgeist-aug03.html>>. For this percentage the term 'Linux' is used.

<sup>127</sup> See <<http://www.vosn.nl/>>.

<sup>128</sup> See <<http://www.nllgg.nl/>>.





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## Chapter 4

# OPEN SOURCE AND PRIVATE LAW

As the previous chapters have demonstrated, the development and distribution of OSS in many respects differs significantly from that of conventional software. The development process of most OSS is very decentralised, as it may involve hundreds to thousands of individual programmers scattered across the world. On the user's side, OSS appeals to a large and varied public in the Netherlands, ranging from governments, businesses, individual users, and institutions, either in the form of custom-made software or of mass-marketed software. To support such a distinct development and distribution model, the open source community uses a different set of licensing conditions than those used by conventional software developers. The main characteristic of an OSS licence is the freedom granted to the licensee to use, reproduce, modify, and distribute the software, aspects which will be examined in detail in the following chapter on copyright law. From a private law perspective, however, open source licences do show important differences from normal software licences, including the copyleft clause and the systematic disclaimer of warranty and limitation of liability. Moreover, these licences were developed from an American perspective, thus giving rise to the question of whether their formation and content would comply with Dutch law.

Among the more striking particularities of open source licences is the share-alike clause (copyleft) to be found in some open source licences, like the GPL, and the systematic warranty disclaimer and limitation of liability, found in most if not all types of open source licences. The obligation to distribute modified versions of the software subject to the same conditions of use is one of the core elements of the GNU GPL licence. This clause is intended to perpetuate the requirement to make the source code available to subsequent developers and to distribute the modified software on a royalty-free basis. But is it valid under Dutch law? How should it be qualified and how can it be binding on subsequent software developers? Are systematic warranty disclaimers and limitations of liability admissible under Dutch law? Does the fact that the software is distributed free of charge change anything to the validity of such stipulations? Though probably less problematic than the share-alike clause and the exclu-

sion of warranty and liability, the clause pertaining to the termination of the agreement does differ from that of conventional software licences and therefore also deserves some attention. All these conditions may very well be valid and enforceable as such, but only as long as the contract can be regarded as binding on the parties. In view of the sheer number of parties potentially involved in a single transaction, the question arises whether the agreement concluded at a distance has been validly formed between the parties.

In the following pages, the legal nature of a typical OSS licence agreement, and attempt to identify the parties to such a licence is discussed. This will allow for a better understanding of the manner in which OSS licences are concluded between the parties and to consider in section 4.2 of this chapter, whether the formation of such agreements generally meets the criteria of the law. We then turn to the analysis of the validity under Dutch civil law of a number of clauses that one encounters in OSS licences and that are known to differ from those of conventional software licences. Since a review of all the clauses contained in a typical OSS licence would go far beyond the bounds of this study, analysis is limited to the examination of the most outstanding clauses: the share-alike clause, the warranty disclaimer, the limitation of liability, and the termination clause. In view of the explosion of licences that are considered to fall under the definition of ‘open source’, it is not our intention to examine every one of them. Instead, we shall concentrate on the provisions of the GNU GPL, the BSD, and the MPL.

## 4.1 NATURE OF THE AGREEMENT

Until recently, the legal nature of the GPL, the BSD or the MPL was a rather controversial issue in the United States. Sceptics of the open source movement contested that open source licences, like the GPL and the BSD, could qualify as contracts in the common law sense because they lacked the proper consideration. The concept of ‘consideration’ is unique to common law systems; it refers to the mutual obligation that is created by the agreement. Since OSS is made available on a royalty-free basis, commentators had argued that there was insufficient consideration for the agreement to qualify as a contract under most State contract laws. The consequence was that the licence could not be enforced as a bilateral contract, but merely as a unilateral grant of permission to the user. Today, the discussion in the main has mostly died down and a majority of commentators now agree that even the most unrestrictive open source licence imposes at least a minimal obligation, such as the obligation to distribute the software with a proper copyright notice, ensuring that consideration in

the legal sense is exchanged and an enforceable contract is created through the licence.<sup>129</sup>

In Europe, the nature of open source agreements has not been discussed as extensively as in the United States. Most commentators would seem to be satisfied that open source agreements, like any other software agreement, can be qualified as a contract under the laws of most European countries.<sup>130</sup> A contract consists in the parties' manifestation of their actual or apparent intention to be bound by obligations and to give them legal effect.<sup>131</sup> In addition, the existence of other, albeit minimal, obligations flowing from an OSS agreement accompanied by the fact that the software is distributed on a royalty-free basis does not in principle affect the synallagmatic nature of the agreement. For the same reason, OSS agreements cannot be qualified as donations under Dutch law.<sup>132</sup> Open source software agreements are generally referred to as licence contracts, which form an un-named category of contracts in the Dutch Civil Code. Their legal nature must be examined on a case-by-case basis, according to the intention of the parties.

At the outset, it is important to emphasise that the transfer of physical support embodying a copyright protected work, by sale, donation or other form of alienation, does not entail a transfer of the author's rights on this copyright protected work. The acquirer of physical support may own this support, but he must obtain a licence from the copyright owner in order to be able to use the program.<sup>133</sup> These two aspects of the transfer of a computer program embedded on a CD-ROM or a DVD or other tangible support are often confused with one another. It is not uncommon to see that the element of the transaction pertaining to the authors' rights will be disregarded and that the entire document will be seen merely as operating the transfer of the physical embodiment of the copyright protected work. The object of a software licence is in fact not only to regulate the private law aspects of the transaction, such as determining the extent of the guarantee granted on the product, but also to specify the extent of the use that the licensee is entitled to make of the copyright protected software. Since the transaction must be seen as a whole, it would be wrong in our opinion to let the qualification of the licence as a sale or a donation depend on whether

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<sup>129</sup> St-Laurent 2004, p. 148.

<sup>130</sup> IfrOSS 2005, p. 97.

<sup>131</sup> Guibault 2002, p. 114.

<sup>132</sup> Asser's handleiding tot de beoefening van het Nederlands burgerlijk recht, Verbintenissenrecht, II. Algemene leer der overeenkomsten Eerste gedeelte. Rechtshandeling en overeenkomst, § 64.

<sup>133</sup> Hof 's-Gravenhage 20 November 2003 (*1st Flight Training*), *Computerrecht* 2004/3, pp. 134-138, with annotation by E.D.C. Neppelenbroek.

the licensee paid a price for the goods or not. Instead of qualifying the licence as a mixed transaction, we believe that the legal nature of the licence agreement should be determined as a whole, i.e. as a licence of right, since the transfer of rights from the licensor to the licensee would probably receive greater weight as being the characteristic performance under the agreement.<sup>134</sup>

Upon examining the issue of the legal nature of conventional software licence agreements,<sup>135</sup> Dutch commentators have considered whether the licence should be qualified as establishing a restricted right ('beperkt recht'), a waiver of right ('afstand van recht'), a right of action ('vorderingsrecht'), or right of use ('gebruiksrecht') in favour of the licensee. If the licence conferred a restricted right on the licensee, this right would be based on the Rights Owner's exclusive right under the Copyright Act. An important argument against the classification of a software licence as a restricted right has been to hold until today that the Dutch patrimonial system recognises a closed set of restricted rights, pursuant to Article 3:81, paragraph 1 of the Civil Code (CC). Only the legislator has the power to recognize the existence of a restricted right, and not the judge or the contracting parties. In the case of a copyright licence, the licensee obtains pursuant to the Copyright Act no prerogative that can be qualified as having an absolute character in the meaning of a restricted right. Another possibility would be to regard the royalty-free OSS licence agreement as a waiver of right. As Quaedvlieg argues, a software licence agreement does not generally constitute a waiver of rights on the part of the licensor, since the latter does not renounce the possibility to exercise his copyright in the future. On the contrary, the grant of a licence by the 'Rights Owner' does not arise from the holder's desire to forego his rights, but rather from the wish to exploit them.<sup>136</sup> This remark certainly holds true in the context of open source licences. The fact that an OSS developer grants the licensee the right to use, reproduce, modify, and distribute the software, by no means implies that he has waived his copyright on the work. As seen in chapter 5 below, the freedom granted to the licensee is certainly subject to a number of strict conditions. The failure to comply with these conditions will lead either to the termination of the agreement or to a claim of copyright infringement or breach of contract. Article 4 of the GPL makes this point very clear when it states: 'You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the

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<sup>134</sup> On the actual scope and content of the licence, see *infra* section 5.2.

<sup>135</sup> For an analysis of the legal nature of the open source licence under German law, see Jaeger and Metzger 2002, pp. 137-145.

<sup>136</sup> Quaedvlieg 1995, p. 228.

Program is void, and will automatically terminate your rights under this License.’

Commentators would seem more generally inclined to regard a licence as a right of action conferred on the licensee. A licensee holds a right of action against the licensor insofar as the former may, on the basis of his right, demand the execution of the contractual obligation.<sup>137</sup> A right of action is in principle transferable, according to Article 3:83(3) paragraph 1 CC.<sup>138</sup> In such a case, however, the question arises whether a written instrument and a notification to the ‘Rights Owner’ are necessary conditions that must be fulfilled for the further transfer of the licence. According to the rule laid down in Article 3:94 CC, one would tend to think so. However, the application of the imperative rules of the exhaustion doctrine, whereby the first sale of a copy of a program by the right holder exhausts the distribution right of that copy, would certainly put an obstacle to the recognition of such an obligation.<sup>139</sup> According to Neppelenbroek, the most problematic aspect of applying the rule of Article 3:94 CC to the transfer of a licence right would be the obligation imposed on the licensee to notify the ‘Rights Owner’ of the transfer, which in the light of the exhaustion doctrine, could be seen as forming an unwarranted attempt to control the further distribution of the software. It is also uncertain whether the transfer of a software licence would have to be set in writing, as Article 3:94 CC would suggest.<sup>140</sup>

Whereas no consensus could emerge in the literature as to whether a software licence can be regarded as a restricted right, a waiver of right, or a right of action in favour of the licensee, Dutch commentators seem to agree that software licences should be seen as conferring a right of use on the licensee. Accordingly, a software licence must be regarded as an agreement whereby the licensor grants the licensee permission to perform certain acts with respect to a copyright protected work, acts which would otherwise be prohibited on the

<sup>137</sup> Asser’s handleiding tot de beoefening van het Nederlands burgerlijk recht Verbintenissenrecht II. Algemene leer der overeenkomsten Vierde gedeelte. De gevolgen der overeenkomsten aanzien van derden Hoofdstuk XIX. Kwalitatieve rechten en verplichtingen.

<sup>138</sup> See Gerechtshof te Arnhem, No. 98/462, 29 January 2002, LJN: AD9115. This is a particularity of the Dutch copyright system, which contains no provision regarding the possibility for the licensee to transfer his right to a third party. According to Art. 122-6 of the French CPI, the grant of a licence is the exclusive right of the author. According to Art. 34(1) of German Copyright Act, the licensee may transfer his right only subject to the prior authorisation of the ‘Rights Owner’.

<sup>139</sup> For a more extensive development on the exhaustion doctrine, see *infra* section 5.2.4.

<sup>140</sup> E.D.C. Neppelenbroek, annotation by Hof ’s-Gravenhage 20 November 2003 (*1st Flight Training*), *Computerrecht* 2004/3, pp. 134-138. On the requirement of a written instrument, see *infra* section 5.2.6.

basis of the licensor's exclusive right on the work.<sup>141</sup> In this sense, the GPL, the BSD, and the MPL do not substantially differ from most conventional software licence agreements. Although the permission granted pursuant to a typical OSS licence may be much broader than that of a conventional software licence, the purpose of both types of licence is essentially the same, so that both types of licence should receive the same qualification.

Does the requirement, present in most OSS licences, to make the source code available to the public change anything to this conclusion? Attorney-General Langemeijer considered this issue in the context of a case before the Supreme Court, where the appellant in cassation had signed an agreement promising in exchange for payment in 3 instalments of a certain sum to deliver to the respondent the computer program, including the source code and documentation.<sup>142</sup> The preamble to the agreement specified that the appellant remained the sole owner of the rights on the software and that the respondent obtained an 'exclusive right' to exploit the work, including the right to develop, modify, promote, maintain, rent, lease, sell or otherwise make the program available to users. The dispute arose as a consequence of the respondent's interruption of payments, which occurred after the latter had gotten wind of the existence of a similar agreement signed between the appellant and a third party with respect to the same software. Who was the 'Rights Owner' of the software in this case? Could the respondent be held liable to pay damages for breach of contract? The Supreme Court followed the Attorney-General's conclusion and rejected the appeal. In his analysis of the case, the Attorney-General drew a distinction between a licence for the use of a computer program and a licence for its exploitation. In his opinion, the supply of the source code could be the consequence of an exploitation licence, but it is not a decisive factor in the distinction. The decisive criterion is what the reasonable intention of the parties was at the time of concluding the agreement, following the interpretation principle known as the *Haviltex*-rule.<sup>143</sup> Whether the agreement qualifies as a licence for use or a licence for exploitation, however, the fact remains that the parties are always free to provide for the delivery of the source code and that such delivery does not have the effect of transforming the nature of the licence into an assignment. This remark holds true for the GPL, the BSD, as well as the MPL.

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<sup>141</sup> See Quaadvlieg 1995, p. 226; and Struik 2002, p. 280.

<sup>142</sup> HR 20 June 2003, Nr. C02/230HR (*Columbus Automatiseringsgroep*), with conclusions of the Attorney General Langemeijer, § 3.3.

<sup>143</sup> HR 13 March 1981, nr. 11647, *NJ* 1981 No. 635 (*Haviltex*).

## 4.2 PARTIES TO THE AGREEMENT

A more complex issue concerns the identification of the parties to an open source licence. Whereas the identification of the licensee poses no great difficulty – it is the person who receives a copy of the software – that of the licensor can be problematic, mainly because the text of the licence does not always contain a clear indication of the name(s) and address(es) of the physical or legal person(s) granting the licence. The lack of proper identification of the licensor could have practical consequences at least in two situations: first, in relation to the enforcement of the purely contractual obligations deriving from the licence; and second, in relation to the proper functioning of the share-alike clause of the GPL.

In the first case, we believe that a sharp distinction should be made between the copyright owner(s) on the software and the licensor(s) of the software. As explained more elaborately in section 5.1 below, the identity of the copyright owner is a factual question, which must be decided on a case-by-case basis and which must take into account subsequent transfers of rights. Since we generally regard open source licence agreements as contracts, the identity of the licensor must be established according to the principle laid down in the *Haviltex* case, i.e., taking the respective expectations of the parties into account. In principle, the licensor and the copyright owner can, but need not necessarily, be the same person for the licence to be valid. Moreover, even if the licence must be considered as a whole, this does not take away the fact that a number of obligations contained in a typical open source licence may be regarded as the exercise of the prerogatives derived from the copyright protection, but with the remaining obligations coming exclusively from the contractual agreement itself. For example, the GPL imposes a number of contractual obligations on the licensee (such as the obligation to disclose the source code, to distribute modifications of the code under the GPL, to put a copyright notice with the names of all authors and the prohibition to ask for royalties), which have nothing to do with copyright protection. It is not – and will never be – an infringement of copyright law to do any of these acts. The only way that a licensor can enforce these specific obligations is on the basis of the GPL, not on the basis of the copyright act. In order to facilitate the future enforcement of the licence, it would therefore be important not only to ascertain who the copyright owner is, but also who the licensor is.

Second, the lack of proper identification of the licensor can make the application of the share-alike clause more difficult. According to Article 6 of the GPL, ‘each time you [a programmer] redistribute[s] the Program (or any work based on the Program), the recipient automatically receives a licence from the

original licensor (...).’ If the contact details of the licensor(s) are not mentioned in the licence, how can a subsequent user ascertain with whom he is contractually bound? Moreover, given the layered structure of open source production, it is unclear whether the licensee obtains a licence only from the very last programmer in the chain or also from every programmer involved in the development process of the particular version of that software. Does the GPL licence only bind the last licensee with the original licensor or does it also bind all other developers in the chain? For the open source ideology to reach its objective, one would think that the licensee should be contractually bound to all developers in the chain.<sup>144</sup> Again, without proper identification of the licensors along every step of the development process, how can a subsequent user ascertain with whom he is contractually bound? The text of the MPL is probably the clearest of the 3 types of licences examined here. Article 2 of the Mozilla licence provides for the grant of a licence to the licensee from the initial developer, as well as from each contributor.

In practice, a vast amount of OSS is made available via the popular OSS catalogues, SourceForge, Freshmeat and the Free Software Directory. For each particular software product, the sites usually list the names of the administrators, along with those of the contributors. The information given by these software catalogues is most often insufficient to know whether the persons mentioned as administrators and contributors are actually the licensors of the programme. For each particular software product, the OSS catalogues also indicate under which licence the software is distributed, referring the user to the web sites of the GNU, the OSI or the FSF and to the licences that can be found there. In some cases, the licence has been programmed to appear as well on the user’s computer screen before or during the course of the installation process,<sup>145</sup> accompanied by the contact details of the physical or legal person(s) granting the licence. In many cases, however, the user can only guess who the licensor is.

The fact that OSS licences contain too little information to allow the proper identification of the licensor(s) holds particularly true for the BSD licence, which is so succinct that the user of the software must understand that the name appearing beside the copyright sign is the grantor of the licence. Unless the licensor has been particularly well inspired to add a paragraph at the bottom of the licence with his contact details, the names and address information of the party granting the licence are then nowhere to be mentioned in the BSD licence. In comparison to this, the identity of the licensor under a MPL is much

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<sup>144</sup> De Preter and Dekeyser 2004, p. 216.

<sup>145</sup> For further information on ‘click-wrap’ licence agreements, see section 4.3.3 *infra*.



clearer: according to the Mozilla licence the licensor is either the ‘Initial Developer’, defined as the individual or entity identified as the Initial Developer in the Source Code notice required by Exhibit A, or a ‘Contributor’, defined as each entity that creates or contributes to the creation of Modifications, or both. For more certainty, the names of the possible contributors are also listed in Exhibit A, in addition to the name(s) of the initial developer. The MPL therefore leaves no doubt as to the identity of both the copyright owner and the licensor of the computer code.

The licensing practice involving the GPL licence presents more difficulty. Indeed, the header of the GPL usually contains no mention of the exact name(s) and address(es) of the person(s) granting the licence, other than a copyright notice in the name of the FSF. The generalised use of unmodified versions of the GPL could probably be explained by the fact that the FSF claims to own the copyright on the GPL. To adapt the licence header to the situation at hand, a licensor would have to obtain the prior authorisation of the FSF. As a result of this practice, licensees may be misled into thinking that the FSF acts as their counterparty under the contract. This may be the case if the individual authors of contributions to a specific OSS project have transferred their copyright to the FSF,<sup>146</sup> but this is far from always the case. Confusion can therefore arise as to the circumstances when the FSF is the licensor and when it is not. Moreover, even if the FSF is not the ‘Rights Owner’, it may have signed a contract of agency with the copyright owner, allowing it to defend the latter’s interests. As long as such a contractual relationship of agency exists, no problem arises. The question becomes more complex when the copyright owner and the FSF have not signed such an agreement. If the FSF consistently appears on behalf of the software developer, it could be argued that it is acting as a representative of the actual copyright owner, in the sense of Article 3:67 of the CC. In such a case, however, the law requires that the identity of the true licensor be disclosed within a reasonable delay. To add to the confusion, Article 9 of the GPL states that:

‘The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of

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<sup>146</sup> See section 7.1 *infra*.

any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.’

Through this clause in the GPL, the FSF reserves for itself the possibility to make technical or legal modifications to the terms of the licence.<sup>147</sup> In principle, such possibility should be reserved to the licensor not to a (natural or legal) person, who is not bound by the contract.

In practice, little case law has emerged in relation to the GPL or any other open source licence. So far the identity of the parties to the agreement has not raised any difficulty. This does not take away the fact, however, that the lack of proper identification of the licensor(s) is prone to generate ambiguous situations. It should be clarified in order to avoid the intervention of the courts. Generally speaking, whoever the licensor may be, the licensee has a right to expect that the (legal or physical) person granting the licence is indeed competent to do so. In all cases, it is a question of fact and evidence whether the author of the code or the FSF is the proper party to the agreement.

What if the end-user acquires the software not directly from the producer, but rather from a distributor? Who is then party to the contract, and to which contract? Uncertainty is most likely to arise in the case of the off-line distribution of OSS. Software products are generally offered for sale on the retail market either with the producers standard contract terms inserted in a box, published inside the instruction manual, or programmed to appear on the user’s computer screen before or during the installation of the software. Depending on the circumstances prevailing at the time of the purchase, the end-user may actually be bound by two contracts: a sales agreement with the retailer or bookstore, and a licence agreement with the software producer. Off-line distribution of OSS is no different. Taking the Linux kernel as an illustration, this product can be purchased at the local bookstore from different distributors, like Red Hat or SuSe Linux. Whereas the buyer of the product will typically enter into a sales agreement with the retailer or bookstore with respect to the physical embodiment of the software (the CD-ROM, in most cases), with whom will the buyer conclude a licensing agreement for the right to use the software? Is the licence agreement concluded with Red Hat or SuSe Linux, as distributors of the product, with the FSF, as owner the copyrights on the GPL, or with Linus Torvald and possibly thousands of other contributors, as copyright owners on the software? In the case of the on-line distribution of OSS products, there is in principle no need for a sales agreement with a distributor, first because producers

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<sup>147</sup> IfrOSS 2005, p. 10.

can license their product directly to the user; and second, because the software is usually made available free of charge anyway. Of course, should the distributor decide to offer extra guarantee, technical support or training then, an agreement may have to be concluded with the user. The licence agreement from the software producer may in fact constitute the only source of contractual obligation to which the user may be bound.<sup>148</sup> As we shall see in the following section, the question is, however, whether the licence agreement is properly formed so as to bind the user.

### 4.3 FORMATION OF CONTRACT

We have seen in section 3.2 above that, unless the OSS is sold to a particular enterprise or governmental organisation as customised software, the vast majority of OSS is distributed to the public subject to the terms of a mass-market licence. With respect to the on-line distribution of OSS, the terms of the licence may be programmed to appear in various ways on the user's computer-screen display. In some cases, the user can download the desired computer program onto his own computer only once he has given assent to the terms of the on-line screen licence, by clicking with the mouse in the appropriate dialogue box. In other circumstances, the licence terms are simply made available for consultation by the user via a hyperlink located close to the download button. In yet other cases, like the on-line distribution of the Linux kernel, the user is expected to consult the file called 'COPYING' that is located somewhere in the main directory of the downloaded software. Other times, the terms of the licence are nowhere to be found and the user is, at most, bound by an implied licence. With respect to the off-line distribution of OSS, retailers, like Red Hat and SuSe, most commonly sell open source products on a CD-ROM or a DVD inserted in an instruction manual, or somewhat less frequently, packed inside a box.<sup>149</sup> Whether the CD-ROM comes in a book or in a box, the licence terms are generally communicated to the user only at the time of installing the software onto his own computer: either by clicking with the mouse in the appropriate dialogue box or by consulting the file called 'COPYING' located somewhere in the main directory of the software.

Are these agreements validly formed? Are users bound by the licence terms? In order to answer this question, we first give a brief overview of the law applicable in the Netherlands regarding the formation of contracts. With respect to

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<sup>148</sup> Stuurman 2004, p. 91.

<sup>149</sup> Stuurman 2004, p. 89; Guibault 2002, p. 201.

non-negotiated contracts, the juridical act leading to the formation of an agreement can be divided into a sequence of 3 elements: the exchange of will between the parties, the acceptance of the core stipulations of the agreement and the applicability of the general conditions of sale. Whereas the particular development and distribution model of OSS may have an impact on all three elements of the formation of the contract, we will consider in turn the principle of offer and acceptance, the notion of ‘core stipulation’, as well as the special provisions of the CC concerning the formation and content of standard form contracts. On the basis of this review, we analyse for each step of the contract formation process how open source licences are concluded and whether they meet the requirements of the law.

#### 4.3.1 Offer and acceptance

Article 6:213 of the Dutch CC states that a contract is a multilateral juridical act whereby one or more parties assume an obligation towards one or more other parties. Juridical acts are defined in Article 33 of Title 2 of Book 3 of the CC, as requiring an intention to produce juridical effects, which intention was manifested by a declaration. Article 3:35 adds that ‘the absence of intention in a declaration cannot be invoked against a person who has interpreted another’s declaration or conduct, in conformity with the sense which he could reasonably attribute to it in the circumstances, as a declaration of a particular tenor made to him by that other person.’ In other words, a juridical act also arises from the fact that another person relies on the impression created by someone’s apparent intention to produce juridical effects.<sup>150</sup> Pursuant to Article 3:37(1) CC, a declaration of intention to produce juridical effect can be made in any form; it may also be inferred from conduct. With respect to contracts, Article 6:217 CC provides that the multilateral juridical act is formed by the exchange of an offer and its acceptance, which can take place in any form, unless the parties have agreed otherwise. This implies that, in principle, offer and acceptance can also be exchanged via electronic means.<sup>151</sup> The fact that juridical act is done for free may play a role in deciding whether an offer has been accepted or not. Commentators would seem to agree that, in the case of gratuitous juridical acts (‘rechtshandelingen om niet’), acceptance is presumed to have taken place more rapidly.<sup>152</sup>

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<sup>150</sup> Asser’s handleiding tot de beoefening van het Nederlands burgerlijk recht, *Verbintenissenrecht*, II. Algemene leer der overeenkomsten, § 8.

<sup>151</sup> Van Esch 2004, p. 157.

<sup>152</sup> Bloembergen 1998, p. 71; Spindler and Wiebe 2003, p. 874.

Do offer and acceptance differ if the transaction takes place in the digital networked environment?<sup>153</sup> In order to tackle the persisting uncertainty around the formation of electronic contracts, the European legislator adopted the directive on electronic commerce in 2000.<sup>154</sup> The directive's main objective is to ensure that the legal system of each Member State allows contracts to be validly concluded by electronic means. The scope of the directive is very broad, since it applies to all contracts concluded via electronic means, irrespective of whether a consumer is involved in the transaction or not. To this end, all 'information society services' (ISS) have an obligation to provide certain information prior to the conclusion of the contract and to make the contract terms and general conditions available to the recipient in a way that allows him to store and reproduce them.<sup>155</sup> The directive on electronic commerce defines the 'ISSs' as services within the meaning of Article 1(2) of Directive 98/34/EC as amended by Directive 98/48/EC, and more specifically as 'any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services.' Considering the formulation of this definition, one could wonder whether the on-line distribution of free OSS qualifies as an ISS. In the Explanatory Memorandum to the Dutch implementation act,<sup>156</sup> the Minister of Justice declared that the expression should be understood in broad terms and should not be limited to services where a contract must be concluded. The directive also covers activities for which the buyer pays nothing, such as the offer of on-line information or the making available of a search engine, if these activities are generally offered against the payment of a price or if they otherwise possess a certain economic value. The determining factor in deciding whether a service falls under the definition is not so much whether remuneration is paid for the service, but rather whether it constitutes an economic activity. In our opinion, the offer – albeit free of charge – by the vast majority of OSS distributors on the Internet definitely constitutes an economic activity that should be covered by the definition of 'ISS'. One's judgment would differ, of course, if the OSS were distributed strictly by a private individual, such as via a student's web site.

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<sup>153</sup> Stuurman, Westerdijk, and Sander 2000, p. 60.

<sup>154</sup> Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market (Directive on electronic commerce), 17 July 2000, *OJEC L 178/1*, Art. 9 and ff. The directive has been transposed in Dutch law by the *Aanpassingswet richtlijn inzake elektronische handel*, *Stb.* 2004, No. 210.

<sup>155</sup> Stuurman, Westerdijk, and Sander 2000, p. 60.

<sup>156</sup> Tweede Kamer, 2001-2002, 28 197, nr. 3, p. 12 (Parliamentary history, 28 197 No. 3, p. 12).

As a result of the implementation of the electronic commerce directive into Dutch law, the new Article 3:15d CC requires that anyone who provides an 'ISS' must make certain information accessible to the recipients of the service in an easy, direct and permanent manner. Particularly relevant in the context of the distribution of OSS are subparagraphs (a) and (b) of Article 3:15d CC which require anyone who provides an ISS to supply his name and geographic address, as well as his electronic mail address, in order to allow him to be contracted rapidly and communicated with in a direct and effective manner. Prior to the adoption of the electronic commerce directive, similar obligations of information had been imposed on suppliers of goods and providers of services to consumers, according to the rules laid down by the European directive on distance contracts.<sup>157</sup> The obligation to provide information applies to any ISS operating within the territory of the Member States of the European Union, irrespective of their country of establishment. This requirement goes back in fact to the remark made in the previous section of this book, concerning the proper identification of the parties to an open source licence agreement. Although no legal consequences are attached as such to the failure of an ISS to provide the information required pursuant to Article 3:15d(1) CC,<sup>158</sup> the lack of proper information may have consequences for the subsequent formation of a contract, more specifically in relation to the general rules on exchange of consent and mistake.

The implementation of the electronic commerce directive has also led to the introduction of new Article 6:227b(1) into the CC. This provision states that, before a contract is concluded via electronic means, any ISS is required to give certain information in a clear, comprehensible and unambiguous way to the other party. More specifically, subparagraph (a) requires that the service indicate the different technical steps to follow to conclude the contract, while subparagraph (c) demands that the service specify the technical means for identifying and correcting input errors prior to the placing of the order. Pursuant to Article 6:227b(2) CC, the ISS must, prior or during the conclusion of the contract, make the contract terms available to the recipient in a way that allows him to store and reproduce them so that he can access them at a later stage. Note that Article 6:227b(1) CC is not applicable to contracts concluded exclusively by exchange of electronic mail or by equivalent individual communications. The

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<sup>157</sup> Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the Protection of Consumers in Respect of Distance Contracts, *OJ*, L 144, 4 June 1997, pp. 19-27, Art. 4.

<sup>158</sup> Tweede Kamer, 2002-2003, 28 197, No. 5, p. 15. (Parliamentary History 28 197, No. 5, p. 15)

consequence of the failure for the service provider to abide by these new requirements is set out in Articles 227b(4) and (5) CC. Paragraph 4 states that a contract concluded in a circumstance where the ISS failed to comply with the obligations of subparagraphs (a), (c) or (d) can be annulled. Moreover, if the ISS provider failed to comply with the obligations of subparagraphs (a) or (c), any contract concluded in spite of this will be presumed null.

In the light of the above, two questions arise: first, whether the process of formation of contract followed by the majority of OSS distributors complies with the legal requirements of Article 6:227b(1) CC; and second, whether the mere act by a user of downloading an open source programme onto his computer constitutes a manifestation of intention, on his part, to be bound by the licence agreement.

In answer to the first question, it is our impression that a large number of on-line distributors of OSS, like the popular sites of Freshmeat, SourceForge and the Free Software Directory, could face some difficulty regarding the general lack of indication on their respective web sites about the different technical steps to follow to conclude the contract. This could ultimately lead to the annulment of contracts concluded in spite of this. The answer to the second question actually depends on the circumstances of each case. Several factors may influence if and how the user has manifested his acceptance to the terms, for example if he was asked to click 'I agree' in a dialog box before downloading or installing the software, or not. Of course, according to the law, acceptance may take any form; it may also be inferred from conduct. Thus, even if the user does not get the opportunity to click 'I agree' in the box, he may still be binding himself to the terms of the licence by the sheer act of reproducing, modifying, or distributing the software. This is in essence the meaning of Article 5 of the GPL, which reads as follows:

'5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.'

In our opinion, a user would be bound to the licence terms as a result of his actions only if he actually accepted the legal consequence of his actions, and accomplished these actions with the specific intention to be bound by the licence.<sup>159</sup> It follows from this that, in the case where the user is not asked to

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<sup>159</sup> IfrOSS 2005, p. 99.

actively manifest his assent before downloading or installing the software, a Dutch court would probably make a distinction between a *professional user* and a *consumer*. In the context of OSS, we would define a professional user as a software developer, whether employed or unemployed, who develops and distributes software as his main occupation or hobby. From professional users, one could expect that they are aware of the terms of the GPL, or of any other open source licence, and that if they choose to download or otherwise acquire particular software that is open source, it is with the specific intention of being bound by the licence terms. There is indeed a strong awareness to the terms of the licences within the OSS community. On the other hand, a consumer, generally defined as a physical person whose profession, occupation or hobby is not to develop and distribute software, may not be aware of the licence terms. A consumer may download a specific open source programme only because it is freely accessible and free of charge, without realising that a licence governs its use. In such a case, one may seriously doubt whether the continued use of the software constitutes a manifestation of assent to the licence terms on the part of the consumer. The same certainly holds true of software downloaded from an anonymous web site, or obtained through a peer-to-peer system. In such circumstances, no contract would be concluded insofar as there would be between the parties no exchange of consent to speak of.

This issue may appear rather theoretical at this time. However, we believe that, contrary to what Article 5 of the GPL states, consumers should obtain a valid licence for the use of the software. For, without a licence, consumers are restricted to the acts mentioned in Articles 45j to 45n of the Copyright Act. For example, Article 45j of the Act permits a lawful acquirer to perform only those acts that are necessary for the use of the work for its intended purpose, apart from the limited acts of loading, displaying, or correcting errors. Moreover, even the making of private copies of software, let alone their distribution among friends and family, is strictly prohibited under the law. As explained in section 5.2.1 below, the freedom of use and reproduction granted under a typical open source licence is generally much broader than that which is allowed under copyright law, making the need to obtain a valid licence if not necessary at least recommendable. Furthermore, in view of the increased popularity of OSS among all levels of the public, the open source community should adapt its licensing practice to the new reality and make sure that the contract formation process meets the requirements of the law with respect to all categories of users.



### 4.3.2 Core stipulation of the agreement

Open source licences, and certainly the GPL, the BSD and the MPL, generally take the form of a standard form agreement, insofar as the terms have not been individually negotiated between the OSS producer or distributor, on the one side, and the user, on the other side. According to the European directive on unfair terms in consumer contracts,<sup>160</sup> a term must always be regarded as not individually negotiated where it has been drafted in advance and the consumer has therefore not been able to influence the substance of the term, particularly in the context of a pre-formulated standard contract. With the conviction that purchasers of goods and services need to be protected against the possible abuse of power by the seller, in particular against one-sided standard contracts and the unfair exclusion of essential rights in contracts, the European and national legislators have subjected the use of standard contract terms to a number of formal and material requirements. As we shall see in the following subsection, even if a software user has manifested his intention to be bound by the terms of the licence, this licence could still be annulled if the legal requirements relating to the formation of the contract were not met or if the terms are deemed unfair. However, as a rule, the assessment of the unfair nature of the terms relates neither to the definition of the main subject-matter of the contract nor to the adequacy of the price and remuneration for the goods and services rendered insofar as these terms are in plain intelligible language. This rule is expressly laid down in Article 4(2) of the European directive on unfair terms in consumer contracts and Article 6:231a of the Dutch CC. This exclusion is generally based on the view that subjecting the terms regarding price and other essential aspects of a contract to the ‘unreasonably onerous’ test would have the undesired effect of introducing the *iustum pretium* doctrine into positive law. This would, in turn, unduly threaten the parties’ contractual autonomy regarding the determination of price. Moreover, without this exception, the judge would be forced to pronounce himself on the equivalence of, on the one hand, the price paid under the contract with, on the other hand, the counter-performance in the delivery of goods or performance of services.

Be that as it may, neither the Directive nor the Dutch CC gives any indication of what must be considered the ‘main subject-matter of a contract’. On the one hand, standard form contracts usually contain clauses that either deviate from the default rules of contract law or that complete these rules. An example of the first type of clause would be an exoneration of liability clause, whereas

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<sup>160</sup> Directive on Unfair Terms in Consumer Contracts, 93/13/EEC, of 5 April 1993, *OJ L* 95/29.

an example of the second would be a price-increase stipulation.<sup>161</sup> On the other hand, standard form contracts also contain terms that are essential for the existence of the contract itself, in the sense that they are of such substantial significance that without them the contract would not have been formed or that there would be no proper manifestation of intention. It is an established principle of jurisprudence that the exception laid down in Article 6:231a CC regarding the core stipulation of a standard form contract must be interpreted as restrictively as possible.<sup>162</sup> It is irrelevant for the determination of the main subject-matter of the contract whether the stipulation governs an important aspect of the contract for one or both parties. Moreover, the content of the core stipulation must be determined on the basis of objective criteria; the parties have in principle no authority to qualify a clause of the contract as a core stipulation, with the result that this clause escapes judicial review.<sup>163</sup> In other words, the core stipulation of an agreement relates strictly to the essence of the performance under the contract.<sup>164</sup> Such essential terms are thus excluded from the definition of a 'general condition' in a non-negotiated contract, thereby escaping judicial review under the 'unreasonably onerous' test of Article 6:233 CC. Essential terms in a contract will therefore be binding upon the parties unless, however, given all relevant circumstances, their enforcement would be unacceptable according to the criterion of reasonableness and equity as laid down in Article 6:248 CC.<sup>165</sup>

What is the core stipulation of the GPL, the BSD or the MPL? According to the case law, the main subject-matter of these open source licence would be restrictly limited to the delivery of the software, free of charge. In our opinion, the limitation of liability, the disclaimer of warranty, the obligation to disclose the source code, to distribute modifications of the code under the GPL, to put a copyright notice with the names of all authors, or the prohibition to ask for royalties would in all likelihood fall outside the category of 'essential term' of the licences. Although these stipulations may all be very important for any software developer who decides to distribute his product under the terms of an

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<sup>161</sup> Asser's handleiding tot de beoefening van het Nederlands burgerlijk recht, Verbintenissenrecht, II. Algemene leer der overeenkomsten, § 348.

<sup>162</sup> HR 21 February 2003, *NJ* 2004 No.567; Gerechtshof 's-Gravenhage, 22 March 2005, 03/1463, LJN: AT1762, § 33.

<sup>163</sup> HR 19 September 1998, *NJ* 1998 No. 6.

<sup>164</sup> Asser's handleiding tot de beoefening van het Nederlands burgerlijk recht, Verbintenissenrecht, II. Algemene leer der overeenkomsten, § 348.

<sup>165</sup> Art. 6:248(1) CC reads as follows: 'A contract has not only the juridical effects agreed to by the parties, but also those which, according to the nature of the contract, result from the law, usage or the requirements of reasonableness and equity.'

open source licence, the fact that they are important has no influence on the determination of the main subject-matter of the licence. The Supreme Court once ruled that, even if a party argues that a particular stipulation is essential for the achievement of its goals and that, at the time of conclusion of the contract, it had mentioned to the other party that this stipulation was not open to negotiation, it does not make this term a core stipulation in the sense of Article 6:231a CC.<sup>166</sup> If the terms of the GPL, the BSD, or the MPL were submitted to the appreciation of a Dutch court, it is quite probable that the court would come to a similar conclusion as the Supreme court in the case mentioned above regarding, for example, the share-alike clause, the obligation to make the source code available, or the prohibition to charge royalties.

### 4.3.3 Standard form contracts

The use of standard form contracts, or general conditions of sale, is further governed by Articles 6:231 to 6:247 of the Dutch CC.<sup>167</sup> As a rule, Article 232 CC states that ‘the other party is bound by the standard form contract even if, at the time of entering into the contract, the user understood or ought to understand that the other party did not know the content of the conditions.’<sup>168</sup> Since the adoption of the new Dutch CC in 1992, it is generally assumed that general conditions of sale can be accepted in their entirety. The intention to enter into contract no longer needs to be directed to the content of the general conditions, but rather to the applicability of the set of conditions as a whole to the actual transaction. When the applicability of a set of standard terms is accepted, the other party cannot invoke the fact that he was not aware of the content of the terms.<sup>169</sup> This relates to the general doctrine of offer and acceptance, examined in section 4.3.1 above. The key question in this case is whether the other party understood or must have understood that, by clicking in a box ‘I agree’ or performing a certain act, he accepted the applicability of the standard form contract.<sup>170</sup> For this, however, the other party must have been given sufficient

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<sup>166</sup> HR 21 February 2003, *NJ* 2004 No. 567, § 3.4.3.

<sup>167</sup> The requirement regarding the content of standard form contracts derive from the Directive on Unfair Terms in Consumer Contracts, 93/13/EEC, of 5 April 1993, *OJ L* 95/29. In the context of open source licences, the provisions of this directive are mostly relevant for questions of guarantees and termination of contract.

<sup>168</sup> Van Esch 2004, p. 181.

<sup>169</sup> *Memorie van Toelichting*, Parlementaire Geschiedenis, *InvW* 6, p. 1573. (Explanatory Memorandum, Parliamentary History, No. 3, p. 1573)

<sup>170</sup> Berghuis 2005, § 2.2.1.

opportunity to take cognizance of the general conditions before or during the formation of the contract.

General conditions may be annulled if they are unreasonably onerous because of their content, or because the user has not given the other party a reasonable opportunity to take notice of the general conditions. Article 234 paragraphs 1 and 2 of the CC specify that the user has given the possibility mentioned in Article 233b CC, if he has given to the other party the opportunity to take cognizance of the general conditions during or before the formation of the contract, or, if this is not reasonably possible, that a copy of the general conditions is available at the local Chamber of Commerce or at the office of the clerk of the court or that it will be sent to the other party upon request. The implementation of the directive on electronic commerce has prompted the Dutch legislator to add a third paragraph to Article 6:234 CC, dealing specifically with standard terms used in contracts concluded by electronic means. According to this new paragraph, an ISS must make the general conditions available to the other party during or before the formation of the contract in such a manner that allows the other party to store and reproduce them so that he can access them at a later stage. If this is not reasonably possible, the user of the general conditions must inform the other party, before the conclusion of the contract, of the site where the conditions may be electronically consulted, and of the fact that a copy of the general conditions may, upon request, be sent electronically or by other means to the other party.

The obligation of an ISS to give the other party a reasonable opportunity to take notice of the general conditions contains an implicit obligation for the user to use clear language. General conditions that can only be known or understood after a lawyer has deciphered them do not pass this test. However, if a clause can only be written in difficult (legal) language because it deals with difficult (legal) content, it will be sufficient if the user has made a reasonable effort to use clear language. The Dutch CC imposes no formal obligation on the user of standard terms to have them written in the Dutch language. Standard terms written in another language will be held valid unless the other party could not be reasonably expected to understand the language used. In the case of OSS licences, one could reasonably argue that if the licensee is capable of using a computer program written in the English language, he is also capable of understanding the terms of the licence accompanying it.

The applicability of shrink-wrap licences has remained uncertain for many years.<sup>171</sup> Shrink-wrap licences refer to the practice of selling off-line mass-

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<sup>171</sup> Scheltema & Tjong Tjin Tai 2003, p. 244; Blok and De Weerd 2004 p. 126; and Guibault 2002, p. 205.

market digital information products along with the producer's standard contract terms written on a piece of paper and wrapped in transparent plastic. In principle, standard form contracts are held to be binding, provided that the purchaser of the good or the service is given the opportunity to review the terms of the licence and to give assent before completing the purchase. As noted above, assent may be express or may be implied from the party's conduct. Only one court decision has been reported in the Netherlands on a purchaser's manifestation of assent to the terms of a shrink-wrap licence, i.e., by the mere act of tearing a plastic wrapping around a box containing the product. In *Coss Holland B.V. v. TM Data Nederland B.V.*,<sup>172</sup> the District Court of Amsterdam held that the simple fact of tearing a wrap open is not sufficient to generate contractual obligations between the software producer and a user. If this were the parties' intention, then, in the Court's opinion, the buyer would have to be made aware of the terms of the contract before the conclusion of the purchase. In the Court's opinion, the specific terms of the contract would have had to be elucidated beforehand. Otherwise, no valid contract would have been formed. This decision raised some controversy in the legal community most notably because it failed to take account of Article 6:232 CC. Since no other Court decision has been reported on the issue since then, the validity of 'shrink-wrap' licences in the Netherlands is still uncertain.<sup>173</sup>

In principle, an electronic standard form contract is validly concluded if the user has explicitly accepted to be bound by it through a click of the mouse. The question arises as to what other type of conduct on the Internet can be deemed to lead to acceptance on the part of the other party. The District Court of Rotterdam considered this issue in summary proceedings in *Netwise v. NTS Computers*.<sup>174</sup> Since this constitutes the first decision rendered by a Dutch court on the validity of a standard form contract presented on the Internet, let us examine it a little closer. In this case, the plaintiff Netwise produced and made a telephone directory available to the public on-line. At the top of the home page appeared the mention 'by searching this directory you agree with the general conditions of use', conditions which were accessible by clicking on a button placed on the left hand-side of the screen. To avoid spamming, the conditions required that the user agree not to send messages to more than one person listed in the directory at a time, failure of which gave rise to a substan-

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<sup>172</sup> District Court of Amsterdam, decision of 24 May 1995 (*Coss Holland B.V. v. TM Data Nederland B.V.*), *Computerrecht* 1997, pp. 63-65.

<sup>173</sup> Stuurman 2004, p. 90.

<sup>174</sup> Rechtbank Rotterdam, 5 December 2002 (*Netwise v. NTS Computers*), in *Computerrecht* 2003/02, p. 149 with annotation by A.R. Lodder, and in *Mediaforum* 2003/15, pp. 109-112 with annotation by M. Voulon.

tial fine. NTS disregarded the condition and used the names and addresses listed in the directory for its marketing activities. In defence, NTS Computers argued that it was not bound by the general conditions, because at the time of visiting the site, it had not been asked to agree to the terms. In the judge's opinion, this did not mean that the terms were not applicable. For, even if the home page had not contained the mention 'by searching this directory you agree with the general conditions of use', but had merely displayed a button 'Conditions' which by clicking on it allowed the user to inspect the terms of use, it must be assumed that NTS, by consulting the directory, was bound by these terms. The judge added that NTS, as a professional visitor of the web site, could be expected to understand that the easily accessible 'Conditions' would contain terms of use to which Netwise wished to bind the users of its directory. One could further expect NTS, the intention of which was to make use of such data for its marketing activities, to know that administrators of databases are not always keen on spamming and therefore to take account of the prohibition on such activities that appeared in the general conditions of use. The judge concluded that NTS had accepted and therefore was bound by Netwise's conditions by the mere fact that it made use of the information in the directory.

In the light of these two cases, it is clear that, in determining whether the other party was given sufficient opportunity to take notice of the general conditions of sale, a Dutch court will make a distinction between a *professional user* and a *consumer*. A consumer is defined as any natural person who is acting for purposes that are outside his or her trade, business, or profession. The question remains whether the use of a hyperlink to refer to general conditions complies with the requirements of Dutch contract law. In some commentators' opinion, the posting on a web site of terms of use that are accessible only through the click of a button displayed on the left hand side of the home page would probably not be sufficient.<sup>175</sup> Especially when the other contracting party is a consumer, this party should be given a clear opportunity to take cognizance of the general conditions at any time before the conclusion of the contract. This can be done by posting a link in a clearly visible place, preferably in the neighbourhood of where one should click to proceed with the conclusion of the contract. A link posted at the bottom of the home page does not satisfy this requirement.

In addition to the requirements of book 6 of the CC on the formation of standard form contracts, the users of non-negotiated contracts concluded at a distance must comply with a number of obligations when dealing with consumers. Articles 7:46a and following of the CC have been introduced in the

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<sup>175</sup> Van Esch 2004, p. 183.

Code as a result of the implementation of the EC Directive on distance contracts.<sup>176</sup> These provisions apply to ‘any contract concerning goods or services concluded between a supplier and a consumer under an organized distance sales or service-provision scheme run by the supplier, who, for the purpose of the contract, makes exclusive use of one or more means of distance communication up to and including the moment at which the contract is concluded.’ At the pre-contractual stage, these provisions mainly impose an obligation of information on the uses of standard terms. In addition, the consumer must receive written confirmation or confirmation in another durable medium available and accessible to him of the information referred to in Article 46c(1) (a) to (f), in good time during the performance of the contract, and at the latest at the time of delivery where goods not for delivery to third parties are concerned, unless the information has already been given to the consumer prior to conclusion of the contract in writing or on another durable medium available and accessible to him.

A discrepancy exists between the time when the information referred to in Article 7:46c CC must be provided and the time when the general conditions of sale must be presented to the consumer under Article 6:234(1) CC. The consequence is that the licensor must make a choice if the information referred to in Article 7:46c CC is included in general conditions of sale. Either he chooses to provide the general conditions in good time prior to the conclusion of any distance contract, or he chooses to supply the information separately before the formation of the contract.<sup>177</sup> In any dealing with consumers, the party using general conditions of sale should comply with the above requirements, including in the context of OSS. Arguably, as we shall see below, the method used for the presentation of most OSS licences to consumers leaves somewhat to be desired under private law, which may ultimately affect their binding character.

#### 4.3.4 Applicability of open source licences

Insofar as OSS distributors fall under the definition of an ‘ISS’ within the meaning of the electronic commerce directive and the Dutch CC,<sup>178</sup> these distributors must comply with the requirements of the law regarding the supply of prior information and the presentation of the general conditions to the other

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<sup>176</sup> Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the Protection of Consumers in Respect of Distance Contracts, *OJ*, L 144, 4 June 1997, pp. 19-27, Art. 2.

<sup>177</sup> Van Esch 2004, p. 177.

<sup>178</sup> On this point, see section 4.3.1 *supra*.

party, before or at the time of conclusion of the contract. It is important to stress at this point that the requirements of Articles 6:227b and 6:234(3) CC do not apply to the distribution of software through an anonymous web site or a peer-to-peer system, since these forms of distribution do not fall in our opinion, under the definition of an 'ISS'. If a dispute should arise concerning the binding character of an open source licence governing software distributed through an anonymous web site or a peer-to-peer system, a court would consider whether a contract was concluded at all for possible lack of proper exchange of consent between the parties, and in the affirmative, whether the other party accepted the set of general conditions as a whole, pursuant to Article 6:232 CC.

With respect to the on-line distribution of OSS, the question is whether the diverse methods used by OSS distributors for presenting the standard terms comply with the requirements of the new Article 6:234(3) CC, according to which the user must make the general conditions available to the other party during or before the formation of the contract in such a manner that allows the other party to store and reproduce them so that he can access them at a later stage. If this is not reasonably possible, the user of the general conditions must before the conclusion of the contract inform the other party of the site where the conditions may be electronically consulted, and of the fact that a copy of the general conditions may, upon request, be sent electronically or by other means to the other party.<sup>179</sup>

The manner in which OSS licences are presented to the other party varies considerably from one project to another. In some cases, the method used to give the other party the opportunity to take notice of the general conditions clearly complies with the requirements of the law, while other times, it is highly problematic. OSS that can be downloaded and installed only once the user has accepted the terms with the click of a button is no doubt compatible with the requirements of the law, provided of course that the general conditions are made available to the other party during or before the formation of the contract in such a manner that allows the other party to store and reproduce them so that he can access them at a later stage. For each particular software product, the OSS catalogues SourceForge, Freshmeat and the Free Software Directory will indicate under which licence the software is distributed, referring the user to the web sites of the GNU, the OSI or the FSF and to the licences that can be found there. In some cases, the licence has been programmed to appear as well on the user's computer screen before or during the course of the installation process. In other cases, not.

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<sup>179</sup> Thole and Seinen 2004, p. 223.



In our opinion, this way of drawing the attention of the other party to the terms of use would probably comply with the provisions of Article 6:234(3) CC, mainly because the other party – whether a professional or a consumer – is given sufficient information on where the conditions may be electronically consulted. Moreover, the other party is also given the possibility to store and reproduce the licence terms so that he can access them at a later stage. The same remark would probably hold true in the case where instructions are displayed inside the copyright notice appearing on the computer screen or in the accompanying documentation telling the user how to access the licence terms, as long of course as the instructions can be carried out reasonably easily by an average user of the product. This is an illustration of such an instruction:

Gnomovision version 69, Copyright © year name of author

Gnomovision comes with ABSOLUTELY NO WARRANTY: for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions; type 'show c' for details.

Neither SourceForge, nor Freshmeat, nor the Free Software Directory mention the fact that a copy of the general conditions may, upon request, be sent electronically or by other means to the other party. Whether this omission would affect the formation of the contract is unclear.

One of the more troublesome ways to present licence terms to the user is probably the one chosen for the on-line distribution of the Linux kernel. In this case, the terms of the GNU GPL licence are meant to be included in a file called 'COPYING' to be joined with the on-line distribution of the product. The informal survey conducted in section 3.2.1 above shows, however, that in the 'kernel' directory containing system independent files, none of the 47 files refers to the GPL using the term COPYING. In the 'lib' directory, only 2 out of 40 files contain some licencing terms. In our opinion, the method used by Linux to present the terms of the GPL to the other party would probably not pass the test of Article 6:234(3) CC, mainly because the consultation of the licence terms by the other party is neither part of the download or the installation process. Of course, taking notice of the terms and giving assent depend to a large extent on the quality of that other party and on his degree of professionalism: a professional software developer will be more readily expected to know of the presence of these terms in the file called 'COPYING' and to assent to them, than would a consumer. This is essentially a question of fact that a court would have to decide.

Interestingly, the last principle of the OSD requires that the 'license must be technology-neutral, in the sense that no provision of the license may be predi-

cated on any individual technology or style of interface.’ According to the accompanying explanation:

‘This provision is aimed specifically at licences, which require an explicit gesture of assent in order to establish a contract between licensor and licensee. Provisions mandating so-called ‘click-wrap’ may conflict with important methods of software distribution such as FTP download, CD-ROM anthologies, and web mirroring; such provisions may also hinder code re-use. Conformant licenses must allow for the possibility that (a) redistribution of the software will take place over non-Web channels that do not support click-wrapping of the download, and that (b) the covered code (or re-used portions of covered code) may run in a non-GUI environment that cannot support popup dialogues.’

The problem with this principle is that it fails to provide a workable alternative in situations where the technology does ‘not support click-wrapping of the download’ or ‘popup dialogues’. If provisions mandating so-called ‘click-wrap’ are likely to conflict with important methods of software distribution such as FTP download, CD-ROM anthologies, and web mirroring, an alternative should be provided as to how to present the licence terms in other formats so that the other party has the possibility to take notice of them before the conclusion of the transaction. Rosen makes the following suggestion:

‘For example, FTP downloading procedures aren’t amenable to click-wrap procedures. For another, click-wrap can become onerous when licensors require clicking for each package in a multi-package distribution. In some situations it may be more appropriate to implement a splash-screen to indicate license terms. It may be that prominent notices in the product documentation will suffice to ensure that knowledgeable users knew about and assented to the licenses.’<sup>180</sup>

As we have seen above, offer and acceptance can take place according to Article 3:37(1) CC in any form, unless the parties have agreed otherwise. This implies that, in principle, offer and acceptance can also be exchanged via electronic means.<sup>181</sup> However, according to Article 233 CC general conditions can be annulled if the user has not given the other party a reasonable opportunity to take notice of the general conditions. Article 5 of the GPL should be read in this context. It could reasonably be argued that modifying or distributing the program would, in the case of software distributed under the GPL, constitute as such a ‘tacit acceptance’ or ‘acceptance which is included in an act’.<sup>182</sup> Indeed,

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<sup>180</sup> Rosen 2002.

<sup>181</sup> Van Esch 2004, p. 157.

<sup>182</sup> Van Holst & Van Mullem 2004, p. 96

if the licensee were to refuse to accept the terms of the GPL (or of any other open source licence), he would then only be able to use the software according to the provisions of the Copyright Act<sup>183</sup> and would infringe the owner's copyright whenever he would reproduce, modify and distribute the software. This does not take away the fact however that, even if acceptance may take any form, the other party must in principle have been given a reasonable opportunity to take notice of the licence terms before or during the conclusion of the transaction. Again, whether this has occurred in practice will be a question of fact that the courts will have to decide.

As we have seen above, Article 7:46c CC requires that the consumer be provided, in good time prior to the conclusion of any distance contract, with certain information in a clear and comprehensible manner in any way appropriate to the means of distance communication used. The supply of this information is mandatory for any enterprise dealing with Dutch consumers even if their place of business is located outside of the Netherlands. Since the most characteristic elements of the required information relate to the price of the goods or services, the delivery costs, or the arrangements for payment, delivery, or performance, it could be argued that the failure for an on-line distributor of free OSS to comply with the provisions of Article 7:46c CC would probably not bring about as severe consequences, as if the software were distributed for a price. But the argument no longer holds true, however, whenever the OSS is distributed for a price, for example because the distributor provides support, documentation, maintenance, or guarantee.

To summarise on the applicability of the terms of open source licences, we believe that most licences will be binding for the licensee if, by his or her actions, the licensee has manifested his or her intention to be bound by the set of terms. Where the licensee is a consumer, the terms will be applicable provided that the latter has been given a reasonable opportunity to take notice of the licence terms before or during the conclusion of the transaction. Moreover, the ISS is required to provide certain information to the consumer prior to the conclusion of the transaction. Again, whether this has occurred in practice will be a question of fact that the courts will have to decide. The consequence of a not properly formed contract is that the parties may not take any advantage of the respective rights and obligations under the contract. For the licensor, this means that he may not require the subsequent developer, for example, to distribute the software under the same conditions. For the licensee, this means that he is bound to use, reproduce, modify and distribute the software follow-

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<sup>183</sup> See section 5.2 *infra*.

ing the rules of the Copyright Act, rather than following the more generous terms of the licence.<sup>184</sup>

#### 4.4 SHARE-ALIKE CLAUSE (COPYLEFT)

One of the most interesting aspects of some OSS licences is their so-called ‘share-alike’ or ‘copyleft’ clause. Open source licences that contain such a clause, and most notably the GPL, purport to perpetuate certain obligations under the licence from one developer to another, as every licensee must include the terms of the GPL in any subsequent licence attached to their derivative work, and so on.<sup>185</sup> Among the contractual terms that a licensee may have to continue are the obligation to make the source code available, the prohibition to charge royalties, the warranty disclaimer, the limitation of liability, and the permissiveness of use. Which licence terms will have to be perpetuated actually depends on the wording of the initial licence. The third principle of the OSD states that ‘the license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.’ The explanation behind this requirement is that ‘the mere ability to read source isn’t enough to support independent peer review and rapid evolutionary selection. For rapid evolution to happen, people need to be able to experiment with and redistribute modifications.’ This principle must be read jointly with another principle of the OSD, which states that ‘the rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.’ This clause is intended to forbid closing up software by indirect means such as requiring a non-disclosure agreement.

The GPL licence is perhaps the licence that takes the perpetuity furthest of all. Article 2b of the GPL provides that: ‘You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, *to be licensed as a whole at no charge to all third parties under the terms of this License*, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.’ Not only must the entire license be carried over, the licence must apply to an entire work even if only a small part of that work constitutes or is derived from a program that has been acquired under the GPL. According to Article 4 of the GPL, failure to do so leads to the automatic termination of the

<sup>184</sup> De Preter and Dekeyser 2004, p. 217. See chapter 5 *infra*.

<sup>185</sup> Radin 2000, p. 1125; and Gonzalez 2004, p. 333.

licence. In practice, the share-alike effect of the GPL is accomplished by Article 6, which stipulates that ‘Each time you redistribute the Program (or any work based on the Program), *the recipient automatically receives a license from the original licensor* to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients’ exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.’ Similarly, the Mozilla licence provides that ‘The Source Code version of Covered Code may be distributed *only under the terms of this License* or a future version of this License released under Section 6.1, and *You must include a copy of this License* with every copy of the Source Code You distribute. You may not offer or impose any terms on any Source Code version that alters or restricts the applicable version of this License or the recipients’ rights hereunder. However, You may include an additional document offering the additional rights described in Section 3.5.’

The share-alike effect of the GPL is the materialisation of Stallmann’s ideological starting point that all software should be free. Although the objective of the share-alike clause is to bring more software under the free regime, the share-alike effect can have quite the opposite result, if it deters software developers from combining proprietary software with software distributed under the GPL.<sup>186</sup> Right holders of proprietary software may be afraid to lose the control over their own software, if it is licensed under the GPL. For software developers who are reluctant to use OSS because of the share-alike clause, the FSF has developed the ‘Lesser GPL license’ or LGPL. The LGPL license allows, under certain conditions, the combination of LGPL libraries with other software, without the other software becoming ‘infected’ with the LGPL.<sup>187</sup> While most open source licenses do require the licensee to perpetuate the obligations of the licence when (re)distributing the OSS, not all licences impose such conditions on subsequent developers. The BSD licence is perhaps the most liberal in this respect since it contains no share-alike clause. Therefore, there is nothing to stop a subsequent developer from taking the software that is distributed under a BSD license and selling it under a proprietary regime. As a result, there is no ‘guarantee’ that BSD-software will remain available under open source conditions, apart from of course the original version distributed by Berkeley.

The share-alike clause raises a number of questions under Dutch law, especially regarding the binding character of the provision and the third party effect of open source licences. What is the nature of the share-alike clause? In view of

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<sup>186</sup> E. Ries, ‘Sneak preview of GPL v. 3: More business friendly’, 2 November 2000, *NewsForge.com*, <<http://www.newsforge.com>>.

<sup>187</sup> Schellekens 2004, p. 4; Koch 2000, p. 339.

the principle of the privity of contracts, how are obligations passed on to a subsequent licensee? Do the rights and obligations under the open source licence bind this subsequent licensee?

Article 6 of the GPL seems to suggest that a contract is automatically formed every time the program is distributed. This solution has been rejected in the literature following the argument that Dutch law does not recognise the automatic creation of contractual obligations between the initial licensor and a sublicensee.<sup>188</sup> In the only case decided so far on the validity of the GPL, the District Court of Munich interpreted Article 4 as containing a resolutive condition with *in rem* effect pursuant to paragraph 158(2) of the German CC.<sup>189</sup> This option mostly draws on the wording ‘any attempt (...) will automatically terminate your rights.’<sup>190</sup> Under Dutch law, resolutive conditions are governed by Article 6:22 CC. In our opinion, however, qualifying Article 4 of the GPL as a resolutive condition having the effect of terminating the agreement and reverting the rights to the owner whenever the licensee fails to comply with the terms of the licence, does not say much about its qualification when the parties do comply with the terms of the agreement or about the manner in which the obligations are passed on from one licensee to another.

In Dutch literature, the share-alike clause has been interpreted in the light of the principle of the relative effect of contracts and of the third party effect of an agreement. The principle of the relative effect of contracts is an age-old principle of contract law, which comes from the Roman adage: ‘Res inter alios acta, aliis nec nocet nec potest’ (‘A legal action between others, neither hurts nor brings advantages to third parties’). The principle of the relative effect of a contract is expressly or implicitly recognised in every jurisdiction, for example in Article 1376 of the old Dutch CC, which stated that ‘agreements have effect only between the contracting parties’. This principle no longer appears expressly in the Code for it is believed to flow directly from the other provisions. On the basis of the autonomy of the will, third parties are not affected by the provisions of a contract to which they are not bound. They have no duties under the contract nor can they derive benefit from it, unless specified in the law. This general principle responds to the need to ensure legal security in contractual relations by not allowing parties to place contractual obligations on other parties who are not aware of them. This concept is known in Anglo-American common law as the principle of privity of contracts.<sup>191</sup> The rights

<sup>188</sup> Visser 2004, p. 228.

<sup>189</sup> District Court of Munich I, 19 May 2004 (*Netfilter v. Sitecom*), *Computerrecht* 2004/10, pp. 774-776 with annotations by T. Hoeren and A. Metzger. See section 7.2 *infra*.

<sup>190</sup> Spindler and Wiebe 2003, p. 876.

<sup>191</sup> Gonzalez 2004, p. 336.

created under a contract are therefore ‘relative rights’ or ‘rights in personam’, in the sense that they are enforceable only against the other party to the contract, unlike ‘absolute rights’ or ‘rights in rem’, such as copyrights, which are opposable to everyone.<sup>192</sup> But how strict is this rule? In fact, two types of situations can give rise under Dutch law to a third party effect, which either passes a burden or a benefit on to the third party. The first type of situation derives from the case law,<sup>193</sup> while the second one flows from Articles 6:251-257 CC.<sup>194</sup>

Dutch commentators who have examined the question of the ‘copyleft’ clause in open source licences have suggested that a right may be passed onto a sub-licensee according to the so-called ‘derdenbeding’ (third party clause) provision of Article 6:253 CC, which reads as follows:

‘A contract creates the right for a third person to claim a prestation from one of the parties or to invoke the contract in another manner against one of them, if the contract contains a stipulation to that effect and if the third person accepts it.’

There are three elements to a ‘third party clause’: first, it must create a right in favour of a third party; second, the contract must expressly provide so; and third, the third party must accept the benefit. Until its acceptance, the stipulation can be revoked by the stipulator. Regarding the acceptance of the benefit flowing from the third party clause, paragraph 3 of Article 6:253 states that ‘acceptance or revocation of the stipulation takes place by a declaration addressed to one of the two other persons involved.’ The declaration of acceptance by the sub-licensee would, considering the practice in the field of OSS licences, be directed to the party granting the sub-licence, and not necessarily to both the initial licensor and the sub-licensor. According to Visser, unless the parties have agreed otherwise, acceptance can take place in any form according to Article 3:37(1) CC. Consequently, the third party may accept the terms by ‘tacit acceptance’ or ‘acceptance which is included in an act.’<sup>195</sup> According to Article 6:254 CC, ‘once the third person has accepted the stipulation, he is deemed to be a party to the contract.’ In Visser’s opinion, the wording of Article 6 of the GPL is not compatible with the general rules of the CC regarding the third party clause. Article 6:253(4) CC creates an exception to the principle

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<sup>192</sup> For an in-depth analysis of the principle of the relativity of contracts, see C.E. Du Perron, *Overeenkomst en derden: een analyse van de relativiteit van de contractswerking*, Kluwer, Deventer, 1999.

<sup>193</sup> HR, 7 March 1969 (*Citronas*), *NJ* 1969 No. 249.

<sup>194</sup> Van Dunné 2004, p. 797.

<sup>195</sup> Visser 2004, p. 228.

of acceptance by the third party, by specifying that ‘an irrevocable stipulation which, with respect to the third person, has been made by gratuitous title, is deemed accepted if it has come to the attention of the third person and he has not rejected it without delay.’<sup>196</sup> This exemption is predicated on the idea that a ‘third party clause’ will be more readily accepted, if the third party derives a clear benefit from it. In the context of the GPL, the clear benefit to the licensee is not readily apparent. The mere fact that a person derives an advantage from an agreement is insufficient to qualify this as a benefit in the sense of the ‘third party clause’.<sup>197</sup>

The argument of the ‘third-party clause’ is therefore not convincing. Apart from the fact that it is highly uncertain whether Article 6 of the GPL actually meets the requirements of a ‘third party clause’ under Article 6:253 CC, this construction of the ‘share-alike’ clause fails, in our opinion, to accurately reflect the contract formation process intended by the GPL. Let us illustrate the concept of privity of contract with the following example: A sells an apartment to B under the condition that it will always be offered for rent within the confines of a low-income housing project and that this condition be imposed on any future buyer. When B sells the apartment to C, under the same condition, and C does not respect it, the party having standing to sue C for breach of contract is not A, but B. There is indeed no contractual relationship between A and C giving rise to a possible cause of action in favour of A. Transposing this example into a situation covered by Article 6 of the GPL, we may consider the following sequence of events: the original licensor, and copyright owner, X offers the programme on his web site under a GPL licence. Y acquires it, and decides to distribute it under the same conditions with extra support and maintenance. If Z acquires the programme from Y, brings some modifications to it and re-distributes it without mentioning the conditions of the GPL, who may institute proceedings? Arguably, X would be entitled to sue for copyright infringement since he owns the copyright on the software.<sup>198</sup> This would in fact appear to be the objective of Article 6 of the GPL.

According to St-Laurent, Article 6 of the GPL creates a relationship between the licensor and each of the licensees, regardless of the number of generations of distribution that may exist between them.<sup>199</sup> This author suggests that the GPL should be effective, regardless of the number of distributions through which it passes, because of the limitations and requirements set out in

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<sup>196</sup> Haanappel and Mackaay 1990, p. 352.

<sup>197</sup> Cahen 2004, p. 43; Idema 2005, p. 31.

<sup>198</sup> Idema 2005, p. 30.

<sup>199</sup> St-Laurent 2004, p. 43.



Articles 1 to 4 of the GPL. More importantly, in St-Laurent's opinion, Article 6 of the GPL tries to create contractual privity between the licensor of the original work and all the licensees of that work. In our opinion, the problem lies precisely there: the GPL *tries* to create contractual privity between the original licensor and the subsequent licensees, but does it really achieve its aim? According to Schultz, of ifrOSS, a licensee obtains, pursuant to Article 6 of the GPL, the permission to make modifications to the programme and to distribute it, but he or she does not receive the permission to grant licences to third parties. This privilege is reserved to the copyright owner.<sup>200</sup> Schultz submits that granting the right to issue sub-licences may result in the further decentralisation of an open source project, bringing with it potential enforcement problems. He further observes that the direct licensing of rights between the original licensor and the subsequent licensees has the advantage of preventing possible 'errors' or 'holes' in the chain of licences, should one of the licensees not have the capacity to contract.

In our opinion, it would certainly have been advisable to confer on the licensee the right to grant sub-licences with respect to the reproduction, modification and distribution of the programme. Besides the uncertain contractual privity between the original licensor and all other licensees, our main concern with the current wording of Article 6 of the GPL relates precisely to the lack of continuity in the licensing chain. Imagine that developer X creates a brand new OSS, and distributes it under the GPL. Developer Y acquires it, creates a new patch, fixes a few bugs, and redistributes it. Multiply this by a factor of a hundred. To add to the confusion, imagine that the names of the licensors are not mentioned on the licence. Does the last developer in the chain, who acquires a copy of the programme after it has been modified by more than a 100 other persons, obtain a valid licence from all previous 100 developers who contributed original lines of code? Does Article 6 of the GPL allow the necessary cross-licensing?

To conclude, the question of the binding character of the share-alike clause actually brings us back to the doctrine of offer and acceptance and to the legal requirements regarding the presentation of the general conditions of sale to the other party. The licensee may very well obtain an automatic licence from the initial licensor, as proclaimed in Article 6 of the GPL, but this by no means entails that the sub-licensee has automatically accepted it, unless acceptance can be inferred from his conduct. All in all, the binding character of the share-alike clause remains a difficult issue, which is all the more complex due to the fact that the identity of the initial – and of every subsequent – licensor is not always clearly ascertainable and that the process of formation of the contract in

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<sup>200</sup> IfrOSS 2005, p. 105.

some cases leaves somewhat to be desired. One thing is certain: the provision could have been couched in much clearer terms.

#### 4.5 WARRANTY DISCLAIMER

Most, if not all, open source licences contain a stipulation according to which the licensor disclaims any warranty for the program. This is normally achieved by stating that the program is provided ‘as is’, such as in Article 11 of the GPL, which reads as follows:

‘Because the program is licensed free of charge, there is no warranty for the program, to the extent permitted by applicable law. Except when otherwise stated in writing the copyright holders and/or other parties provide the program ‘as is’ without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the program is with you. Should the program prove defective, you assume the cost of all necessary servicing, repair or correction.’

Warranties have an important role in American law. Article 2 of the Uniform Commercial Code (UCC) contains a number of clauses relating to warranties with respect to the sale of goods (Art. 2-312 UCC). The UCC differentiates between ‘express warranties’, ‘implied warranties’ and ‘warranties of title’. A warranty of title is a guarantee that the seller is entitled to sell the good and that the good is free of any restrictions such as a security interest or a lien (Art. 2-312 UCC). A warranty of title is considered to be part of the contract of sale, unless agreed upon otherwise. The seller creates express warranties, by making a promise or affirmation of fact to the buyer in relation to the goods. A description of the goods or an example of the goods is also considered to be an express warranty (Art. 2-213 UCC). Implied warranties are not created by the seller but are considered to be part of the contract of sale. There are two kinds of implied warranties. The first one is the implied warranty of merchantability or usage of trade (Art. 2-314 UCC). This means that goods should be merchantable and fit for normal purposes. The second implied warranty is fitness for particular purpose (Art. 2-315 UCC). This means that when the seller knows that the buyer has a particular purpose in mind for the goods, there is warranty that the goods are fit for this purpose. Both implied warranties can be altered or excluded, although there are some rules for this (Art. 2-316 UCC).

The expression ‘as is’ is an accepted means of excluding a warranty (Art. 2-316 (3) a UCC). From the above, follows why most open source licences con-

tain an express ‘no warranty’ clause, with explicit references to implied and express warranties. Without this clause, both implied warranties would be applicable. The UCC requires a signed, written contract for any sale of goods in excess of \$500. In addition, the UCC requires sellers (licensors) to provide certain warranties, including warranties of merchantability, fitness for a particular purpose, and non-infringement, which are not provided by the GPL. On the validity of such disclaimers of warranties under the UCC, American commentators argue that since many distributions of GPL software are not in exchange for money, the writing requirement of the UCC does not apply to them. The UCC expressly does not cover such no-cost transactions.<sup>201</sup>

By contrast, the term warranty (‘garantie’) has no real autonomous meaning under Dutch law, meaning which must be assessed according to the criterion developed by the Supreme Court in the Haviltex case.<sup>202</sup> A warranty may consist in the seller’s, or licensor’s, promise to take action at the occurrence of a specific factual situation or of an event, which hinders the proper performance of the obligations under the contract. Although the term ‘warranty’ is nowhere mentioned in the CC, a licensor can be legally bound to live up to his contractual obligations. The licensor’s promise is an obligation of result, in the sense that if the promise is not fulfilled the licensor is in a situation of breach of contract. Depending on the situation, the promise can be fulfilled by the delivery of the missing goods, by the repair or the replacement of the goods, by the resolution of the contract or by the payment of damages.<sup>203</sup> In this sense, it is interesting to note that the Directive 1999/44/EC on certain aspects of the sale of consumer goods and associated guarantees<sup>204</sup> defines the term ‘guarantee’ as any undertaking by a seller or producer to the consumer, given without extra charge, to reimburse the price paid or to replace, repair or handle consumer goods in any way if they do not meet the specifications set out in the guarantee statement or in the relevant advertising

The legal basis under Dutch law of a promise to take action in case of default in the performance of the contractual obligations can be found in the concept of ‘conformity’. Article 7:17 paragraph 1 CC sets out the conformity requirement, by stating that: ‘The seller must deliver goods to the consumer,

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<sup>201</sup> Wacha 2005, p. 472.

<sup>202</sup> Van der Klaauw-Koops and De Graaf 2004, p. 132.

<sup>203</sup> Van der Klaauw-Koops and De Graaf 2004, p. 132.

<sup>204</sup> Directive 1999/44/EC of the European Parliament and of the Council of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees, *OJ* 171, 7 July 1999, pp. 12-16. This directive was implemented in Dutch law by the *Wet van 6 maart 2003 tot aanpassing van Boek 7 van het Burgerlijk Wetboek aan de richtlijn betreffende bepaalde aspecten van de verkoop van en de garanties voor consumptiegoederen*, *Gazette* 2003, No. 110.

which are in conformity with the contract of sale.’ This means that the seller must deliver goods that have the qualities, which can be expected by the buyer. The next question then is what the buyer can expect? In answering this question, all that the seller knew or should have known about the purpose of the goods and the intentions of the buyer should be taken into account. The nature of the good therefore is important (implied warranty), but also statements by the buyer (express warranty). Article 7:17 paragraph 2 CC provides that: ‘A good does not correspond to the agreement if, considering the nature of the good and statements by the seller relating to the good, it does not possess the specifications that the buyer could expect on the basis of the agreement. The buyer may expect that, without having to doubt about it, the good has the specifications necessary for normal purpose, and that the good has the qualities necessary for a particular purpose, which was envisaged at the time of concluding the agreement.’ The content of the warranty, even if it is explicitly stated to the buyer, does not alter the obligation under Article 7:17 CC. New Article 7:6a CC specifies that in the case where a warranty is given in the context of a consumer transaction, the exercise of the warranty does not affect any other rights of the consumer under the law.

There is a definite parallel between the provisions of the Dutch CC on warranties and those of the UCC. Both sets of rules concern the sale of goods. In fact, warranties have been given to computer licensees in the past, the legality of which has been upheld and enforced by the courts.<sup>205</sup> Like the warranties in the UCC, however, the rules of the CC do not apply, when goods or an open source program is provided for free. It has therefore been argued that, since a program distributed under the GPL is licensed for free, there is no warranty for the program and the licensor (i.e., the copyright holder) cannot be compelled to deliver other goods, repair or replace defective goods, rescind the contract or pay damages, in case the software is not in conformity with the contract.

#### 4.6 LIMITATION OF LIABILITY

Most, if not all, open source licences contain a stipulation according to which the licensor limits all liability for damages resulting, directly or indirectly, from the use of the program. Article 12 of the GPL, which reads as follows:

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<sup>205</sup> Voorzieningenrechter Rechtbank 's-Gravenhage 19 December 2002, *Computerrecht* 2003/4, p. 261; Voorzieningenrechter Rechtbank 's-Gravenhage 20 January 2003, *Computerrecht* 2003/4, p. 263; P.H. Blok en T.J.M. de Weerd, ‘Uw opinie’, *Computerrecht* 2004/3.

‘In no event unless required by applicable law or agreed to in writing will any copyright holder, or any other party who may modify and/or redistribute the program as permitted above, be liable to you for damages, including any general, special, incidental or consequential damages arising out of the use or inability to use the program (including but not limited to loss of data or data being rendered inaccurate or losses sustained by you or third parties or a failure of the program to operate with any other programs), even if such holder or other party has been advised of the possibility of such damages.’

There are three main types of liability under Dutch law. In the case of software, this narrows down to three possible forms of liability: a) Liability resulting from a breach of contract; b) Liability resulting from a tort; and c) Product liability. Liability resulting from a breach of contract is based on Article 6:74 CC, which states that every shortcoming by the debtor obliges him to pay for damages, unless he cannot be held accountable for it. Liability resulting from a tort is based on Article 6:162 CC, which obliges the parties to act carefully. If a party knows that a certain program contains serious errors, but decides to distribute it nonetheless, then he can be held accountable. Product liability is dealt with in Article 6:185 CC and following. Generally speaking, if a product is defective (i.e., not fit for its purpose), damages arising from its defectiveness should be compensated.<sup>206</sup>

Article 12 of the GPL, like the BSD and Article 9 of the MPL, all purport to fully exonerate the licensor from any kind of liability. But is such a full limitation of liability valid under Dutch law?

#### 4.6.1 Restriction and disclaimer of liability under Dutch law

In principle, a restriction or disclaimer of one’s liability is permitted under Dutch law. This flows from the principle of the freedom of contract, according to which the parties to an agreement are free to determine the content of that agreement. However, the law does place some restrictions upon the parties’ freedom of contract. First, it is possible that the agreement (i.e., the disclaimer of liability) itself is void because it is contrary to common decency (‘goede zeden’) (Art. 3:40 CC). In the case of restrictions of liability, it is generally accepted that an agreement, which restricts a person’s liability for damages, which were caused by his own deliberate behaviour, is void. This is a long-standing rule in Dutch case law. Similarly, liability for damages that result

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<sup>206</sup> Gerechtshof Amsterdam, 22 November 2001 (*Liebeswerk Kirche in Not/Ostpriesterhilfe/ Cap Gemini Benelux BV*), *Computerrecht* 2002/2.

from a person's own gross negligence cannot be restricted. There is some doubt on this last rule<sup>207</sup> and the Supreme Court has not (yet) taken this doubt away. Considering the above, the last sentence of Article 12 GPL ('even if such holder or other party has been advised of the possibility of such damages') will probably not be valid since it disclaims liability for gross negligence.<sup>208</sup>

Under Dutch law, an agreement is not only invalid if it is contrary to law and custom, but also if the agreement would not be acceptable according to the principle of reasonableness and fairness (Art. 6:248 section 2 CC). This principle has been instrumental in the assessment of disclaimers of liability under Dutch law. The landmark case in this field is *Saladin/HBU* in 1967.<sup>209</sup> In this case, the Supreme Court decided that it was possible for a judge to examine an agreement that disclaimed liability according to the principle of reasonableness and fairness. The evaluation of the reasonableness and fairness should not be restricted to the agreement itself (i.e., its content) but should also include its formation and the period in which the damages occur. All relevant circumstances should be taken into consideration. Interestingly, the Supreme Court mentioned a (non-limited) number of circumstances that should be taken into consideration: the seriousness of gross negligence, in particular in relation to the nature and gravity of the related interests; the nature and content of the agreement; the social position of the parties and their mutual relationship; the way in which the agreement was formed; the degree of consciousness of the agreement with the other party.

Although this was an important decision by the Supreme Court, there remains a certain degree of legal uncertainty. This is partly due to the fact that the assessment of the relevant circumstances is a question of fact and therefore not admissible for a possible reversal of judgment by the Supreme Court. Consequently, there are no clear-cut rules for judging disclaimer agreements. However, in the years following the *Saladin/HBU*-case, legal scholars have tried to expand the list of 'relevant circumstances'. The Supreme Court has followed some of these suggestions. One of which is that if there is a disparity between the price of goods and the possibility of damages (i.e., a relatively inexpensive product that causes enormous damages), a disclaimer should be considered reasonable. Another relevant circumstance is the possibility of insurance. If the buyer of goods has better opportunities for insurance, a disclaimer by the seller, who does not have the same opportunities for insurance, can be considered

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<sup>207</sup> Van den Brink 1998, p. 71.

<sup>208</sup> Visser 2004, p. 228.

<sup>209</sup> HR, 19 May 1967, *NJ* 1967 No. 261.

reasonable.<sup>210</sup> Still, the fact remains that the assessment of a disclaimer according to the principle of reasonableness and fairness is a question of fact, which can depend on many circumstances. Case law in the Netherlands dealing with restrictions of liability for software has confirmed that a disclaimer for liability is not considered to be unreasonable *per se*. Software is therefore no exception to the general rule of *Saladin/HBU*<sup>211</sup> and a clause in an open source licence purporting to restrict the licensor's liability will not be held invalid unless the circumstances dictate such a conclusion.

#### 4.6.2 Standard form contract

The GPL can be regarded as a set of general conditions or a standard form contract. This has been confirmed by the only case so far in Europe concerning the validity of the GPL.<sup>212</sup> As mentioned earlier, the Dutch CC contains a special regime dealing with general conditions of sale (6.5.2. A), which could have implications for the validity of the disclaimer in paragraph 12 of the GPL. The provisions of this section of the CC, along with those of the German CC, have served as a model for the European Directive on unfair terms in consumer contracts, which was adopted in 1993.<sup>213</sup> These rules are meant to restore the balance in favour of the traditionally weaker party in the transaction: the consumer. In principle, consumers, defined as a natural person not acting professionally or in business, are the main beneficiaries of the protection granted under these provisions. However, the legislative history of the relevant provisions reveals that small parties, that are not consumers but are comparable to consumers because of their weaker bargaining position, should also benefit from the protective regime. This is called the reflex effect ('reflexwerking') of the regime. A clause that protects a typically consumer interest will not have reflex effect.<sup>214</sup> Clauses that protect a more general interest of a contracting party or protect a party's trust will have reflex effect. Indeed, the CC provides that a company employing less than 50 employees or a legal corporation can invoke the general regime of the CC to quash the general conditions of the party using them.<sup>215</sup>

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<sup>210</sup> Duyvensz 2003, p. 25.

<sup>211</sup> HR, 19 May 1967, *NJ* 1967 No. 261.

<sup>212</sup> Landgericht Munchen I, *Az*: 21 O 6123/04

<sup>213</sup> Directive on Unfair Terms in Consumer Contracts, 93/13/EEC, of 5 April 1993, *OJL* 95/29.

<sup>214</sup> Wessels & Jongeneel 1997, p. 244.

<sup>215</sup> See Art. 235(a) CC.

Article 6:233 CC states that a clause in the general conditions is to be voidable if the clause, ‘considering the nature and further content of the agreement, the way in which the general conditions are formed, the mutual knowable interest of parties and the remaining circumstances of the case, is unreasonably onerous for the other party.’ The regime does not apply to terms that deal with the definition of the main subject-matter of the contract or with the adequacy of the price and remuneration in relation to the goods or services supplied, insofar as these terms are in plain intelligible language (‘kernbedingen’). A clause is considered to deal with the definition of the main subject-matter of the contract, if without it, the agreement would not have been concluded (e.g., the price of goods). Inspired by the requirement of good faith, the unfairness of contractual terms is to be assessed according to the nature of the goods or services for which the contract was concluded, to all the circumstances attending the conclusion of the contract, as well as to all the other terms of the contract. In addition, Articles 236 and 237 CC respectively contain a ‘black list’ of terms that are invalid because they are regarded as unreasonably onerous to the other party, and a ‘grey list’ of terms that, unless proven otherwise, are presumed to be unreasonably onerous.

In the context of open source licences, Article 6:237(f) CC is worth pointing out. According to this provision, a stipulation is deemed to be unreasonably onerous, if it ‘frees the user or a third person in whole or in part from a legal obligation to repair damage.’ Literature and case law agree that since Article 6:237(f) CC protects a general interest of contracting parties, it can have a reflex effect.<sup>216</sup> It follows from the above that, with regard to the validity of a limitation of liability, the quality of the contracting parties is important. A stipulation limiting the licensor’s liability could be annulled, if contrary to the requirement of good faith, it caused significant imbalance in the parties’ rights and obligations arising under the contract, to the detriment of the consumer. If the licensee is not a consumer, but is in a situation comparable to that of a consumer, the reflex effect of the general conditions will not allow the licensor to invoke the disclaimer of liability. If the licensee is a stronger party, then the general conditions regime will not apply and the disclaimer will have to be assessed according to the principle of reasonableness and fairness. Of course, the fact that most OSS is distributed for free constitutes an important factor to take into consideration when evaluating the onerous character of the limitation of liability. Nevertheless, there may be circumstances where the limitation of liability should not be upheld. As Thole and Seinen suggest, however, the assessment of the validity of an exoneration clause included in an open source

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<sup>216</sup> Van der Klaauw-Koops and De Graaf 2004, p. 133; Visser 2004, p. 228.



licence does not substantially differ from one incorporated in any other software licence.<sup>217</sup>

Contrary to the indicative list of ‘presumably unfair’ terms included in the Annex to the Directive on unfair contract terms, Articles 236 and 237 CC do not expressly mention the clause ‘excluding or limiting the legal liability of a seller or supplier in the event of the death of a consumer or personal injury to the latter resulting from an act or omission of that seller or supplier.’ Such a disclaimer of liability could be held invalid, depending on the circumstances, on the basis of Article 3:40 CC as contrary to common decency (‘goede zeden’). While the Dutch courts have not, in all cases, held an exoneration of liability for death or physical injury invalid, they have approached this sort of exoneration of liability differently from other kinds of restrictions on liability.<sup>218</sup> In the context of open source licences, such an exoneration of liability would only play a role in the rare instances where it could be demonstrated that the use of an open source program has resulted in the death or physical injury of its user. This could be the case for example, for the use of OSS in combination with medical equipment. While it is not all together excluded, the occurrence of such circumstances would, in our opinion, be very exceptional. Whether the exoneration of liability would be held valid would, of course, depend on the circumstances.<sup>219</sup>

The fact that most open source computer programs are distributed for free probably also excludes any product liability on the part of the licensor. Indeed, Article 6:185(1)(c) CC provides that ‘the producer shall be liable for the damage caused by a defect in his product, unless the product has not been manufactured for the purpose of sale by the producer or for any other form of distribution by him with an economic objective; or unless it has not been manufactured or distributed in the framework of the course of his profession or business.’ This last sentence essentially excludes any liability for software developed for example by unemployed persons or students.

Finally, liability can arise in the field of computer programming from what has been called ‘code-poisoning’.<sup>220</sup> If a program, which is distributed under the GPL, contains copyrighted material (that is, not copyrighted by the licensor), users of the program could be infringing the copyright of a third party. This in fact is what happened (or rather claimed) in the SCO/IBM-case in the United States.<sup>220a</sup> Arguably, the licensee could hold the licensor responsible

<sup>217</sup> Thole and Seinen 2004, p. 224.

<sup>218</sup> Van den Brink 1998, p. 73.

<sup>219</sup> HR 9 October 1992, *NJ* 1994 Nos. 286-289 (*Maassluis*).

<sup>220</sup> Zittrain 2004, p. 274.

<sup>220a</sup> See Goettsch 2003, p. 588.

for damages arising out of copyright infringement. In the GPL, there is no special disclaimer for this kind of damages, but since there is a general disclaimer for all damages, they probably fall under this general disclaimer.

#### 4.7 TERMINATION OF CONTRACT

A special aspect of open source licenses that deserves attention is the possibility for the licensor to end the agreement. While Stallman argues that this would run contrary to the GPL, it is possible that open source licenses can be terminated at any moment.<sup>221</sup> Fitzgerald's suggestion that open source licenses can be ended is based on common law jurisprudence in which it is considered that 'a gratuitous license can be revoked at will'.<sup>222</sup> McGowan also believes that a developer can initially bring out his contributions under the GPL and will subsequently be able to terminate this license.<sup>223</sup> Fitzgerald rightly observes that the withdrawal of a license has little effect in practice if a great number of computer programmers have subsequently made contributions to the project.<sup>224</sup> Furthermore, the code that is subject to the withdrawn licence may soon reappear in the open source community anyway. In light of the limited practical effect of the termination of an open source licence, any concern on this point seems arather theoretic.

It is generally accepted in Dutch contract law that, unless the parties have stipulated otherwise, contracts that are concluded for a fixed period of time may only be terminated at the end of their term. For contracts that are concluded for an undetermined period of time, the termination by one of the parties is possible, if done according to the principle of good faith.<sup>225</sup> However, a party is entitled to ask for the termination of the agreement if the other party has substantially violated his obligations under the contract. Most open source licences set out the circumstances under which the licence may be terminated. Article 4 of the GPL provides for example that: 'You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under

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<sup>221</sup> See Frequently Asked Questions about the GNU GPL, at <<http://www.gnu.org/licenses/gpl-faq.html>>.

<sup>222</sup> Suzor, Fitzgerald & Basset 2003, p. 11.

<sup>223</sup> McGowan 2003, pp. 6 and 13.

<sup>224</sup> Suzor, Fitzgerald & Basset 2003, p. 11.

<sup>225</sup> HR 21 April 1995, *RvdW* 1995/98 (*Kakkenberg/Kakkenberg*); Van Dunné 2004, p. 836.

this License will not have their licenses terminated so long as such parties remain in full compliance.’ It states that if the licensee does not comply with the conditions of the GPL, his rights under the license are automatically terminated.

Article 8.1 of the Mozilla Licence states that: ‘This License and the rights granted hereunder will terminate automatically if you fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. All sublicenses to the Covered Code, which are properly granted, shall survive any termination of this License. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.’ The licence will also terminate, if the licensee initiates litigation by asserting a patent infringement claim (excluding declaratory judgment actions) against the Initial Developer or a Contributor. In a situation where a licensor invokes the right to terminate the licence pursuant to Article 4 of the GPL or 8.1 of the MPL, the licensee could perhaps rely on Article 6:237d CC to counter the automatic termination of the licence. This provision declares that in a contract between a user of general conditions of sale and a consumer, a stipulation, which frees the user from being bound to the contract, is presumed to be unreasonably onerous.

In our opinion, except for the termination of the licence as a result of a breach of the share-alike clause, most grounds for termination listed in the GPL and the MPL are comparable to those included in conventional software licences. Similarly, the provision stating that the contract survives with respect to sub-licensees is not unusual. Hence, in the event of termination under Sections 8.1 or 8.2 of the Licence, all end user license agreements (excluding distributors and resellers), which have been validly granted by the licensee, or any distributor hereunder prior to termination, shall survive termination.



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## Chapter 5

# OPEN SOURCE AND COPYRIGHT LAW

Software developers across the European Union enjoy copyright protection on their programs since the adoption, in May 1991, of the Directive 91/250/EEC on the legal protection of computer programs.<sup>226</sup> The provisions of this directive were transposed into the Dutch Copyright Act 1912 by the Act of 7 July 1994.<sup>227</sup> As a result, all computer programs, whether in object code or in source code,<sup>228</sup> are subject to copyright protection in the Netherlands, provided that they meet the habitual criterion of originality. OSS does not differ in this respect from any other proprietary software. Open source software does, however, depart from proprietary software in the manner in which it is created and distributed to the public. As described in chapter 2, the modes of creation and distribution of OSS have emerged in reaction to those of proprietary software, where the use of copyright law was seen as an impediment to the further development of software.<sup>229</sup> Far from rejecting the rules of copyright law, the open source movement relies on the application of these rules to set their own ‘open’ terms of use for protected software. The key terms in open source licences have been designed to take account of the fact that the traditional distinction between creators and users of software has essentially vanished within the open source community: users are creators and vice versa. As mentioned earlier, the most widely used open source licences have been developed from an American law perspective, which shows important differences with Dutch copyright law. In order for Dutch users to be able to fully take part in the open source movement, it is paramount that each software developer knows precisely what his rights and obligations are under the law and the licence.

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<sup>226</sup> Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, *OJ L* 122 17 May 1991 p. 42 [hereafter the Computer programs directive].

<sup>227</sup> Wet van 7 juli 1994, *Stb.* 1994 No. 521.

<sup>228</sup> Computer programs directive, recital 7, which reads as follows: ‘Whereas, for the purpose of this Directive, the term “computer program” shall include programs in any form, including those which are incorporated into hardware; whereas this term also includes preparatory design work leading to the development of a computer program provided that the nature of the preparatory work is such that a computer program can result from it at a later stage.

<sup>229</sup> Azzaria 2004, p. 409.

In the following pages, we concentrate exclusively on the distinctions shown between the terms of the GPL, the BSD, and the Mozilla licences and the rules on copyright currently in force in the Netherlands.<sup>230</sup> We first consider the issue of authorship and ownership in the context of OSS. In view of the manner in which OSS is developed, two aspects deserve our attention: first, the question of the joint authorship with respect to software created by more than one author; and second, the question of the authorship with respect to software created under employment. In this last subsection, we broaden our inquiry to include works that are created under the supervision of another person, as well as those that are communicated to the public by a public institution, association, foundation, or company. Generally speaking, the rules laid down in the Copyright Act regarding the authorship of a work also determine who should be considered the owner for the rights on that work. From the perspective of the Rights Owner's exploitation rights, we then examine the acts that are expressly permitted under the three main open source licences. These acts generally include the freedom to use, reproduce, and modify the software, the freedom to distribute or re-distribute the software, and the obligation to distribute the software free of any royalty. For each of these acts, we analyse how the licence terms depart from the relevant provisions of the Copyright Act 1912. In this section, we also have a look at whether the open source licences comply with the legal requirements regarding the licensing of rights. The third section focuses on the licences' different obligations regarding the respect of moral rights, such as the duty to mention the name of the developers, and on how these obligations conform to the provisions of the Copyright Act 1912. Finally, section four gives a brief description of the phenomenon of dual licensing.

## 5.1 AUTHORSHIP/OWNERSHIP

As we shall see in the following pages, the determination of the authorship of an open source program remains a thorny issue, which in most cases will have to be decided on a case-by-case basis. The question of authorship is paramount, since there are two major consequences deriving from the determination of who the author of a work is: first, one can establish who owns the rights on the work, and thereby decide who is entitled to exercise the exclusive rights on the work and act as the licensor;<sup>231</sup> and second, one can determine the duration of

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<sup>230</sup> For a more exhaustive account of the legal protection of proprietary software, we refer the reader to Meijboom 1999, pp. 71/1-71/36; and Verkade 2004, pp. 242-258.

<sup>231</sup> On the subject of the enforcement of the rights, see *infra*, section 7.1.

the copyright protection on the work. Generally speaking, the copyright protection runs for the life of the author and for 70 years after his death, irrespective of the date when the work is lawfully made available to the public. However, according to Article 1(2) of the Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights,<sup>232</sup> in the case of a work of joint authorship, the term of the copyright protection shall be calculated from the death of the last surviving author. According to the fourth paragraph of the same provision, where a Member State provides for particular provisions on copyright in respect of collective works or for a legal person to be designated as the right holder, the term of protection shall run for 70 years after the work is lawfully made available to the public. This rule does not apply if the natural persons who have created the work are identified as such in the versions of the work, which are made available to the public. Moreover, this paragraph is without prejudice to the rights of identified authors whose identifiable contributions are included in such works. In such a case, the protection expires 70 years after the death of the last surviving author.

### 5.1.1 Joint authorship

Perhaps more than any other type of software, OSS is the engine of collaborative creation. The very fact that the source code is made available to fellow users via the Internet encourages subsequent developers to make their own contribution to an existing piece of software, by correcting errors, or by enhancing the software's capabilities and efficiency. As shown in section 3.1 above, OSS usually consists in a patchwork, or a 'bazaar', of different contributions originating successively from a number of unsupervised and unrelated developers, who are often scattered across different locations. The modifications brought to the initial software can then either be distributed as a separate programme or be integrated in the original software. In the latter case, one person or a group of persons may be appointed to control the patches and approve of their incorporation into the original software, like Linus Torvalds does with respect to the Linux kernel. Between these two extreme modes of production of OSS, there is a plethora of variations on the notion of 'team work', where the contributors of elements of the software may be regarded as 'authors', in the sense of the Copyright Act 1912, depending of course on the extent of their creative input. Indeed, each contribution may be protected under the Copyright Act, either as a separate programme or integrated into the origi-

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<sup>232</sup> Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights, *OJL* 290, 24 November 1993, p. 9.

nal software, only as long as the lines of code meet the criterion of ‘originality’, in the sense that the code bears the personal stamp of their author.

Leaving the issue of private international law to an expert, let us concentrate here on the question of the authorship and ownership of rights on such a composite work. Does OSS qualify as a collaborative work under Dutch law? Who owns the rights on such software? For the purpose of this section, we assume that all contributors are physical persons and not legal persons.

With regard to the authorship of computer programs, Article 2(1) of the Computer programs directive specifies that ‘the author of a computer program shall be the natural person or group of natural persons who has created the program or, where the legislation of the Member State permits, the legal person designated as the right holder by that legislation. Where collective works are recognized by the legislation of a Member State, the person considered by the legislation of the Member State to have created the work shall be deemed to be its author.’ The second paragraph of this provision adds that, ‘in respect of a computer program created by a group of natural persons jointly, the exclusive rights shall be owned jointly.’ Notwithstanding the rules set out in the Computer programs directive, the Dutch Copyright Act 1912 contains no special provision dealing with the authorship of software. The authorship of this category of works is therefore subject to the general rules laid down in the Act. The provisions of the Copyright Act 1912 must, however, be interpreted in conformity with the purpose and wording of the directive.<sup>233</sup> Hence, it is generally admitted that the wording of Article 1 of the Act, according to which ‘copyright is the exclusive right of the author’, implies that the natural person or group of natural persons who have created the program are considered the copyright owners of that program.<sup>234</sup>

With respect to works that are created by more than one author, the Dutch Act contains only two provisions that may be relevant to software developers, one on ‘collections of works’ and one on ‘works created under the supervision of another person.’ Regarding this last category of works, Article 6 of the Act states that ‘if a work has been made according to the draft and under the guidance and supervision of another person, that person shall be deemed the author of the work.’ In such a case, the importance would lie not so much on the person who technically realises the tangible exemplary of the work, but rather on the person who by giving guidance and supervision inspires or insufflates the spirit in the creation of the work.<sup>235</sup> According to Meijboom, this provision

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<sup>233</sup> Meijboom, in Jongen and Meijboom 1993, p. 5.

<sup>234</sup> Jongen in Jongen and Meijboom 1993, p. 170.

<sup>235</sup> Spoor, Verkade and Visser 2004, p. 30.



may be relevant in the field of computer programming only in the case where the design of the computer program is so detailed that the ultimate programming work entails no more than a mere straightforward non-creative execution of instructions.<sup>236</sup> In practice, this provision can hardly have any significance for the development of OSS. Indeed, considering the essentially decentralised mode of production of this kind of software, it is highly doubtful whether the realisation of any OSS project can ever qualify as a work created under the supervision of another person.

The provision dealing with ‘collections of works’, on the other hand, may be more directly relevant to the production of OSS. Typical examples of ‘collections of different works’ covered by this provision and by Article 10(1) 2<sup>o</sup> of the Act are student course packs, newspapers, periodicals and encyclopaedia.<sup>237</sup> Article 5(1) of the Act provides that ‘if a literary, scientific or artistic work consists of separate works by two or more persons, the person under whose guidance and supervision the work as a whole has been made or, if there is no such person, the compiler of the various works, shall be deemed the author of the whole work, without prejudice to the copyright in each of the works separately’. Article 5(2) of the Act further specifies that ‘where a separate work in which copyright subsists is incorporated in a whole work, the reproduction or communication to the public of each separate work by any person other than the author thereof or his successor in title shall be deemed an infringement of the copyright in the whole work.’ In the field of computer programmes, this provision may be applicable if, for example, several elements created by different authors are brought together and combined by another person who, without prejudice to the rights of the individual authors, is then deemed the author of the whole work. This could be important for example in the case of multimedia works.<sup>238</sup> Whether an OSS project can qualify as a ‘collection of different works’ is not excluded but would have to be determined by the court on a case-by-case basis.

The Copyright Act 1912 only refers to works created by more than one author inside the section relating to the exercise and enforcement of rights, without specifying when one is in presence of a work of joint authorship. Article 26 states that ‘where the copyright in a work belongs jointly to two or more persons, it may be enforced by any one of them, unless otherwise agreed.’ In view of the silence of the Act, the case law had to develop rules regarding

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<sup>236</sup> Meijboom 1999, p. 71-13. See also HR 1 June 1990, *NJ* 1991 No. 377 (*Kluwer Publiektijdschriften BV and Eska Tijdschriften BV/Lamoth*), which involved the mechanical execution of a photograph by one person following the instructions of a supervisor.

<sup>237</sup> Spoor, Verkade and Visser 2004, p. 35.

<sup>238</sup> Meijboom 1999, p. 71-13.

the authorship and ownership of works created by multiple authors. As a result, courts distinguish on the one hand, the situation where the work is the result of such close co-operation between authors that the individual contributions cannot be separated from one another, from on the other hand, the situation where the individual contributions are clearly identifiable.<sup>239</sup> When a collaborative work is composed of different forms of expression (text/illustration, text/music and music/film), the individual contributions will generally be regarded as separable. Within a same form of expression however, the contributions will be presumed inseparable.<sup>240</sup> In case of doubt, the separability of the different authors' contributions is a question of fact that must be decided on a case-by-case basis.

The consequences of this rule are significant. In the case of distinguishable contributions, each author enjoys a separate right with respect to his own contribution, which he can exercise apart from the others. By contrast, in the case of combined contributions, all authors enjoy the rights on the work in joint ownership, which must be exercised with the consent of every author.<sup>241</sup> The rules on collaborative works developed by the courts coincide roughly with the position advocated by OSS developers in Article 2 of the GPL, which declares that:

'These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it. Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.'

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<sup>239</sup> See HR 25 March 1949, *NJ* 1950 No. 643 with annotation by D.J. G. Visser (*La belle et la bête*).

<sup>240</sup> Hof 's-Hertogenbosch, 27 December 1994, *NJ* 1995 No. 623 (*Rooijakkers/Wouters*), with annotation by D.W.V. Verkade.

<sup>241</sup> Koelman 2004, p. 231.

The quintessential example of a collaborative work distributed under the GPL licence is the Linux kernel, which consists in the aggregation of the contributions of thousands of people. Arguably, the Linux kernel may constitute a 'collection of different works'. According to Article 5(1) of the Copyright Act 1912, Linus Torvalds would in all likelihood be considered the author of the whole work, as being either the person under whose guidance and supervision the work as a whole has been made or, as the compiler of the various contributions. In this capacity, Linus Torvalds would probably own the copyright in the whole programme. Of course, pursuant to the same provision of the Act, each individual contributor to the Linux kernel would be deemed the author of his own original contribution separately, retaining the rights on each contribution.

By contrast, neither the BSD licence nor the Mozilla licence contains any provision regulating the ownership of rights on software created by multiple authors and distributed under these licences. In the absence of a contractual arrangement, the authorship of a work created by more than one author must be determined according to the provisions of the Copyright Act 1912. It is now established jurisprudence in the Netherlands that, where co-authors have not provided for a specific arrangement regarding the exercise of rights on a collaborative work, each author is in principle entitled to exploit the work, even without the authorisation of the other, provided that the moral rights of the co-authors are respected.<sup>242</sup> In addition, according to the case law, the general rule of fairness and equity would demand that, where one of the co-authors decides to exploit the work on his own, the other author be entitled to participate in the revenues generated by such exploitation in proportion to each author's interest in the work. In the case of OSS distributed under the BSD licence or the Mozilla licence, it would essentially be a question of fact to decide whether the multiple contributions submitted for a particular project are separable from one another and whether the authors of these contributions are permitted to exercise the rights on their own contribution without the consent of the other authors.

### 5.1.2 Work created under employment

According to the general principles of copyright, the natural person or group of natural persons who have created the program are considered the copyright owners of that program. The rules of ownership vary however in the case of

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<sup>242</sup> Hof 's-Hertogenbosch, 27 December 1994, *NJ* 1995 No. 623 (*Rooijackers/Wouters*), with annotation by D.W.V. Verkade.

software developed by persons working under employment.<sup>243</sup> In such a case, the Computer programs directive dictates that the employer, whose employee has created the program in the execution of his duties or following the instructions given by his employer, is entitled to exercise all economic rights in the program so created, unless otherwise provided by contract.<sup>244</sup> The Dutch Copyright Act 1912 already contained such a rule, so that no adjustment was needed in order to comply with this requirement of the directive. Article 7 of the Act provides that ‘where labour carried out by an employee consists in the making of certain literary, scientific or artistic works, the employer shall be deemed the author thereof, unless otherwise agreed between the parties.’ The application of this provision presupposes the existence of an employment relationship, characterised by the subordinate position of the employee and the payment of a salary. This would include persons employed by the national, provincial or local governments for example, but would in all likelihood exclude work carried out by students and apprentices.<sup>245</sup> The element of subordination is essential for the application of Article 7 of the Copyright Act, for without it, the authors’ rights remain with the natural person who created the work. Freelancers, as well as any other person carrying out work on commission for another without being bound by an employment relationship, are not covered by this provision.<sup>246</sup> The ownership of rights on the fruits of the intellectual labour of academics and researchers remains a highly debated issue in the Netherlands. It has been argued, for example, that Dutch Universities do not own the rights on works created by academics and researchers, because in application of the principle of academic freedom there is no sufficient relationship of subordination between the employer and its employees.<sup>247</sup> At this point, only a decision of the Supreme Court could settle the issue.

In order for an employer to be presumed owner of the copyright on a work made under employment, this work must have been created within the scope of the employee’s employment description. In the field of computer programming, an employer would be presumed the copyright owner only in the case of software developed by an employee who was hired to do so.<sup>248</sup> For example, an accountant who develops an accounting program would retain the rights on this program, insofar as his employment description was limited to bookkeep-

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<sup>243</sup> Verkade 2004, p. 258; and Meijboom 1999, p. 71-13.

<sup>244</sup> Computer Programs Directive, Art. 2(3).

<sup>245</sup> Koelman 2004, p. 231.

<sup>246</sup> Spoor, Verkade and Visser 2004, p. 40.

<sup>247</sup> Schuijt 1999, pp. 101-109.

<sup>248</sup> Meijboom 1999, p. 71-14.

ing and not to computer programming.<sup>249</sup> The fact that the accountant developed a computer program on his employer's time may perhaps constitute a breach of the labour agreement, but it in no way means that the rights on the work belong to the employer. Moreover, the fact that a work is created during the employee's free time is not as such a decisive factor, but it may be relevant if the employee's tasks had not been well defined.<sup>250</sup> This is essentially a question of facts that must be decided on a case-by-case basis.

The interpretation of Article 7 of the Copyright Act, and in particular of the circumstances in which a person is deemed to work under employment, may be very important in the context of the development of OSS. As Koelman points out, OSS is often developed by academics and students, in which case the ownership of rights is highly uncertain.<sup>251</sup> Furthermore, many programmers involved in the development of OSS are employees of commercial enterprises working in their free time, in which case the rights on such software may accrue to their employer if they had been engaged in their capacity of computer programmer. Whether the employer would be bound by the terms of the open source licence, would probably depend on whether the computer developer had the power to conclude an agreement on behalf of the enterprise. If an employee were to modify an open source product in the absence of a valid licence, however, his employer would not be in a position to exploit the work. Besides the question of the employee's power of representation *vis-à-vis* third parties, the involvement of an employee in the development of OSS may not necessarily coincide with his employer's vision of how software should be produced and distributed. This may cause problems if it turns out that the application of the rules of authorship designate the employer as owner of the rights on the software. In practice, there is also a risk that a mosaic of owners, including natural and legal persons, hold the rights on a single open source project. This is undoubtedly the reason why the explanation on how to use the GPL recommends developers to 'get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary.'<sup>252</sup> Whenever developers working under employment do not contractually reserve their rights, the ownership of OSS created by numerous individuals would be shared not only among numerous natural persons, but also among

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<sup>249</sup> Pres. Rb. Haarlem 29 August 1988, *Computerrecht* 1988/5, p. 254.

<sup>250</sup> Verkade 2004, p. 259 where in the field of computer programming, the author refers to the following cases: Pres. Rb. Rotterdam 21 March 1989, *Computerrecht* 1989/3, p. 149 (*Navalconsult/Tres*: in favour of the employer); Pres. Rb. 's-Hertogenbosch 12 July 1990, *Computerrecht* 1990, p. 256 (*Soecoma/Lathouwers*; in favour of the employee).

<sup>251</sup> Koelman 2004, p. 231.

<sup>252</sup> See <<http://www.opensource.org/licenses/gpl-license.php>>.

several legal persons. In practice, the risk of this happening is not insignificant, knowing that nearly two thirds of the open source project developers have the status of employee.<sup>253</sup>

Finally, Article 8 of the Copyright Act 1912 is, in certain circumstances, also relevant in the field of computer programming, insofar as it may be applied in favour of the commissioner of a work outside any employment relationship. This provision states that ‘a public institution, association, foundation or company which communicates a work to the public as its own, without naming any natural person as the author thereof, shall be regarded as the author of that work, unless it is proved that the communication to the public in such manner was unlawful.’ For our purposes, this would mean that a public institution, like a national, provincial, or local government, or any other legal person that communicates a computer program to the public as its own would be regarded as the copyright owner unless there was evidence that that communication to the public was unlawful. A communication of the software would be unlawful if it occurred in violation of a contractual agreement, for example if the contract forbade publication without the mention of the author’s name. Although Article 8 of the Act is certainly very relevant to the distribution of proprietary software, we consider it less likely that it will play a role with open source products for the simple reason that most if not all open source licences, including the GPL, the BSD and the Mozilla licence, require that the distribution of the software be accompanied by a notice giving the names of all contributors. Distributing software without such a notice would amount to a breach of contract. In conclusion, and as the Artistic Licence in a laconic tone specifies: “‘Copyright Holder” is whoever is named in the copyright or copyrights for the package.’

All in all, the question of the authorship and ownership of rights on typical OSS is rather obscure, which will have to be decided on a case-by-case basis.

## 5.2 EXPLOITATION RIGHTS UNDER OPEN SOURCE LICENCE

According to Article 1 of the Dutch Copyright Act 1912, ‘copyright is the exclusive right of the author of a literary, scientific or artistic work or his successors in title to communicate that work to the public and to reproduce it, subject to the limitations laid down by law.’ Copyright owners have thus the exclusive right to authorise or prohibit the communication to the public and the reproduction of the work. Since the adoption of the Computer programs directive,

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<sup>253</sup> See section 3.2.1 *supra*.

the right of reproduction is considered to include the permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole. Given this very broad exclusive right of reproduction, some limitations had to be introduced to allow the lawful user to execute certain acts with respect to protected software without the former's prior authorisation. Nevertheless, most provisions of the Act concerning the use of computer programs are merely default rules from which contracting partners may derogate. In practice, copyright owners usually grant users permission to accomplish certain acts with respect to their copyright protected work by means of a licence. The main difference between open source licences and proprietary software licences lies first and foremost in the freedoms that the former type of licence grants to users and in the obligation, under certain licences, to make the source code available to fellow developers. As we will discuss below, the user of OSS enjoys an extended freedom to use, reproduce, modify and (re)distribute the software. In return, the licensee who undertakes to modify and redistribute new software based on an open source program must agree, at least under the GPL, to renounce receiving royalty payments for the use of the software. Finally, we examine whether the three most common open source licences comply with the statutory requirements regarding the transfer of exploitation rights.

At the outset, it is important to note that, contrary to what is often asserted in the literature, the freedom of use afforded under most open source licences does not, as such, entail a waiver of right on the part of the Rights Owner. In our opinion, the grant of a permission to execute certain acts with respect to a copyright protected work falls within the scope of the Rights Owner's exclusive right to authorise or prohibit the reproduction and communication to the public of his work and must be distinguished from a waiver of right. Admittedly, the line between a very broad licence to use a work and a waiver of right is in practice hard to draw. This may explain the confusion in terminology found in the literature. A waiver of right implies that the Rights Owner forsakes his right to exercise in the future one or all of his exclusive prerogatives, with respect to one or more individuals.<sup>254</sup> If the licensor waived his right of reproduction and communication to the public, there would logically be no consequence attached to the non-respect of the conditions by the licensee. However, by granting users the freedom to use, reproduce, modify and (re)distribute the OSS, the licensor does not relinquish his right to institute infringement proceedings should the licensee fail to honour the conditions set out in the licence. As we have seen in section 4.5 above, the failure by the licensee to meet the requirements of the GPL, or the MPL regarding the distribution of new ver-

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<sup>254</sup> Spoor, Verkade and Visser 2004, p. 552.

sions of the software may result in the termination of the licence. This, in our opinion, supports the qualification of the open source licence as a broad permission, rather than a waiver of right.<sup>255</sup>

### 5.2.1 Freedom to use

Traditionally, copyright owners have never held absolute control over the use of their works. Everyone is in principle free to read, listen to, or view a work for his or her own learning or enjoyment. In theory, copyright never protected against acts of consumption or reception of information by individuals.<sup>256</sup> With the adoption of the Computer programs directive, this is no longer true, however, with respect to computer software.<sup>257</sup> In the case of software, the execution of even the most trivial operation constitutes a restricted act, since it involves making at least one temporary reproduction of the software in the RAM memory of the computer. Article 45i of the Dutch Copyright Act 1912 indeed specifies that ‘without prejudice to the provisions of article 13, the reproduction of a work as referred to in article 10, paragraph 1, sub 12°, shall include the loading, displaying, running, transmission and storage, insofar as these acts are necessary for the reproduction of the said work.’ According to recital 17 of the directive however, the exclusive rights of the author to prevent the unauthorized reproduction of his work must be subject to a limited exception in the case of a computer program to allow the reproduction technically necessary for the use of that program by the lawful acquirer. According to Article 5(1) of the Computer programs directive, in the absence of specific contractual provisions, the acts of reproduction referred to in Article 4a) and b) do not require authorization by the right holder where they are necessary for the use of the computer program by the lawful acquirer in accordance with its intended purpose, including for error correction. This provision has been incorporated into Article 45j of the Copyright Act 1912, which reads as follows:

‘Unless otherwise agreed, the reproduction of a work as referred to in article 10, paragraph 1, sub 12° by the lawful acquirer of a copy of said work, where this is necessary for the use of the work for its intended purpose, shall not be deemed an infringement of copyright. Reproduction, as referred to in the first sentence, in connection with loading, displaying or correcting errors cannot be prohibited by contract.’

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<sup>255</sup> See Clément-Fontaine 1999, § 59.

<sup>256</sup> Guibault 2002, p. 48.

<sup>257</sup> Jaeger and Metzger 2002, p. 21.



From the text of the directive and its implementing provision in the Dutch Copyright Act, it follows that the minimum rights of use are conferred only to the 'lawful acquirer' of a computer program. When is a person to be considered the 'lawful acquirer' of a computer program? More importantly for our purpose, can the person who downloads or otherwise obtains free of charge a copy of an open source program be seen as a 'lawful acquirer'? How must one interpret the 'lawful' character of the acquisition? Should the 'lawfulness' be assessed in relation to the authorisation to use the software granted under licence by the copyright holder, or in relation to the acquisition of the copy of the software, where the lawfulness is considered from a property law perspective.<sup>258</sup> In the first case, a user who acquires in good faith an infringing copy of the software would not be considered a 'lawful' acquirer of the program in the sense of the Copyright Act, while it could be true in the second case. Van Schelven and Struik argue that, in view of the copyright dimension of the Computer programs directive, the 'lawfulness' of the acquisition should logically be evaluated from the perspective of the authorisation of the copyright holder rather than from a property law perspective. As a logical consequence of this, it is also generally accepted that a subsequent acquirer of the same copy of the software would be a 'lawful acquirer', even in the absence of a licence, according to the doctrine of exhaustion of rights.<sup>259</sup> In a preliminary ruling, the district court of Zutphen confirmed this interpretation of the expression 'lawful acquirer'.<sup>260</sup> The court ruled in this case that the simple fact that a copy of the program had been obtained legally, i.e., without having been stolen, it did not imply that the acquirer had the right to pose the acts of a 'lawful acquirer' in the sense of Article 45j of the Copyright Act. On appeal, the Court of Arnhem overruled the decision, arguing among other things that since the software had been acquired in good faith the acquirer could be regarded as lawful within the meaning of Article 45j of the Act.<sup>261</sup> This part of the court's ruling received severe criticism in the literature: first, the good faith character of the acquisition was irrelevant from a copyright law point of view, since infringement done in good faith is still an act of infringement. Moreover, the appeals decision went against the majority opinion which considers the 'lawful acquirer' solely

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<sup>258</sup> Van Schelven and Struik 1995, pp. 79-82.

<sup>259</sup> Van Schelven and Struik 1995, p. 81; HR 25 January 1952, *NJ* 1952 No. 95 (*Leesportefeuille*); and HR 20 November 1987, *NJ* 1988 No. 82, with annotation from Wichers Hoeth (*Stemra/Free Record Shop*). See subsection 5.2.4, *infra*.

<sup>260</sup> Arrondissementsrechtbank Zutphen, 29 April 1999 (*Deurwaarders Software Services*), *Computerrecht* 1999/4, § 9.19.

<sup>261</sup> Gerechtshof Arnhem, 11 December 2001 (*Blomsma/ Deurwaarders Software Services (DWSS) BV*), *Computerrecht* 2002/2, with annotation from E. Thole.

to be the one who is authorised to use the software in accordance with a purchase or licence contract from the copyright owner or his assignee.

The European Commission would seem to agree with the majority of opinion in the Netherlands, which considers the 'lawful acquirer' to be the one who is authorised to use the software in accordance with a purchase or licence contract from the copyright owner or his assignee and not to be the one who legally obtained a copy of the program. In its report on the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs, the European Commission observes that divergences of views subsist however as to the meaning of 'lawful acquirer'. Several Member States have transposed this notion by using the term 'lawful user', i.e., a person having a right to use the program. The Commission shares the view of some commentators that 'lawful acquirer' does in fact mean a purchaser, licensee, renter or a person authorised to use the program on behalf of one of the above. This argument also draws from Articles 6 and 8 of the Database Directive (Directive 96/9/EC) which use the term 'lawful user' and which were modelled along the lines of Article 5(1) of the Computer programs directive. In the view of the Commission, what was intended by Article 5(1) and recital 18 was that it should not be possible to prevent by contract a 'lawful acquirer' of a program from doing any of the restricted acts that were required for the use of the program in accordance with its intended purpose or for correcting errors. It is, however, possible for a contract to include specific provisions that 'control' the restricted acts, which may be carried out by the user of the computer program.<sup>262</sup>

With this definition of a 'lawful acquirer' in mind, one could reasonably argue that anyone having a licence to use an open source computer program is a 'lawful acquirer' of that program within the meaning of the Copyright Act, provided that the licence accompanying the product was validly entered into. Whether the user of the OSS obtained the copy free of charge or not should make no difference, since the majority opinion considers that the lawfulness of the acquisition should not to be assessed from a property law perspective. In other words, whether the transaction would qualify as a donation rather than a purchase is irrelevant for the determination of when a user is a 'lawful acquirer' of OSS pursuant to Article 45j of the Act. According to some commentators, a literal interpretation of Article 45j of the Act would suggest that a person who downloads an electronic version of the software instead of acquiring a tangible copy of the same software could not be regarded as a lawful acquirer of 'a

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<sup>262</sup> Report from the Commission to the Council, the European Parliament and the Economic and Social Committee on the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs, COM/2000/0199 final.

copy' of the software. As a result, the acquirer of a computer program downloaded from the Internet would not be entitled to benefit from the minimum rights of use.<sup>263</sup> In our opinion, it cannot have been the intent of the legislator to limit the application of the provision according to the medium upon which the software is distributed to the public. Arguably, at the time the directive was adopted in 1991, neither the European legislator nor the national legislators of the Member States were aware of the possibility to distribute software on-line, as an economically viable mode of exploitation.<sup>264</sup> Today, on-line distribution has become one of the most important modes of exploitation of both proprietary and OSS, including for popular programs like Microsoft Windows and Linux. Such a restrictive and technology dependent interpretation would, in our opinion, be inconsistent with the more common interpretation of the provision according to which 'lawful acquirer' means the person who is authorised to use the program. From a practical point of view, this interpretation would also frustrate the reasonable expectations of use of all licensees who acquire software on-line, consequence, which can hardly be justified under the law.

Article 45j of the Dutch Copyright Act also implies that while Rights Owner's may contractually regulate the running, transmitting or storing of a computer program, they may not prohibit lawful acquirers from performing such acts as the loading, displaying or correcting of errors. The last sentence makes it clear that, in view of the unprecedented expansion of the copyright protection, the Dutch legislator wanted to guarantee a minimum right of the lawful acquirer of a copy of a computer program to perform those acts that are necessary for the normal use of the computer program.<sup>265</sup> Apart from the limited acts of loading, displaying, or correcting errors, a lawful acquirer may, however, only execute those acts that are necessary for the use of the work for its intended purpose. When can an act be deemed necessary for the use of the program for its intended purpose? Verkade notes on this subject that the circular formulation of

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<sup>263</sup> Koelman 2004, p. 230; Thole and Seine 2004, p. 221; and Scheltema and Tjong Tjin Tai 2003, p. 245 and 247.

<sup>264</sup> See Proposal for a European Parliament and Council Directive on the harmonisation of certain aspects of copyright and related rights in the Information Society, Explanatory Memorandum, December 1997, § II.A.5, where the Commission writes: 'The Computer Programs Directive, in its Article 4, however, only protects "any form of distribution to the public" of computer programs, not expressly addressing its on-line transmission over the networks. Indeed, at the time of adoption of the Directive the usual form of distribution took place on the basis of floppy discs and not on-line'. And Meijboom, 'The EC Directive on Software Copyright Protection', in Jongen and Meijboom 1993, p. 11 where the author writes: 'Usually, software is transferred, in whole or part, from the medium on which it is supplied (diskette, tape, hard disk) to the computer's memory in order to execute the program.'

<sup>265</sup> Guibault 2002, p. 220.

Articles 45i and 45j is the result of a political compromise and that it certainly cannot have been the intention of the legislator to include any and all technically possible acts of reproduction within the scope of protection of the Rights Owner.<sup>266</sup> For Meijboom, the intended purpose of the software is a question of fact that can be assessed in relation to the software's nature, functionality, or capacity. The decisive factor in establishing what the intended use of a particular program consists in looking at the common intention of the parties at the time they concluded the licensing agreement.<sup>267</sup> When the interpretation of the licence contract offers no concrete solution, the intended purpose of the software can be estimated in function of the use that the average purchaser could reasonably have expected to make of the software.<sup>268</sup>

It is worth pointing out in this context that the Directive on copyright and neighbouring rights in the information society<sup>269</sup> introduced a mandatory exception for temporary acts of reproduction. Article 13a of the Copyright Act, which transposed this last provision into Dutch law, provides that:

'The reproduction of a literary, scientific or artistic work does not include temporary acts of reproduction which are transient or incidental and an integral and essential part of a technological process and whose sole purpose is to enable: (a) a transmission in a network between third parties by an intermediary, or (b) a lawful use, of a work or other subject-matter to be made, and which have no independent economic significance.'

According to recital 50 of the InfoSoc directive, however, 'such a harmonised legal protection does not affect the specific provisions on protection provided for by Directive 91/250/EEC. (...) Articles 5 and 6 of that Directive exclusively determine exceptions to the exclusive rights applicable to computer programs.' In other words, the temporary reproduction of any other type of copyright protected work than computer software is excluded from the scope of the Rights Owner's exclusive right, provided that the conditions of application of Article 13a of the Act are met. As some commentators have argued, the Dutch legislator would have been wise to review Article 45i in the light of new Article 13a of the Act in order to avoid any possible ambiguity.<sup>270</sup>

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<sup>266</sup> Verkade 2004, p. 253.

<sup>267</sup> Meijboom 1999, p. 71-25.

<sup>268</sup> Verkade 2004, p. 254.

<sup>269</sup> Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, L 167, 22 June 2001, pp 10-19 [hereafter InfoSoc directive].

<sup>270</sup> Kleve 2004, p. 210.

Under Dutch copyright law, pure consumptive uses of computer programs such as loading, displaying and correcting errors on the software cannot be prohibited by contract, even if they technically fall under the scope of the owner's exclusive right. However, the licensor is allowed to contractually regulate the running, transmitting or storing of a computer program. In this sense, open source licences grant users a much greater freedom of use than Article 45j of the Act. This is particularly evident from Article 0 of the GPL, which specifies that 'Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.' The BSD licence states that redistribution and use in source and binary forms, with or without modification, are permitted provided that certain conditions regarding the redistribution of software are met. Similarly, Article 2.1 of the MPL grants the user the following rights: 'a world-wide, royalty-free, non-exclusive license, subject to third party intellectual property claims: (a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer to use, reproduce, modify, display, perform, sublicense and distribute the Original Code (or portions thereof) with or without Modifications, and/or as part of a Larger Work.'

Contrary to what Article 5 of the GPL states, we believe that consumers should obtain a valid licence for the use of the software. For, without a licence, consumers are restricted to the acts mentioned in the Copyright Act. For example, Article 45j of the Act permits a lawful acquirer to perform only those acts that are necessary for the use of the work for its intended purpose, apart from the limited acts of loading, displaying, or correcting errors. Moreover, even the making of private copies of software, let alone their distribution among friends and family, is strictly prohibited under the law. The freedom of use and reproduction granted under a typical open source licence is generally much broader than what is allowed under copyright law, making the need to obtain a valid licence if not necessary at least recommendable.

### 5.2.2 Freedom to reproduce

As soon as a user wants to do more with his software, than merely loading and displaying it on his computer, he must as a matter of course make a reproduction of the program. This is true not only for running, transmitting, or storing a computer program, but also for ensuring its maintenance<sup>271</sup> and for translating

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<sup>271</sup> Rb. 's-Gravenhage, 23 April 2003, *Computerrecht*, 2004/5 (*Faco Informatisering BV/Haley Software BV*), § 8.

or adapting it. Unless these acts are covered by a limitation on copyright, the user is obligated to obtain permission from the rights holder prior to making any kind of reproduction. The Dutch Copyright Act, on the model of the Computer programs directive, grants the lawful user<sup>272</sup> only limited rights to make unauthorised reproductions of protected computer programs. Article 45k of the Act allows the lawful user of a program to make a copy of that program to serve as a back-up copy, where this is necessary for the use of the work for its intended purpose. The making of private copies of a program is strictly prohibited under Article 45n of the Copyright Act.<sup>273</sup> Article 45l states that a person who is entitled to perform the acts referred to in Article 45i shall also be entitled, while performing them, to observe, study or test the functioning of the work concerned in order to determine the ideas and principles underlying it. Article 45m permits the making of a copy of a program and the translation of the form of its code, provided that these acts are indispensable for obtaining information necessary to achieve the interoperability of an independently created computer program with other programs, and provided that a number of conditions are met. In the Explanatory Memorandum to the Implementation Act, the Dutch government did indicate that the limitations on the exclusive right, such as those set out in Articles 45k, 45l, and 45m of the Act, were imperative. However, according to the government, there was no need to specify this in the Act.<sup>274</sup> Although it would certainly have been clearer to spell it out in the Act, the Dutch courts cannot ignore the mandatory character of these provisions, since they too must interpret these provisions in compliance with the Directive.<sup>275</sup> A great deal has been written concerning the scope of these limitations with respect to proprietary software.<sup>276</sup> Suffice to say, here, that the general limitations on the owner's exclusive rights, such as the right to quote and the right to use work for educational purposes are also applicable with respect to the reproduction of a computer program.<sup>277</sup>

In light of these provisions, it is clear that once again the GPL, the BSD, and the MPL all offer the licensee much greater freedom to reproduce the computer

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<sup>272</sup> According to Meijboom [1999, p. 71-28], the expression 'lawful user' should be understood in the same terms as the expression 'lawful acquirer' since a person may only be a lawful user if he is a lawful acquirer in the sense of Arts. 45i and 45j of the Act.

<sup>273</sup> Report from the Commission to the Council, the European Parliament and the Economic and Social Committee on the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs, COM/2000/0199 final.

<sup>274</sup> Verkade 1992, p. 95.

<sup>275</sup> Guibault 2002, p. 218.

<sup>276</sup> Verkade 2004, p. 252 et seq.; Meijboom 1999, p. 71-18 et seq.

<sup>277</sup> Groenenboom 2002, p. 22.

program, without restriction as to the number of copies realised or to the purpose for making these copies. From the perspective of the licensor(s), these licences are valid, as Rights Owner's are entitled to licence their rights as they see fit.<sup>278</sup> As will be seen in section 5.2.6 below, nothing in the Dutch Copyright Act prevents Rights Owner's to license their rights broadly to a third party, whether on an exclusive or non-exclusive basis, for a fee or for free. The only restrictions on the freedom of contract of the Rights Owner would be set by the imperative character of the limitations relating to the making of a backup copy, of a reproduction for purposes of observing, studying and testing the software, as well as to the decompilation of the program for purposes of interoperability. These restrictions are irrelevant in the context of OSS, since all types of open source licences grant the user much broader rights of use than the law normally does.

### 5.2.3 Freedom to modify

Generally speaking, the right to modify, adapt, or transform a protected work falls under the exclusive right of reproduction of the owner. This principle is derived from Article 13 of the Dutch Copyright Act, which provides that 'the reproduction of a literary, scientific or artistic work includes the translation, arrangement of music, cinematographic adaptation or dramatization and generally any partial or total adaptation or imitation in a modified form, which cannot be regarded as a new, original work.' The rights holder's exclusive right of reproduction entails more than just the right to authorise or prohibit the making of exact or substantially similar copies. It also extends to the making of arrangements, adaptations, and modifications to an existing work, otherwise called 'derivative works'. Any arrangement, adaptation, or modification of an existing work is subject to the prior authorisation of the rights holder.<sup>279</sup> With respect to computer programs, recital 20 of the Computer programs directive states: 'the unauthorized reproduction, translation, adaptation or transformation of the form of the code in which a copy of a computer program has been made available constitutes an infringement of the exclusive rights of the author.' Besides the generally applicable limitations on copyright, such as the right to quote and to make reproductions for purposes of research and private study, no specific limitation tempers Article 45i of the Copyright Act, with respect to the translation, adaptation, or transformation of software. In other

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<sup>278</sup> On the issue of the regulation of exploitation contracts, see *infra*, section 5.2.6

<sup>279</sup> Van Lingen 2002, p. 77. The moral rights aspects of the freedom to modify software are examined in section 5.3, *infra*.

words, a computer program may not be translated, adapted, or transformed without the rights holder's prior authorisation. Moreover, proprietary licensing contracts are usually adamant in requiring that the licensee refrain from bringing any modification to the software without prior authorisation from the rights holder.

Perhaps more than the freedom to use or to reproduce a computer program, the freedom to modify the software constitutes the cornerstone of the open source movement. As one can read on the home page of the OSI:

'The basic idea behind open source is very simple: When programmers can read, redistribute, and modify the source code for a piece of software, the software evolves. People improve it, people adapt it, people fix bugs. And this can happen at a speed that, if one is used to the slow pace of conventional software development, seems astonishing. We in the open source community have learned that this rapid evolutionary process produces better software than the traditional closed model, in which only a very few programmers can see the source and everybody else must blindly use an opaque block of bits.'<sup>280</sup>

As a rule, users of OSS have, pursuant to the GPL, the BSD, or the MPL, the right to modify the software and to prepare derivative works based upon the original work. Indeed a particular computer program may be qualified as 'OSS' only if the licence allows modifications and derivative works, and allows them to be distributed under the same terms as the license of the original software. To facilitate the modification and the evolution of computer programs, most open source licences require that the source code be distributed along with the object code of the program, or that it at least be made available to the public. Only by having access to the source code of an existing computer program, are software developers in a position to build upon that existing program in order to improve it or to develop compatible software.<sup>281</sup> Proprietary software manufacturers are usually very protective of their source code, for it may embody competitive trade secrets, and only give users access to it in rare circumstances, under controlled conditions.<sup>282</sup> In the same vein, proprietary software suppliers are generally highly reluctant to provide interested parties with interface information. Without the proper interface information or the possibility to decompile a program, computer programmers are absolutely unable to develop any kind of software that is interoperable with existing software. At the time of the adoption of the Computer programs directive, the question of whether the

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<sup>280</sup> See <<http://www.opensource.org/>>, site visited on 23 November 2004.

<sup>281</sup> Gonzalez 2004, p. 332.

<sup>282</sup> Hoeren 2004, p. 721.



decompilation of a program should be allowed led to heated debates. As a result, the directive contains a mandatory limitation allowing under strict conditions lawful users to decompile a program for purposes of interoperability, which the Dutch legislator has transposed in Article 45m of the Copyright Act.<sup>283</sup>

According to Article 3 of the GPL, for an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable code. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable code runs, unless that component itself accompanies the executable code. If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

Decompilation of a program becomes no more than a useless intellectual challenge in the context of OSS. The first principle laid down in the OSD holds that ‘the program must include source code, and must allow distribution in source code as well as in a compiled form. Where a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost—preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a pre-processor or translator are not allowed.’ The OSD’s second principle concerns derivative works, whereby ‘the license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.’ The rationale behind this principle is that the mere ability to read the source code is not enough to support independent peer review and rapid evolutionary selection. For rapid evolution to happen, people need to be able to experiment with and redistribute modifications. What constitutes a modification of an open source computer program must be evaluated, in the same way as for any other type of work, according to the criterion of originality.

While neither the GPL nor the BSD licence gives any definition of what must be understood by ‘modification’, the Mozilla licence defines ‘modifica-

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<sup>283</sup> Van Lingem 2002, p. 62; de Cock Buning 1993, p. 129; and Meijboom in Jongen and Meijboom 1993, p. 14.

tions' as follows: 'any addition to or deletion from the substance or structure of either the Original Code or any previous Modifications. When Covered Code is released as a series of files, a Modification is: A. Any addition to or deletion from the contents of a file containing Original Code or previous Modifications. B. Any new file that contains any part of the Original Code or previous Modifications.' Arguably, even if they do not expressly define it, the GPL and the BSD licences should make reference to a similar notion of 'modification', presumably derived from the American case law on the notion of 'derivative works'.<sup>284</sup> The BSD and the Mozilla licences grant the user comparable freedom to make modifications to existing OSS. However, Article 10 of the GPL warns the user that if he wishes to incorporate parts of the licensed program into other free programs whose distribution conditions are different, he must write to the author to ask for permission. In the case of software licensed by the FSF, exceptions can be made, each case being assessed following the double objective of preserving the free status of all derivative works based on free software and of promoting the sharing and reuse of software generally.

As we shall see in the next section, the freedom to modify OSS under all types of licences is further accompanied by strict obligations as soon as the user wishes to distribute software based on software originally distributed under an open source licence.

#### 5.2.4 Freedom to (re)distribute

The freedom to redistribute copies of the software or to distribute a modified version of the software is, just as the freedom to make modifications, one of the key features of any open source licence. A particular computer program will fall under the OSD only if it complies with the first principle laid down by the OSI, according to which the 'license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources.' As a rule, open source licences therefore afford users much greater freedom than Article 12 of the Copyright Act normally would with regard to the right to distribute a copy of a copyright protected work, since the exclusive right of the rights holder includes any form of distribution to the public, including the rental, of the original com-

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<sup>284</sup> See Title 17 USC § 101, definition of 'derivative work': A 'derivative work' is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a 'derivative work'.

puter program or copies thereof.<sup>285</sup> The only exception to this rule is the one provided for in Article 15b of the Act, which concerns the further communication to the public or the reproduction of a literary, scientific or artistic work communicated to the public by or on behalf of the public authorities. According to this provision, unless the copyright has been explicitly reserved, either in a general manner by law, decree, or ordinance, or in a specific case by a notice on the work itself or at the point of communication to the public, a work that is communicated by or on behalf of the public authorities may be freely distributed. This exception would be applicable for example in the case of software distributed by the government.

Under the three types of open source licences examined here, the exercise of this freedom is accompanied by a number of strict conditions of application. The BSD licence states for instance that redistributions of source code must retain the copyright notice, the list of conditions and a disclaimer. Redistributions in binary form must reproduce the copyright notice, the list of conditions and a disclaimer in the documentation and/or other materials provided with the distribution. As we have seen in the previous section, one of the main conditions under the GPL is that the source code be distributed along with the program or that it be made available to any third party who requests it. Article 2 of the GPL regulates essentially the same elements as the BSD licence, i.e., the placement of a copyright notice, of a list of conditions and a disclaimer of warranty and liability, but in much greater detail. As the GPL explains, ‘it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.’ The GPL licence goes further than the BSD licence in that it requires the user to cause any work that he or she distributes or publishes, that in whole or in part contains or is derived from the program, to be licensed as a whole *at no charge* to all third parties *under the terms of the GPL License*. According to Article 2 of the Mozilla licence, the initial developer grants the user a licence to among other things distribute the original code (or portions thereof) with or without modifications, and/or as part of a larger work. Article 3 of the Mozilla licence sets out ‘distribution obligations’, which are comparable in length and complexity to those of the GPL. The provision requires among other things that the user distribute any copy of the software or any work derived from the original code only under the terms of this licence and that a copy of the licence be included in the distribution. The user must also make any modification that he creates available in

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<sup>285</sup> Van Lingem 2002, p. 87.

source code. He must also document the changes made to the original software and duplicate the prescribed copyright notice.

In this sense, the GPL and the Mozilla licences follow the OSI's foremost precept, according to which 'the rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.' This clause, known as the 'copyleft' clause, is intended to forbid closing up software by indirect means such as requiring a non-disclosure agreement. To this end, the distribution obligations are placed not only on the initial licensee, but also on any subsequent licensee. In practice, the 'copyleft' clause varies in scope from one type of open source license to another and, as the BSD licence demonstrates, not every type of open source licence contains such a clause.<sup>286</sup>

Under the GPL and the Mozilla licences, the copyleft clause is applicable to the distribution of the original code *with or without* modification. In the case of the distribution of modified code, the question can arise, however, whether the product involved actually does constitute a 'derivative' work based on the original work, or if it rather constitutes an entirely new work, in the sense of Article 13 last sentence, of the Dutch Copyright Act 1912.<sup>287</sup> For, if the new software qualifies as a new work under the copyright act, the developer is in principle not bound by the copyleft term of the licence. As McGowan rightfully observes, there are problems with the proposition that a person creates a work derivative of a program just by writing another program that interacts with it.<sup>288</sup> The last part of Article 2 of the GPL does specify the following:

'These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.'

<sup>286</sup> O'Sullivan 2004, p. 343.

<sup>287</sup> Verkade 2004, p. 251.

<sup>288</sup> See for example: McGowan 2003, p. 23.

In the open source context, the discussion has focused essentially on the question of whether static and dynamic linking to a computer program distributed under the GPL entail, as a consequence, that the linking program must also be distributed under the GPL. The FSF has adopted the position that both static and dynamic linking to a computer programme may result in a 'derivative' work.<sup>289</sup> Whether other combinations of code modules must also be regarded as an arrangement depends, according to the FSF, on the communication mechanism and the semantics of the communication between the modules. The fact that modules are combined into the same file suggests that we are in presence of an adaptation or an arrangement. If the modules are developed in order to be executed together in a combined address location, we can speak of an adaptation or an arrangement. However, collective communication mechanisms, which are normally used by two separate programmes, will not easily be seen as an adaptation. On the other hand, whenever the semantics of the communication are sufficiently 'proximate', one can conclude that an adaptation has been realised. In all cases, the question of whether the new code forms a derivative work or an entirely new work is a matter of fact that should be decided on a case-by-case basis.

The private law implications of the copyleft clause were analysed in section 4.3 above. While this clause may raise difficulties from a private law perspective, it may also raise problems from the point of view of copyright law. A potential problem concerns the application of the doctrine of exhaustion of rights. According to Article 4c) of the Computer programs directive, 'the first sale in the European Community of a copy of a program by the right holder or with his consent exhausts the distribution right within the Community of that copy, with the exception of the right to control further rental of the program or a copy thereof.' As a consequence of this rule, the author of a work loses control over the further dissemination of the copy after it has been made public by him or with his consent. Therefore, selling, lending, leasing and hiring of a copy of a computer program by the lawful acquirer cannot be prohibited.<sup>290</sup> The application of this doctrine has been reaffirmed in slightly different words in Article 4(2) of the InfoSoc Directive. This provision states that 'the distribution right shall not be exhausted within the Community in respect of the origi-

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<sup>289</sup> Free Software Foundation, <<http://www.gnu.org/licenses/gpl-faq.html#MereAggregation>>. Incidentally, this rather broad interpretation of the term 'derivative work' may have as a consequence that emulators like Wine, which use the libraries of Windows to function, would infringe Microsoft's copyright.

<sup>290</sup> Jongen, in Jongen and Meijboom 1993, p. 174. See HR 25 January 1952, *NJ* 1952 No. 95 (*Leesportefeuille*); and HR 20 November 1987, *NJ* 1988 No. 82, with annotation from Wichers Hoeth (*Stemra/Free Record Shop*).

nal or copies of the work, except where the first sale or other transfer of ownership in the Community of that object is made by the right holder or with his consent.' Does the distribution of computer programs under the terms of an open source licence constitute a 'sale' in the sense of the Computer programs directive, which would have as a consequence the effect of exhausting the distribution right of the rights holder? A corollary question to this is whether the distribution of software free of charge entails a 'transfer of ownership', which would lead to an exhaustion of right under Community law? Another corollary question is whether, for the purposes of the exhaustion doctrine, there is a difference between the off-line or on-line distribution of a 'copy' of a computer program.

Software manufacturers often maintain that the distribution right is not exhausted through the grant of a licence of use of the software, because the licensing of rights does not constitute 'the first sale in the European Community of a copy of a program by the right holder or with his consent.' This argument could be inferred from the wording of Article 4c) of the Computer programs directive, which would seem to limit the application of the exhaustion doctrine to the 'sale' of a computer program, whereas any other form of distribution would not give rise to the application of the doctrine.<sup>291</sup> This theory has been, in our opinion, rightfully contested.<sup>292</sup> Along with Neppelenbroek, we believe that the exhaustion doctrine does not so much focus on the concept of 'sale', but rather on that of 'transfer of ownership'. As Grosheide explains with respect to the general principle of exhaustion of rights: 'it is not limited to the first sale of the copy but encompasses other forms of distribution such as donation and first rental. Exhaustion assumes assignment of title with regard to the copy (i.e., the content carrier).'<sup>293</sup> This interpretation of the exhaustion doctrine would, in our opinion, be more consistent with the interpretation of the doctrine as it is set out in other European Directives in the field of copyright. It follows from this that in any case, the mere labelling of a transaction as a licence is insufficient as such to circumvent the exhaustion doctrine.

The question of whether the grant of a licence can amount to a sale or to another form of distribution giving rise to the application of the exhaustion doctrine is a matter of fact that should be decided on a case-by-case basis. In the Netherlands, opinions are divided on whether the distribution to the public of a computer program on a tangible medium (i.e., floppy disc or CD-ROM) for an unlimited term and an outright fee is more akin to a sale than a licence,

<sup>291</sup> Van Schelven and Struik 1995, pp. 70-71; and Grosheide 1998, p. 308.

<sup>292</sup> Neppelenbroek 2001, p. 126.

<sup>293</sup> Grosheide 1998, p. 307.

understood in the strict meaning of the word. Such a transaction would entail, in our opinion, a transfer of ownership of the physical embodiment of the work, which would lead to the application of the exhaustion doctrine. In this sense, the court of appeal of The Hague once ruled that the view, according to which the further distribution of the software can be blocked through a clause prohibiting further transfers, would unduly restrict the working of the exhaustion doctrine.<sup>294</sup> In Germany, it is generally accepted that the distribution right is exhausted as soon as a computer program is put into circulation following the terms of an unlimited licence and against the payment of a one-time fee, a position that was confirmed by the Federal Supreme Court in the OEM-Version case.<sup>295</sup> The situation would be different if the licence to use the software was limited in time and if the licensee was obligated to periodically pay a fee during the entire duration of the licence. In this case, there would be no transfer of ownership of the physical embodiment of the work, and the distribution right of the rights holder would not be exhausted. On the other hand, the licensing of a copy of the software for an indefinite term, but free of charge, would probably qualify as a donation,<sup>296</sup> thereby implying a transfer of ownership of the physical embodiment of the work.<sup>297</sup> As a result, the distribution right of the rights holder would be exhausted as soon as a tangible copy of the work is put into circulation, even if this occurs free of charge. As Spindler observes, the application of the exhaustion doctrine does not depend on whether the copy of the work is distributed for a price or free of charge. The important factor is that, through the granting of a licence, the distributor operates a definitive transfer of ownership of the software in favour of the licensee.<sup>298</sup>

The above remarks concern the distribution of physical copies of computer programs, i.e., on floppy discs, CD-ROM's, and the like. To the question formulated above, of whether, for the purposes of the exhaustion doctrine, a difference must be made between the off-line or on-line distribution of a 'copy' of a computer program, the answer is yes. While the non-application of the exhaustion doctrine to the electronic delivery of computer programs could already be inferred from the wording of Article 4c of the Computer programs directive, which refers only to the 'first sale in the European Community of a "copy" of a program', the question would seem to have been resolved at the

<sup>294</sup> E.D.C. Neppelenbroek, annotation by Hof 's-Gravenhage 20 November 2003 (*1st Flight Training*), *Computerrecht* 2004/3.

<sup>295</sup> BGH, 6 July 2000, I ZR 244/97 (*OEM-Version*), *Computer und Recht* 2000, p. 654; see also Jaeger and Metzger 2002, p. 22; and Spindler 2003, p. 48.

<sup>296</sup> See section 4.1, *supra*.

<sup>297</sup> See Dutch CC, Art. 7:175.

<sup>298</sup> Spindler 2003, p. 51, footnote 302.

European level with the adoption of the InfoSoc directive. According to Recital 29 of the InfoSoc directive:

‘The question of exhaustion does not arise in the case of services and on-line services in particular. This also applies with regard to a material copy of a work or other subject matter made by a user of such a service with the consent of the right holder. Therefore, the same applies to rental and lending of the original and copies of works or other subject matter which are services by nature. Unlike CD-ROM or CD-I, where the intellectual property is incorporated in a material medium, namely an item of goods, every on-line service is in fact an act which should be subject to authorisation where the copyright or related right so provides.’

The notion that the electronic distribution of works does not give rise to the exhaustion doctrine because it falls under the scope of the right of making a work available to the public, rather than under the right of distribution, is now part of the *acquis communautaire*.<sup>299</sup> For more certainty, the European Commission clearly stated, in its report on the implementation of the Computer programs directive, that community exhaustion only applies to the sale of copies, i.e., goods, whereas supply through on-line services does not entail exhaustion.<sup>300</sup> Although this distinction may be unfortunate in the eyes of some commentators,<sup>301</sup> we will not dwell on the issue any further. Nevertheless, it could be argued that the exhaustion doctrine could apply to the tangible copy made from a digital version of a computer program downloaded from the Internet. It would indeed not be unreasonable to think that, if the lawful acquirer of an electronic version of computer program burned the software on a CD, he would be able to transfer that specific CD to a third party without infringing the owner’s copyright, provided that the initial copy of the programme is deleted from his computer.

In light of all this, let us now consider how the exhaustion doctrine applies in the case of an open source licence. We will recall that, under the GPL and the Mozilla licences, the ‘distribution obligations’ are applicable to the distribution of the original code with or without modification. One must realise at this point that the doctrine of exhaustion applies only to the distribution right, not to the right of reproduction or to the right to distribute derivative works.<sup>302</sup> The

<sup>299</sup> Walter 2001, p. 1053; and Neppelenbroek 2001, p. 127.

<sup>300</sup> Report from the Commission to the Council, the European Parliament and the Economic and Social Committee on the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs, COM/2000/0199 final.

<sup>301</sup> Bolcher in Walter 2001, p. 171 and ff.; Tjong Tjin Tai 2003, p. 207.

<sup>302</sup> Walter 2001, p. 1043.



distribution right is therefore subject to exhaustion only in the case where the original software is distributed on a tangible medium, i.e., on floppy discs or CD-ROM's, where the licence terms can be interpreted as operating a transfer of ownership in the software and where the licensee further distributes exact and unmodified copies of that software. In such circumstances, the 'distribution' obligations of the GPL, the BSD, or the Mozilla licence would not be binding upon the licensee. On the other hand, these obligations would be binding upon the licensee whenever the OSS is delivered on-line, or when the licensee creates and distributes a derivative work based on an open source computer program. In practice, the exhaustion doctrine would come into play only in limited circumstances, since the large majority of OSS is distributed over the Internet and since a software developer has little interest in distributing exact copies of a program that is otherwise freely available elsewhere. A computer programmer will be much more inclined to put improved versions of the software into circulation. In that case, he must comply with the requirements of the licence, for example to distribute the source code along with the object code of the program, or at least to make it available to the public, to put the proper copyright notices and, to distribute the modified software under the same licence terms.

### 5.2.5 Royalty free distribution

In addition to the threefold requirement mentioned above, some open source licences demand that the software developer, who wishes to distribute a modified version of the OSS, agree not to require a royalty or other fee for the sale of OSS. By imposing this requirement, the OSI hopes that the temptation to throw away many long-term gains in order to make a few short-term sales dollars will disappear.<sup>303</sup> Otherwise, the OSI fears that co-operators would find themselves under a lot of pressure to defect from the open source movement in favour of more lucrative activities. In practice, this condition means that the distribution of any software developed on the basis of an open source programme must not be subject to the payment of a royalty fee.<sup>304</sup> Not all licences contain this requirement. Whenever they do not, like the BSD and the Mozilla licences, they are not regarded as falling under Article 1 of the OSD which states that 'the license shall not require a royalty or other fee for such sale.' However, the prohibition to charge royalties for the use of the software does not exclude the possibility of charging a fee for other aspects of the distribution. Article 1 of

<sup>303</sup> See <<http://www.opensource.org/docs/definition.php>>, site visited on 2 December 2004.

<sup>304</sup> Gonzalez 2004, p. 333.

the GPL stipulates, for example, that ‘you may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.’

The obligation to license OSS free of charge raises little concern from a copyright law perspective. Pursuant to the Dutch Copyright Act, an author may transfer his exploitation rights in whole or in part; or grant them under licence, exclusive or non-exclusive, for a fee or free of charge. Nothing in the Copyright Act precludes rights holders from agreeing by contract not to ask for royalties for their copyright protected work.<sup>305</sup> From Microsoft to small software developers, the free distribution of software is in fact very common.<sup>306</sup> Most of all, the GPL does not prevent Rights Owner’s to make money, for example by charging for support and for guarantee. As an illustration of this, the Linux operating system is distributed, free of charge, over the Internet under the GPL terms. However, for any user who feels unable to download the free version of the software from the Internet and install it, potential users have the possibility of purchasing from several vendors a boxed set with the Linux system. In this case, the cost of Linux system increases, but on the other hand, the user will be provided with full documentation, step-by-step installation instructions and in many cases free technical support for up to 90 days by phone or e-mail.<sup>307</sup>

While the obligation to distribute software on a royalty free basis would probably pose no difficulty from a copyright law point of view, such an agreement may, in certain circumstances, raise competition law concerns. A first concern relates to the obligation of open source licensees to distribute the software free of charge. It has been suggested that this practice could, in certain circumstances, be regarded as an unlawful imposition of a vertical restraint in the form of resale price maintenance, contrary to Article 6 of the Dutch Competition Act or Article 81(1) of the European Union Treaty.<sup>308</sup> Both provisions prohibit all agreements between undertakings, which have as their object or effect the prevention, restriction, or distortion of competition within the common market, including agreements that directly or indirectly fix purchase or selling prices. However, a restrictive agreement may still be allowed, under Article 6(3) of the Dutch Competition Act and Article 81(3) of the European Treaty, if it contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair

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<sup>305</sup> Spindler 2003, p. 48.

<sup>306</sup> Microsoft Corp (COMP/C-3/37.792) (Unreported, 24 March 2004) (CEC).

<sup>307</sup> See Linux web site, Download Information, at <[http://www.linux.org/dist/download\\_info.html](http://www.linux.org/dist/download_info.html)> (site visited on 21 October 2004).

<sup>308</sup> Koch 2000, p. 341.

share of the resulting benefit, and which does not: (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives; (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question. In the case of OSS distributed under the GPL, it could be argued that it is precisely this obligation of distributing software on a royalty free basis that ensures that the open source community has the incentive to produce and distribute improved software, which is certainly to the advantage of the consumers. In other words, this argument would probably fail in our opinion, because the restrictive clause would likely pass the test of Article 6(3) of the Dutch Competition Act and Article 81(3) of the European Treaty. The distribution on a royalty-free basis would probably also be able to benefit from the application of the Block Exemption on technology transfer agreements,<sup>309</sup> which allows setting maximum prices under certain conditions.

The obligation to distribute OSS on a royalty free basis could also be seen as an abuse of dominant position arising from the predatory pricing on the part of the licensor,<sup>310</sup> contrary to Article 24 of the Dutch Competition Act or Article 82 of the European Union Treaty. Generally speaking, predatory pricing occurs, *inter alia*, where a dominant firm sells a good or service below cost for a sustained period of time, with the intention of deterring entry, or putting a rival out of business, enabling the dominant firm to further increase its market power and later its accumulated profits.<sup>311</sup> To amount to an abuse of dominant position under Article 24 of the Dutch Competition Act,<sup>312</sup> two conditions must be met: first, the undertaking must occupy a dominant position in the market or a substantial part thereof; second, the undertaking must abuse its dominant position. Currently, hardly any open source project would meet these two conditions. Although this should be confirmed by exact figures, none of the open source projects has to our knowledge reached the degree of market share necessary to be in the presence of a dominant position, even if certain software is very successful on specific markets. Moreover, the OSS having the biggest market share is not necessarily the one distributed under the GPL, but it is often

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<sup>309</sup> Commission Regulation (EC) No. 772/2004 of 27 April 2004 on the application of Art. 81(3) of the Treaty to categories of technology transfer agreements, *OJL* 123, 27 April 2004, pp. 11-17, Art. 4(1).

<sup>310</sup> Heath 2002, p. 251.

<sup>311</sup> Case C-62/86 *AKZO Chemie BV v. Commission*.

<sup>312</sup> Art. 82 of the Treaty establishing the European Community states that: 'Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market in so far as it may affect trade between Member States'.

software distributed under the BSD, the MPL or any of their variant which does not contain an obligation to distribute OSS on a royalty-free basis. In addition, the evidence of an abuse of dominant position arising from predatory pricing would be very difficult to establish since this obligation is part of an ideological movement, aimed at improving technological progress and not at eliminating the competition. Finally, the obligation to refrain from asking for royalties does not prevent companies, like Red Hat and SuSe, to charge the small and medium-sized business market substantial sums of money for the support of the Linux server.<sup>313</sup> Far from representing a form of predatory pricing, these high prices may come with consequences, especially in a market where free alternatives are available for those who do not want as much support, software updates and certification as Red Hat offers. Competition is alive and well, also in the open source market!

### 5.2.6 Regulation of exploitation contracts

In the Netherlands, the formation and interpretation of contracts for the exploitation of copyright protected works are governed, in addition to the general principles of contract law, by Article 2(2) of the Copyright Act. This article provides that: 'The delivery required by whole or partial assignment shall be effected by means of a deed of assignment. The assignment shall comprise only such rights as are recorded in the deed or necessarily derive from the nature or purpose of the title.' Accordingly, an assignment of right can only be effectuated by means of a deed, i.e., a written instrument intended for this purpose, signed by the author.<sup>314</sup> This requirement serves essentially as a means to prove the transfer of rights, rather than as a condition of validity of the transfer. The failure to meet the requirement of form can be raised only by the party who benefits from the protection of the law, in this case the author, and is usually met with the relative nullity of the contract. With respect to licensing contracts, however, the Copyright Act imposes no formal requirement. Licences can be granted in writing, orally or even implicitly. The same holds true for software licence agreements, since the Copyright Act contains no specific provision regulating the formation of this kind of licences. Indeed, in view of the rapid technological changes, the legislator preferred to leave the possibility open for parties to conclude software licence agreements through other means than a written

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<sup>313</sup> Stephen Shankland, 'Dell: Red Hat needs to lower prices', CNET News.com, 7 December 2004, available at <[http://news.com.com/Dell+Red+Hat+needs+to+lower+prices/2100-7344\\_3-5482234.html?tag=cd.top](http://news.com.com/Dell+Red+Hat+needs+to+lower+prices/2100-7344_3-5482234.html?tag=cd.top)>.

<sup>314</sup> Hugenholtz and Guibault 2004, p. 6.

instrument.<sup>315</sup> Since open source licences operate no assignment of right, they can therefore be validly concluded and evidenced under Dutch law, without the need to fulfil any additional formal requirement.

The second sentence of Article 2(2) of the Copyright Act sets out a rule of interpretation aimed at protecting authors against overbroad transfers of rights in favour of producers. According to this rule, ‘the assignment shall comprise only such rights as are recorded in the deed or necessarily derive from the nature or purpose of the title.’ Although the scope of this rule of interpretation has led to some debate in the Dutch legal literature, the fact remains that, in case of doubt, an assignment of right will generally be interpreted in favour of the author, and therefore will be given a restrictive interpretation.<sup>316</sup> It is not entirely clear whether this rule applies by analogy to licensing contracts.<sup>317</sup> In practice, licences are usually interpreted more restrictively than assignments because, by choosing to licence his rights, the author indicates that he intends to retain his rights. Knowing that this rule has been adopted to protect authors, it would be only logical that the permission to use the work be limited to those acts explicitly enumerated in the contract.<sup>318</sup> In the context of open source licences, however, the rule of the restrictive interpretation of licence agreements may come in direct contradiction with the spirit of the open source philosophy, since the GPL and other open source licences were not created to protect authors, but to grant users more freedom.<sup>319</sup>

Should the Dutch legislator decide to follow the model of its neighbouring countries and increase the protection for authors through the adoption of legislative measures,<sup>320</sup> consideration should be given to a number of aspects in order to avoid any possible friction between the new provisions and the use of open source licences.<sup>321</sup> Areas of possible conflict concern for example the introduction of a ‘bestseller’ clause in the Copyright Act, which would entitle an author to ask for the revision of the contract if evidence revealed that he has received a disproportionately low remuneration in relation to the revenues gen-

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<sup>315</sup> Blok and De Weerd 2004, p. 126.

<sup>316</sup> Frequin and Vanhees 1999, p. 100.

<sup>317</sup> Koelman concludes that this cannot be inferred either from case law or legal history. However, the interpretation of licensing-contracts is influenced by the principle of reasonableness and fairness, which is laid down in the Civil Code. Koelman 1998, p. 77, 79. See also Grosheide 1998, p. 270 (footnote 46).

<sup>318</sup> Frequin and Vanhees 1999, p. 105.

<sup>319</sup> Laurent 2004, p. 42.

<sup>320</sup> See Hugenholtz and Guibault 2004; and Minister of Justice Donner, Copyright Policy, Letter to the Second Chamber, 29 838, No. 1, 13 October 2004, p. 5.

<sup>321</sup> For a portrait of the German situation, see Jaeger and Metzger 2002, pp. 96-100; and Spindler 2003, p. 54.

erated from the exploitation of the work. The situation would be highly contradictory if someone could license software under the GPL, i.e., on a royalty-free basis, and later on request the revision of the contract, on the basis of the 'bestseller' clause.<sup>322</sup> On the other hand, it is not excluded that the text of several open source licences may have to be revised as a consequence of the adoption of protective measures, in order to comply with the new requirements of the Act. This would be the case for instance, if the Copyright Act contained an obligation to specify the scope, the duration, and the territory covered by the licence of rights, together with an obligation to specify the amount of remuneration.<sup>323</sup> It is indeed not entirely clear whether the current wording of the open source licences would meet any such requirement.

### 5.3 MORAL RIGHTS UNDER OPEN SOURCE LICENCE

In addition to the bundle of prerogatives known as exploitation rights, authors enjoy under the copyright regime a number of prerogatives, known as moral rights, that derive from their personality rights. Moral rights are recognized in Article 25 of the Dutch Copyright Act. These rights are inalienable, in the sense that they remain with the author even after he has assigned his rights to another person. They comprise the following four attributes: 1) the right to object to the divulgence of his work without his name (right to paternity), unless such an objection conflicted with the norm of reasonableness and equity; 2) the right to oppose the divulgence of the work under another name than his own; 3) the right to object to the modification of the work (right of integrity), unless such an objection conflicted with the norm of reasonableness and equity; and 4) the right to oppose any distortion, mutilation, or other impairment of the work that could be prejudicial to his name or reputation. Paragraph 25(3) of the Dutch Copyright Act of 1912 explicitly allows the waiver of the author's right to oppose the communication of his work without acknowledgment of his name or other indication as author, as well as his right to oppose certain alterations of the work. Paragraph 25(4) further specifies that if the author of the work has assigned his copyright, he shall continue to be entitled to make such alterations to the work as he may make in good faith in accordance with social custom. However, the author may not waive his right to oppose any distortion, mutilation, or other impairment of the work that could be prejudicial to his name or

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<sup>322</sup> IfrOSS, Stellungnahme zu einzelnen Aspekten einer Neuregelung des Urheberrechts in der Informationsgesellschaft durch den '2. Korb', Hamburg, 29 April 2004.

<sup>323</sup> For a portrait of the Belgian situation, see Laurent 2004, p. 42.

reputation or to his dignity as such.<sup>324</sup> The recognition of an additional attribute of the author's moral rights can be inferred from the wording of Article 2(3) of the Copyright Act, which states that 'the copyright belonging to the author of a work and, after his death, to the person having acquired any unpublished work as successor or legatee of the author, shall not be liable to seizure.' Commentators have interpreted this provision as granting the author a right of first publication, or *droit de divulgation*, according to which the decision regarding the first publication of a work belongs to the author.

In the absence of any specific provision in the Copyright Act dealing with the moral rights of a computer programmer, it is generally admitted in the literature that the general provision of Article 25 is also applicable to software developers.<sup>325</sup> In view of the functional nature of computer programs, the question has arisen however whether software developers enjoy the same level of protection for their moral rights, as authors of works of a more artistic or literary nature, who presumably have a closer personal connection to their work. As we will discuss more extensively below, this is especially true with regard to the computer programmer's right to object to the modification of the work, which as some authors suggest should play a limited role for software developers.<sup>326</sup> Another complication comes from the fact that in the case of works created under employment, it is still unclear whether the moral rights belong *ab initio* to the employer or if they remain with the author. Most commentators seem to favour the first option.<sup>327</sup> On the other hand, it has been argued that a legal person is not in a position to exercise moral rights, since these rights are attached to the personality of a physical author.<sup>328</sup> Opinions are divided on both issues and only a decision of the Supreme Court could clarify the situation. The uncertainty remains regarding the scope of the moral right protection for computer programs and the ownership of the moral rights on employee created software, not only with respect to conventional software, but equally so with respect to OSS. In practice, open source licences may contain stipulations that affect the exercise of certain attributes of the author's moral rights. For, although they grant users and subsequent developers far greater freedom to use, reproduce, modify, and (re)distribute software than conventional software licences, most types of open source licences do impose obligations on the licensee with respect to mention of the authors' name(s). Moreover, even if the

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<sup>324</sup> Van Lingen 2002, p. 103 and ff.

<sup>325</sup> Verkade 2004, p. 257; and Meijboom 1999, p. 71-18.

<sup>326</sup> Thole 1991, p. 117; Quaedvlieg 1992, p. 29.

<sup>327</sup> Spoor, Verkade and Visser 2004, p. 361.

<sup>328</sup> Van Lingen 2002, p. 107.

licences do not contain specific provisions to that effect, it has been argued that the very nature of open source licences has an incidence on the author's right of first publication and on his right of integrity. Let us examine the moral rights aspects of open source licences as they would emerge in the course of development of a typical open source program, turning first to the right of first publication, then to the right of paternity and finally to the right of integrity.

### 5.3.1 Right of first publication

As mentioned above, Article 2(3) of the Dutch Copyright Act indirectly recognises the author a right of first publication. Accordingly, it falls in principle under the author's prerogative to decide if and when a computer program is ready to be disclosed to the public. Referring to the case of software developed as a collective work, where one person has the task of aggregating the contributions of thousands of people, Koelman has argued that the decision of the co-ordinator to release an official version of the software is comparable to a right of first publication.<sup>329</sup> While a 'co-ordinator' will not prohibit the use or modification of an 'unofficial' version of the software, he will decide whether the proposed modifications and improvements are worthy enough to be integrated in the software and made 'official'. This thesis is contested. Laurent maintains that, even if this prerogative of the co-ordinator is comparable to the right of first publication, it is not an application of it. First, because the right of first publication of multiple authors of a collective work must be exercised in principle by all authors, and not just one of them. Second, in the case of a derivative work based on an existing open source program, the original developer does not share the right of first publication of the subsequent developer on the derived software, even if he gave his consent to the modification.<sup>330</sup>

In relation to this, Koelman mentions the fact that individual programmers at times 'fork' an existing open source project and release an independent and incompatible version of the software. Koelman would seem to argue that the negative reaction of the open source community to this practice is an indication of the subordination of the right of first publication of individual programmers to the 'higher' needs of the open source project in which they are involved. We believe, to the contrary, that such a response from the open source community is merely the reflection of the fact that the right of first publication of multiple authors of a collective work must be exercised in principle by all authors, and not just one of them. Moreover, whenever a programmer wishes to dissociate

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<sup>329</sup> Koelman 2000, p. 154.

<sup>330</sup> Laurent 2004, p. 38.



himself from an ongoing open source project, he is entitled to do so, but only subject to the authorisation of the original developer. The permission of original author is needed because the subsequent developer would without it be making an infringing reproduction of the software in order to create a derivative version, and not because the original developer shares the right of first publication of the subsequent developer on the derived software. Our explanation in fact coincides with the one provided in Article 2 of the GPL, where one can read the following:

‘These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, *the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.*’ (Our emphasis)

Another indication that each software developer’s right of first publication plays a limited role in the context of open source may be inferred from the fact that neither the Open Source Definition, nor the BSD or Mozilla licences contains a stipulation to that effect.

### 5.3.2 Right of paternity

Contrary to conventional software licences, the right for an author to require that his name be mentioned on the work, or right of paternity, is an important feature of several if not most open source licences, knowing that the preservation of a good reputation constitutes an essential source of motivation for open source developers.<sup>331</sup> As mentioned before, the GPL requires that, for the exercise of each permitted act, the copyright notices be respected and that these appear on each copy of the software. The GPL further requires that if the modified program normally reads commands interactively when run, it must, when started running for such interactive use in the most ordinary way, print or display an announcement including among other elements an appropriate copy-

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<sup>331</sup> Ibid.

right notice. The only allowed exception to this requirement relates to the case where the program itself is interactive but does not normally print such an announcement. Then, the modified work based on the program is not required to print an announcement. Admittedly the GPL does not expressly require that the name of the author be mentioned in the notice. According to Laurent, such an obligation could conflict with the right of paternity itself, since an author should always retain the right to disclose his name or not, or to publish under a pseudonym.<sup>332</sup> Like the GPL, the BSD licence also requires that the redistribution of source code display a copyright notice, and that the redistribution of software in binary form reproduce a copyright notice in the documentation and/or other materials provided with the distribution. In comparison to the GPL however, the BSD licence suggests that the copyright notice take the following form: ‘Copyright (c) 2000 <SOMEONE> All rights reserved.’ The same observation can be made with regard to the MPL. ‘Exhibit A’ to the Mozilla licence requires that the copyright notice include the names of the initial developer of the original code and of each contributor, as well as the ownership of rights. Clearly, subsequent developers are expected under both of these licences to indicate their name in the copyright notice. Failure to do so may give rise to a damage claim on the part of the authors whose name has not been mentioned.<sup>333</sup>

### 5.3.3 Right of integrity

Article 25 of the Dutch Copyright Act recognises several attributes of the moral rights, including the right to object to the modification of his work, unless such objection would conflict with the norm of reasonableness and equity, as well as the right to oppose any impairment of the work that could be prejudicial to his name or reputation. The Dutch Copyright Act of 1912 explicitly allows the waiver of the author’s right to oppose certain alterations of the work, but not of his right to oppose any distortion, mutilation, or other impairment of the work that could be prejudicial to his name or reputation or to his dignity as such.<sup>334</sup> With respect to the moral rights of a software developer, it is still unclear under Dutch law whether these creators enjoy the same level of protection as authors of other categories of works who presumably entertain a more intimate relationship with the fruit of their intellectual labour. In her dissertation, Thole maintains that the nature of a software product is such that important modifications must regularly be brought to certain of its components. A software pro-

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<sup>332</sup> Id., p. 39.

<sup>333</sup> Jaeger and Metzger 2002, p. 86.

<sup>334</sup> Van Lingen 2002, p. 103 and ff.

grammer could not reasonably object to such modifications, unless these were prejudicial to his name, reputation, or dignity. This finding is particularly true in the case of software created by more than one developer. Referring to film works, Quaedvlieg suggests that not all authors are in a position to exercise their moral rights without restriction. Apart from the practical chaos that an unrestricted exercise of moral rights would undoubtedly generate, it could be argued that, in the case of collective or collaborative works, a part of the autonomy of each author's personal creativity is subordinate to the necessity to create a consistent whole.<sup>335</sup> In practice, moral rights are likely to play a limited role for software developers, in comparison to traditional works protected by copyright law.<sup>336</sup> Although it would probably occur only in exceptional circumstances, it is not altogether unthinkable that a modification to a computer programme may affect the reputation of a software developer.<sup>337</sup>

In light of this, we must disagree with some commentators who argue that the freedom granted under the GPL to modify the software could be interpreted as a waiver of the author's right of integrity.<sup>338</sup> As mentioned earlier, the respect of the author's reputation is an important component of any open source licence. Although the right of a software developer to object to the modification of his programme bears little significance in practice, the right to oppose any impairment of the work that is prejudicial to his name or reputation may still be relevant in the context of the development of OSS. Indeed, in cases where thousands of programmers contribute source code to a single project, it may occur that an individual contribution is of such poor quality that the rest of the programming community regard its inclusion into the global program as a mutilation of their work, which is prejudicial to their name or reputation. The fact that a software developer allows others to make a derivative work of his computer program, from an exploitation right perspective, by no means implies that the initial author has waived his moral right to oppose the mutilation of his work. This right is unwaivable. In fact, none of the licences suggests that authors have waived their moral right to integrity. On the contrary, the OSD contains a statement regarding the Integrity of the Author's Source Code, which reads as follows:

'The license may restrict source-code from being distributed in modified form *only* if the license allows the distribution of "patch files" with the source code for

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<sup>335</sup> Quaedvlieg 1992, p, 25, footnote 53.

<sup>336</sup> Thole 1991, p. 117.

<sup>337</sup> Jaeger and Metzger 2002, p. 64.

<sup>338</sup> Van Holst and Van Mullem 2004, p. 98.

the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.

Rationale: Encouraging lots of improvement is a good thing, but users have a right to know who is responsible for the software they are using. *Authors and maintainers have reciprocal right to know what they're being asked to support and protect their reputations.* Accordingly, an open-source license must guarantee that source be readily available, but may require that it be distributed as pristine base sources plus patches. In this way, “unofficial” changes can be made available but readily distinguished from the base source.’ (Our emphasis)

In view of the collaborative and incremental mode of development of OSS, the mention of the author’s name has great practical significance, for it serves to prevent the possibly damaging association of the initial programmer with derivative works created from the original code. The obligation to distribute any new version of the software along with a proper copyright notice is therefore connected to the need to protect the reputation of all contributing authors. This intention clearly transpires from the text of the preamble of the GPL, which states that: ‘For each author’s protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors’ reputations.’ The text of Article 3.3 of the MPL is even clearer. It reads as follows: ‘You must cause all Covered Code to which You contribute to contain a file documenting the changes You made to create that Covered Code and the date of any change. You must include a prominent statement that the Modification is derived, directly or indirectly, from Original Code provided by the Initial Developer and including the name of the Initial Developer in (a) the Source Code, and (b) in any notice in an Executable version or related documentation in which You describe the origin or ownership of the Covered Code.’ Whether it happens through the identification of the authors themselves or through the identification of the new software components, all efforts are made to safeguard the reputation of the contributing software developers.<sup>339</sup>

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<sup>339</sup> Laurent 2004, p. 39.

## 5.4 DUAL LICENSING

Dual licensing is based on the idea of simultaneous use of both open source and proprietary licences. Duality means that both the free software distribution mechanism and the traditional software product business are combined. There is technically only one core product but two licences: one for free distribution and free use and another for other (proprietary). Dual licensing model differs from pure free software model in a number of ways. The main difference lies in the fact that the users of the free licence have an option to obtain a proprietary licence. If a software product with a strong copyleft clause – such as Article 2b) of the GPL – is embedded to become a part of another product then the combined product should be distributed for free. A proprietary licence may free the user from this restriction. In this way, third party product businesses become also possible. From the user’s perspective, dual licensing can be described as indiscriminating.<sup>340</sup> Stallman would appear to find dual licensing acceptable, provided that all the code which the company releases is available as free software. Alternative licences should only be used to allow other companies to make proprietary extensions to the software, although this is a practice in which the FSF would never engage.<sup>341</sup> Article 13 of the MPL would appear to allow the practice of dual licensing for it reads as follows:

‘Initial Developer may designate portions of the Covered Code as Multiple-Licensed. Multiple-Licensed means that the Initial Developer permits you to utilize portions of the Covered Code under Your choice of the NPL or the alternative licenses, if any, specified by the Initial Developer in the file described in Exhibit A.’

One fundamental legal requirement for dual licensing is that the software company has undisputed rights to the software product it wishes to dual licence. Ownership of rights is central because it allows company to price its software, change its licensing policy, and distribute software with different licences. A major legal risk in using open source licences is that the licence may dilute the ownership and even eliminate the possibility to dual license. Therefore, Rights ownership must be managed carefully. Under a copyleft licence, a fully open and distributed development process without sufficient rights clearing is not suitable for any company that wishes to make any direct licence sales with dual licensing. No hidden liabilities in code contributions from unknown third parties should remain.

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<sup>340</sup> Välimäki 2003,

<sup>341</sup> O’Sullivan 2004, p. 344.



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## Chapter 6

# OPEN SOURCE AND PATENT LAW

The grant of patent protection with respect to computer programs has been a problematic issue worldwide for well over two decades. In the United States, the United States Patents and Trademark Office and the courts were initially very hesitant to grant patents with respect to software, since software was considered equivalent to mathematical algorithms or laws of nature, and thus not patentable.<sup>342</sup> A Supreme Court ruling in 1981 drastically changed software patenting. It held that, while software in isolation remained unpatentable, software innovations were patentable if they were claimed as part of a process.<sup>343</sup> The 1990s were marked by two important rulings from the Court of Appeals for the Federal Circuit,<sup>344</sup> which effectively extended the patent protection to cover software and business methods. Today, patents are granted regularly in the United States with respect to software, provided that the invention produces a ‘concrete, useful and tangible’ result and that it is new and non-obvious.<sup>345</sup>

In Europe, patent protection is granted pursuant to Article 52(1) of the European Patent Convention (EPC) for any inventions, which are susceptible of industrial application, which are new and which involve an inventive step.<sup>346</sup> Although the EPC does not expressly require it, the constant practice of the European Patent Office (EPO) has also been to grant a patent only if the claimed subject-matter, considered as a whole, has a technical character.<sup>347</sup> While ‘programs for computers’ are included in the list of items that are not regarded as inventions within the meaning of the Convention, if the claimed subject-matter has a technical character, it is not excluded from patentability. Accordingly, the EPO has issued over the years an estimated 30,000 patents relating to computer-implemented inventions and a considerable body of case law on the sub-

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<sup>342</sup> *Gottschalk v. Benson*, 409 US 63 (1972); Evans and Layne-Farrar 2004, § 8.

<sup>343</sup> *Diamond v. Diehr*, 450 US 175, 186 (1981)

<sup>344</sup> *In re Allapat* 33 F.3d 1526 (Fed. Cir. 1994); *State Street Bank and Trust Co. v. Signature Financial Group Inc.* 149 F.3d 1368 (Fed. Cir. 1998).

<sup>345</sup> Bakels and Hugenholtz 2002, p. 13.

<sup>346</sup> European Patent Convention, Art. 52(1).

<sup>347</sup> Guidelines for Examination in the EPO, C-IV, § 2.3.

ject has been built up by the appellate bodies of the EPO and the Member States' courts. It is important to point out that the EPC is entirely separate from the European Community and the EPO is not subject to Community law. Granted European patents form a 'bundle' of national patents which have to be validated, maintained and litigated separately in each Member State. The patent holder in any case obtains, for a period 20 years from the date of filing of the application, the exclusive right to make, use, put on the market or resell, hire out or deliver the patented invention, or otherwise deal in it commercially, or to offer, import or stock it for any of those purposes. Even more than copyrights, patent rights have the potential to confer on their owner a degree of monopoly power in the market. Patents therefore constitute a significant economic instrument in the competition process.

The appropriateness of granting software-implemented inventions the same level of protection as other types of inventions is a hotly debated topic, namely in view of the very particular mode of development of software and in view of the fact that software also benefits from copyright protection.<sup>348</sup> The controversy is in fact so strong that the recent efforts of the European legislator towards the adoption of a European directive on the patentability of computer-implemented inventions have until now remained unsuccessful.<sup>349</sup> Indeed, because the rules regarding the patentability of computer-implemented inventions and the interpretation of patent claims differ among the EU Member States, the European Commission has proposed the text of a directive intended to set clear borders to what would be patentable in the EU and what would not. While the European Commission argues that the harmonisation of the patent rules regarding computer-related inventions is necessary to remedy the current lack of legal certainty in the field, opponents maintain that the proposed directive may not only fail to achieve its intended objective, but may also have undesirable effect on software development.<sup>350</sup>

Open source software developers have consistently taken the position that software patents generally impede innovation in software development and that software patents are inconsistent with OSS ideology. The implications of the current patenting practice for the open source movement became very clear during the summer of 2004, when the news circulated that the Linux kernel could be infringing an estimated 283 patents world-wide, and 50 patents in

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<sup>348</sup> Evans and Layne-Farrar 2004.

<sup>349</sup> Proposal for a Directive of the European Parliament and of the Council on the Patentability of Computer-implemented Inventions, Brussels, 20 February 2002 COM(2002) 92 final 2002/0047 (COD).

<sup>350</sup> Bakels and Hugenholtz 2002, p. 43.



Europe alone.<sup>351</sup> Soon after the results of the Open Source Risk Management (OSRM) survey were disclosed, the city of Munich announced that it would halt its 13,000-desktop migration to Linux in order to investigate whether software patent laws in the EU could impact the city's use of the open source operating system.<sup>352</sup> In the light of this incident, we will examine in the first subsection the implications of the recognition of the patentability of software-implemented inventions for the development of OSS, without however, putting the entire patent system into question. To this end, we briefly consider the patent protection as it is currently granted in the Netherlands with respect to computer-implemented inventions, as well as the most relevant provisions of the proposed European directive on the patentability of computer-implemented inventions. In a subsequent subsection, we take a look at the reaction of some OSS developers in order to counter potential patent infringement claims from third parties. This includes the development of a patent strategy and the drafting of specific language such as the one appearing inside the GPL, and the MPL.

## 6.1 SOFTWARE PATENTS IN THE NETHERLANDS

With respect to the Netherlands, an inventor, or his assignee, may apply for a purely national patent to be issued pursuant to the Dutch Patent Act of 1995, or may choose to designate the Netherlands, as one of the territories for which patent protection is sought, to be issued as part of a bundle of national patents pursuant to the EPC. While the Dutch and the European patent regimes both impose similar substantive requirements, there exists a significant difference in their application and issuance procedures. The Dutch patent regime is generally referred to as a 'registration system', where a patent is granted as soon as the formal requirements are met, irrespective of whether the invention also meets the substantive criteria for patentability, such as novelty, inventivity and industrial application. Contrary to the European patent system, where the patentability of an invention is evaluated *ex ante* by the patent examiner in the course of the application procedure, the validity of a Dutch patent is assessed *ex post* by the judge, in the context of an infringement or an invalidation procedure. The Dutch Patent Act does require the production of a novelty search

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<sup>351</sup> Steven J. Vaughan-Nichols, 'Open-Source Insurance Provider Finds Patent Risks in Linux', *eWeek*, 2 August 2004, available at <<http://www.eweek.com/article2/0,1759,1630082,00.asp>>.

<sup>352</sup> Linux Business Week News Desk, 'Concerned Over Patent Infringement, Munich Calls Halt to Linux Switch', *LinuxWorld*, 5 August 2004, available at <<http://www.linuxworld.com/story/45825.htm>>.

conducted by the Office for the Industrial Property (BIE) prior to the start of any infringement or invalidation proceeding. At the time of its implementation, the Dutch 'registration system' was believed to be simpler and more accessible to small and medium enterprises (SME's), than an 'examination patent system' like the European patent system. Whether this system has yielded the expected advantages is a question, which reaches far beyond the scope of this study.<sup>353</sup> The fact remains, however, that OSS developers must, in their developing process, take account of the possible existence of potentially conflicting patents on related computer-implemented inventions, whether issued under the Dutch or EPC patent system, and which their owners will undeniably want to enforce. Let us briefly consider the difficulties posed to OSS developers under the current legal framework as well as under the proposed directive. Given the fact that the substantive requirements of the Dutch and European patent systems are fairly comparable, we will refer below primarily to the provisions of the EPC and to the case law of the EPO, since it is more extensive on this subject than the purely national jurisprudence. With respect to the scope of protection granted, we will refer to the Dutch Patent Act since Article 64 of the EPC refers directly to the national legislation on this issue.

### 6.1.1 Current legal framework

An invention can be a process, a machine, a product, or a composition of matter. In order to be patentable under the EPC, an invention must have a technical character. In particular, this requirement is not met if the patent application or the patent relates to mathematical methods, rules and methods for performing mental acts or doing business, presentation of information or computer programs as such. Assuming that a patent application is formulated so as to avoid claiming rights on a program for a computer 'as such', which would fall under the exclusion of Article 52(2) of the EPC, the invention must also be susceptible of industrial application, be new, and involve an inventive step.<sup>354</sup> An invention is considered new if it does not form part of the state of the art. The state of the art comprises of everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application, including pending patent applications (published or not) as well as any published innovations in industry or academic journals. An invention is considered as involving an inventive step

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<sup>353</sup> See D. van Engelen, 'Het Nederlandse registratieoctrooi: een wolf in schaapskleren!', *IER* 2004/1.

<sup>354</sup> Bakels and Hugenholtz 2002, p. 8.

if, having regard to the state of the art, it is not obvious to a person skilled in the art.<sup>355</sup> If the state of the art also includes patent applications that were filed prior to the date referred to in the application but which were published on or after that date, these documents are not to be considered when deciding whether there has been an inventive step. With respect to the evaluation of the technical character of a computer-implemented invention, the Guidelines for Examination in the EPO give patent examiners the following instructions:

‘If a claimed invention does not have a prima facie technical character, it should be rejected under Art. 52(2) and (3). In the practice of examining computer-implemented inventions, however, it may be more appropriate for the examiner to proceed directly to the questions of novelty and inventive step, without considering beforehand the question of technical character. In assessing whether there is an inventive step, the examiner must establish an objective technical problem which has been overcome. The solution of that problem constitutes the invention’s technical contribution to the art. The presence of such a technical contribution establishes that the claimed subject-matter has a technical character and therefore is indeed an invention within the meaning of Art. 52(1). If no such objective technical problem is found, the claimed subject-matter does not satisfy at least the requirement for an inventive step because there can be no technical contribution to the art, and the claim is to be rejected on this ground.’<sup>356</sup>

European patents have been granted with respect to all kinds of computer-implemented inventions, ranging from an activated anti-blocking-system (ABS), to a road-pricing system, a voice-recognition system, a data-compression (MP3) system, and a biometrical identification and access control system, to name but a few examples.<sup>357</sup> Most of these patents relate to a new process or machine. In practice, the requirement of a ‘technical effect’ has proved to be rather ambiguous and difficult to apply. The interpretation of the substantive criteria of ‘technical effect’, novelty, and inventiveness of computer-implemented inventions has led to a considerable body of case law from the appellate bodies of the EPO.<sup>358</sup> Over the years, the EPO has generally taken the position that the technical character of a computer-implemented invention cannot be acknowledged if a program merely causes physical modifications of the hardware (i.e., elec-

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<sup>355</sup> European Patent Convention, Art. 56.

<sup>356</sup> Guidelines for Examination in the EPO, C-IV, § 2.3.

<sup>357</sup> Tauchert 2005, §§ 4-8.

<sup>358</sup> See Sedlmaier and Gigerich 2005, § 80 and ff.; Case Law of the Boards of Appeal of the European Patent Office, Fourth Edition, Munich, EPO, 2002, § 1.1, pp. 2-6; Singer and Stauder 2003, p. 73 and ff.; and the classic cases: T208/84, *O.J.E.P.O.* 1987, 14 (*VICOM*); T26/86, *O.J.E.P.O.* 1988 No. 19 (*Koch & Sterzel*); T769/92, *O.J.E.P.O.* 1995 No. 525 (*SOHED*).

trical currents) deriving from the execution of the program instructions. A technical character might however be found in further effects deriving from the execution by the hardware of the instructions given by the computer program. Where these further effects have a technical character or where they cause the software to solve a technical problem, an invention that brings about such an effect might be considered the subject-matter of a patent under the EPC.<sup>359</sup> In some commentators' opinion, the criterion of the 'technical effect' has been interpreted rather loosely, while at the same time, the exclusion of Article 52(2) EPC has been interpreted rather restrictively.<sup>360</sup> This, in combination to a poorly accessible body of prior art in the field of computer-implemented inventions, leads in turn to the grant of what some commentators refer to as 'trivial patents'.<sup>361</sup> This problem, however, is not unique to patents on computer-implemented inventions.

Leaving the complex issue of the patentability of computer-implemented inventions to the appreciation of more expert scholars, let us concentrate here on the implications of granting patents on such inventions for the development of OSS. As mentioned previously, the open source community has consistently maintained that software patents are incompatible with the open source ideology. The foundation of the open source development model lies on the possibility for developers to share parts of the source code and to use the source code in one's own work. This freedom is severely curtailed whenever a new piece of code ends up fulfilling the same function as that of a patented invention. In such circumstances, the manufacturing, use, and distribution of the potentially infringing code would be impossible without the patent holder's authorisation, a requirement that goes against the philosophy of the open source development model. The open source community argues that the patenting software would reduce the overall level of innovation in the field and may lead to a monopolisation of standards.<sup>362</sup>

Unlike copyright protection, patent law generally protects the functionality of a computer program and not its expression. By conferring on its owner the exclusive right to manufacture, use, sell, and distribute the patented invention, the existence of a patent actually prevents any other computer programmer from independently developing a piece of software with a comparable functionality, even if the new software does not reproduce the lines of code of the

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<sup>359</sup> See T935/97 and T1173/97, *O.J.E.P.O.* 1999 No. 609 (*IBM patents*); T 931/95, *OJ* 10/2001 No. 441.

<sup>360</sup> Verkade 2004, p. 239.

<sup>361</sup> Tauchert 2005, § 45. The argument of 'trivial patents' is particularly strong in the United States, see Evans and Layne-Farrar 2004, § 25.

<sup>362</sup> Valgaeren 2004, p. 234.

patented software.<sup>363</sup> Moreover, several European national courts, including the Dutch Supreme Court, have recognised the general applicability of the doctrine of equivalents. This doctrine states that an element ('the equivalent element') can generally be considered as being equivalent to an element as expressed in a patent claim if, at the time of any alleged infringement, either of the following conditions is fulfilled in regard to the invention as claimed: 1) substantially the same function in substantially the same way and produces substantially the same result as the element as expressed in the claim; or 2) it is obvious to a person skilled in the art that the same result as that achieved by means of the element as expressed in the claim can be achieved by means of the equivalent element. Although this doctrine has yet to be applied in Europe to computer-implemented inventions, a computer programmer would not, according to this theory, be able to 'invent around' a patent, if the resulting computer code fulfils substantially the same function in substantially the same way and produces substantially the same result as the patented invention.<sup>364</sup>

Since the core of the patent protection relates to the functionality of an invention, some commentators have maintained that, for the purposes of software development, a distinction should be made between object code and source code.<sup>365</sup> If the patent claim relates to a product or a machine, Article 53(1)(a) of the Dutch Patent Act grants its owner the exclusive right to prohibit anyone from making, using, putting on the market or reselling, hiring out or delivering the patented product, or otherwise dealing in it in or for his business. A patented machine or product embodying software can only be infringed when the object code, not source code, is loaded into the memory of a computer to produce an equivalent functionality. If the patent claim relates to a process, Article 53(1)(b) of the Dutch Patent Act grants its owner the exclusive right to prohibit anyone from using the patented process in or for his business or to use, put on the market, or resell, hire out or deliver the product obtained directly as a result of the use of the patented process, or otherwise deal in it commercially. Since the process patent primarily protects inventive technical methods, the prohibition right does not cover the production of a product, but rather the 'application' of the patented invention and the 'offering' for application of the invention.<sup>366</sup> As the authors Sedlmaier and Gigerich explain:

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<sup>363</sup> Engelfriet 2003, p. 206.

<sup>364</sup> HR, 2 November 2001, *BIE* 2003/30 (*Kabelgeleidingsbuis*); HR, 29 March 2002, *BIE* 2003, No. 14, p. 99 (*Van Bentum/Kool*).

<sup>365</sup> Lin, Sag and Laurie 2002, p. 235.

<sup>366</sup> Sedlmaier and Gigerich 2005, § 166; Jaeger and Metzger 2002, p. 119.

‘Das Programmieren von Software birgt stets das Risiko einer Patentverletzung. Die Gefahr einer Patentverletzung bezieht sich dabei aber weniger auf die Designstruktur oder die Kodierung selbst, als auf die Programmarchitektur und Funktionalität des jeweiligen Computerprogramms.’<sup>367</sup>

In other words, the use, study, copy, or modification of the source code embodied in a computer-readable medium can hardly infringe a patent on a computer-implemented invention. The use of a patented computer-implemented invention in the development of new software also brings up the issue of interoperability. It could be argued that, since Article 53(1) of the Patent Act does not prevent natural or legal persons from using a patented invention purely for internal or private research purposes, developers are in principle free to reverse engineer a computer program for purposes of interoperability or otherwise, without the patent holder’s authorisation. In this sense, the patent rules appear more flexible than the copyright rules on the subject. However, just as with copyright law, the private or internal use of a patented invention must not pursue commercial objectives.<sup>368</sup> The question is whether the resulting interoperable computer-implemented invention or software infringes the patented invention once it is put on the market. The answer, in our opinion, is a matter of factual appreciation.

The chance that a particular piece of code unwittingly infringes a patent is not purely theoretical.<sup>369</sup> The risk for a software developer of being involved in a patent infringement lawsuit and of having to start the development process from scratch is especially acute for small software firms or freelance developers who rarely have the sufficient resources to hire a patent lawyer to conduct a search prior to the development of new software. Of course, the fear of having to pay high damages as a result of a patent infringement suit may also play an important role in the software development process.<sup>370</sup> Contrary to most commentators however,<sup>371</sup> we believe that the risk of facing an infringement lawsuit may be greater for OSS developers than for developers of proprietary software, insofar as the disclosure of the source code that is typical for any open source project makes the detection of possible infringement much easier than would otherwise be the case. Nevertheless, the uncertainty comes above all from the fact that the law is still unclear on the patentability of computer-

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<sup>367</sup> Sedlmaier and Gigerich 2005, § 148.

<sup>368</sup> Jaeger and Metzger 2002, p. 117.

<sup>369</sup> Engelfriet 2003, p. 207; Jaeger and Metzger 2002, p. 113.

<sup>370</sup> Jaeger and Metzger 2002, p. 128.

<sup>371</sup> Knubben 2004, p. 5; Tauchert 2005, § 49 and ff.; Sedlmaier and Giegerich 2005, § 164 and ff.; Engelfriet 2003, p. 207; Evans and Layne-Farrar 2004, § 69.

implemented inventions and that the quality of the patents delivered by the EPO or the national patent offices of the Member States often leaves something to be desired.<sup>372</sup>

### 6.1.2 Proposed EC Directive on the patentability of computer-implemented inventions

The adoption process of the EU Directive on the patentability of computer-implemented inventions has unfolded into an extremely controversial exercise, where all parties involved deployed their strongest arguments either in favour or against it. The strongest opposition has come in fact from the open source community. Initially introduced by the European Commission on 20 February 2002, the text of the directive was sent to the European Parliament for first reading in March 2003. On 24 September 2003, the European Parliament put forward no less than 64 amendments to the initial proposal, at the close of an examination process by 3 different committees. Following this, the European Council published its own proposal, which incorporated only 21 of the amendments proposed by the European Parliament, showing some important differences between the two institutions' positions. These differences mainly relate to exceptions from patentability for computer-implemented inventions. The Parliament wanted wide exclusions covering the use of patented technology for interoperability and data handling. The Commission and Council felt, however, that these would go beyond what is required to set the right balance between rewarding inventors for their efforts and allowing competitors to build on these inventions, and could ultimately harm EU competitiveness. The Council's version was informally adopted as the parliament's common position in May 2004.<sup>373</sup> Both the European Council and the European Parliament must then adopt the text of the common position. At the request of Poland, the EU Council postponed its adoption twice. On 4 February 2005, the European Parliament's committee on Legal Affairs voted for a restart of the legislative process of the directive on computer-implemented inventions. Against all expectations, EU ministers approved on 8 March 2005, the controversial proposal despite objections from a number of national parliaments and a unanimous call from leaders of all political groups in the European Parliament to withdraw

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<sup>372</sup> Sedlmaier and Giegrich 2005, § 186.

<sup>373</sup> Council of the European Union, Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions – Political agreement on the Council's common position, 2002/0047 (COD), Brussels, 10 May 2004.

the draft. On 6 July 2005, the European Parliament rejected the Council's common position, which closed the legislative procedure for the present time.

In view of the current status of the proposal for a directive on the patentability of computer-implemented inventions, we will only give here a brief overview of the major issues at stake, as they have arisen from the European Commission's initial proposal. In its Explanatory Memorandum, the European Commission exposed its intention to follow the practice developed by the EPO with respect to the patentability of computer-implemented inventions, without extending the protection to computer programs 'as such'.<sup>374</sup> The European Commission also stated its intention to refrain from following the American model and grant protection to 'methods of doing business'.<sup>375</sup> Unfortunately, these aims were not expressed in the clearest and most unequivocal terms in the text of the Commission's initial proposal, giving rise to unsurmountable controversy. Among the several debated issues was the fact that the Commission's text did not contain any provision expressly excluding computer programs 'as such' and 'methods of doing business' from patentability. Another point of discussion related to Article 3 of the proposal, according to which patents would be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application. A computer-implemented invention was defined as belonging to a field of technology. Although this provision was intended to reflect the wording of Article 27(1) of the TRIPs Agreement, it could give the impression to the unbiased reader that, in the future, all software would, by pure legal fiction, be considered 'technical' and thereby patentable. The criterion of 'technicality' as a separate requirement could be abandoned for two reasons: first, because software is not *per se* technical; and second, because it reverses the general relationship between the rule and the exception to patentability.<sup>376</sup>

Severe disagreement emerged regarding Article 4 of the proposal, which spelled out the central requirement for patentability: in order to be patentable, an invention that is implemented through the execution of software on a computer or similar apparatus had to make a contribution in a technical field that was not obvious to a person of normal skill in that field. The Commission, the Parliament and the Council each adopted a different position concerning the appropriate method to assess the criterion of 'technical contribution' required

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<sup>374</sup> Proposal for a Directive of the European Parliament and of the Council on the Patentability of Computer-Implemented Inventions, Brussels, 20 February 2002 COM(2002) 92 final 2002/0047 (COD), p. 11.

<sup>375</sup> Metzger 2003, p. 314.

<sup>376</sup> *Id.*, p. 315.



for patentability. For some people, the ‘technical contribution’ of a computer-implemented invention should be evaluated upon deciding whether the invention is patentable, while for others, it should be assessed upon deciding whether the invention demonstrates the required level of inventiveness. This last position was advocated by the Commission and the Council. The Commission’s initial proposal defined a ‘technical contribution’ as ‘a contribution to the state of the art in a technical field which is not obvious to a person skilled in the art.’ Although not strictly in disagreement with the definition, the Council suggested adding the following phrase to the definition: ‘The technical contribution shall be assessed by consideration of the difference between the state of the art and the scope of the patent claim considered as a whole, which must comprise of technical features, irrespective of whether or not these are accompanied by non-technical features.’ By contrast, the Parliament’s version of the definition made no reference to the concept of obviousness and considered the ‘technical contribution’ as a separate requirement for patentability. The provision of the Parliament’s text read as follows:

“‘Technical contribution”, also called “invention”, means a contribution to the state of the art in a field of technology. The technical character of the contribution is one of the four requirements for patentability. Additionally, to deserve a patent, the technical contribution has to be new, non-obvious, and susceptible of industrial application. The use of natural forces to control physical effects beyond the digital representation of information belongs to a field of technology. The processing, handling, and presentation of information do not belong to a field of technology, even where technical devices are employed for such purposes.’

On the question of interoperability, the European Commission did note in its Explanatory Memorandum that, while Member States’ patent laws are not fully harmonised, they did not in general extend to acts performed privately and for non-commercial purposes, or to acts carried out for experimental purposes related to the subject-matter of the invention. Nor was it likely that the making of a back-up copy in the context of the authorised exploitation of a patent covering a programmed computer or the execution of a program could be construed as an infringement. The proposed Directive would not have changed this situation. Thus, because of the differences between the subject-matter of protection under patent and copyright law, and the nature of the permitted exceptions, the exercise of a patent covering a computer-implemented invention could not interfere with the freedoms granted under copyright law to software developers by the provisions of the existing Computer programs directive. Indeed, the proposed Directive made specific reference, *inter alia*, to the provisions on decompilation and interoperability in the Computer programs directive, in terms

that ensure that the different scope of protection granted by patents would not undermine the possibility to carry out the acts that are permitted under that existing Directive.<sup>377</sup>

The possible implications of the proposal for a Directive on the patentability of computer-implemented inventions for the open source community would have been rather difficult to assess. A tangible fear existed that the final text of the Directive would have opened the door to a broadening of the patentability of computer software ‘as such’, which may have had disastrous consequences for the programming community. In the general interest of preserving the integrity of the patent system as a whole, we submit that the European legislator should always be careful not to open the door to the patentability of innovations that bring little or no technical contribution to the state of the art. One must bear in mind, however, that in the absence of a Directive on the subject, the legal uncertainty regarding the patentability of computer programs ‘as such’ and of computer-implemented inventions will persist. On the other hand, whatever the Directive would have said, it would not have addressed the problem of ‘trivial patents’ that are sometimes issued by the EPO or the National Patent Offices.<sup>378</sup> Nevertheless, we believe along with other commentators, that neither the current practice of the EPO and the National Patent Offices nor the possible adoption of the European Directive on the patentability of computer-implemented inventions constitute sufficient reason for public administrations or private enterprises to put a halt to their OSS projects.<sup>379</sup>

## 6.2 OPEN SOURCE AND PATENTED SOFTWARE

Whether or not the European legislator will one day harmonise the rules on the patentability of computer-related inventions, the reality is that patents are actually being granted with respect to computer-implemented inventions both at the European and at national levels. Part of this reality is also that a relatively small number of very large companies hold the vast majority of patents issued with respect to computer-implemented inventions.<sup>380</sup> This means that, in order to avoid infringing another company’s patent, (open source) software developers may be forced to obtain a licence on a patented invention before they can

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<sup>377</sup> See Proposal for a Directive on the patentability of computer-implemented inventions, Brussels, 20 February 2002 COM (2002) 92 final 2002/0047 (COD), Recital 18.

<sup>378</sup> Sedlmaier and Gigerich 2005, § 187; and Bakels and Hugenoltz 2002, p. 37.

<sup>379</sup> Knubben 2004, p. 3.

<sup>380</sup> Bessen and Hunt 2004, p. 4; and see the statistics held by the Free Information Infrastructure, available at <[http://swpat.ffii.org/patents/stats/app\\_stat.html](http://swpat.ffii.org/patents/stats/app_stat.html)>.

pursue their own development activities. Although no generalisation should be made in this regard, it may happen in practice that large companies will build-up impressive patent portfolios for strategic reasons, in order to gain leverage in cross-licensing negotiations. Patents may be used in an aggressive manner to fight competition by means of patents rather than by performance. Patents are said to be used in a 'strategic' way if the owner employs his patents merely to prevent competitors from using the invention, rather than to exploit the invention himself. In a broader sense, strategic use of patents could also be considered to include other actions specifically targeted at the obstruction of competitors.<sup>381</sup> As a result, smaller businesses and individual freelance developers could be prevented from entering the market and from innovating further.<sup>382</sup>

In the context of OSS development, the fear of unwittingly infringing another company's patent by one's own developing activities is only as strong as the fear of incorporating another contributor's infringing code into a collective work. In both cases, the software developer(s) could be held liable for patent infringement at the close of a very costly litigation process. Although OSS developers are not often involved in patent infringement lawsuits, it does happen that distributors of CD-ROM's embodying open source programs are confronted with a patent holder's claim. One example is the Linux-distributor Red Hat which had to remove all MP3-software from her products because it allegedly conflicted with a MP3 licensing scheme of Thomson Multimedia.<sup>383</sup> However, open source developers are not entirely helpless in front of holders of patents on conventional software. Besides taking an insurance policy against third party patent infringement claims, there are ways to minimise the risk of being confronted with the consequences of both 'strategic' patenting of conventional software developers and possible patent infringement lawsuits. The first method consists, for the open source community, in developing a patenting strategy of its own. This includes the development of a patent portfolio, which would serve as an exchange item for cross-licensing and patent pools. The second method is to include adequate language in open source licences providing for guarantees against third party infringement claims, for a prohibition to further distribute patented software and for a free non-exclusive licence to use any software patented by an open source developer. As we shall see briefly in the pages below, the GPL and the MPL give a good illustration of such language.

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<sup>381</sup> Bakels and Hugenholtz 2002, p. 22.

<sup>382</sup> Evans and Layne-Farrar 2004, § 54.

<sup>383</sup> Engelfriet 2003, p. 207.

### 6.2.1 Open source patenting strategy

Among the different patenting strategies available to the open source community to counter possible misuse of massive software patent portfolios is to develop a corresponding portfolio of software patents for defensive purposes.<sup>384</sup> Many software companies, both open source and proprietary, pursue this strategy. As Bakels and Hugenholtz maintain, all patents serve to some extent a defensive purpose, since a patent owner can always prevent others from applying the technology he has developed. A purely defensive use of patents may be the filing of patents with the sole objective of creating an exchange item in negotiations with competitors. The patented software can be used to obtain a licence for another patent from a competitor who would otherwise be reluctant to do so or to create a patent pool with other companies.<sup>385</sup> Cross-licensing and patent pools are also an effective way to share technology.<sup>386</sup> Of course, developing a patent portfolio is not a realistic option for small businesses and independent programmers. And although the patenting of computer-implemented invention theoretically goes against the principles of the open source community, the competitive reality leaves the bigger players no other choice but to jump into the race and start developing their own patent portfolio.

The most important Linux-distributor, Red Hat Inc., has elected to adopt this same stance. It conceded to do so reluctantly because of the perceived inconsistency with the open source ideology. To the extent any party exercises a patent right with respect to open source which reads on any claim of any patent held by Red Hat, Red Hat agrees to refrain from enforcing the infringed patent against such party for such exercise. The promise does not extend to any software, which is not open source, and any party exercising a patent right with respect to non-open source which reads on any claims of any patent held by Red Hat must obtain a licence for the exercise of such rights from Red Hat. The promise does not extend to any party who institutes patent litigation against Red Hat with respect to a patent applicable to software (including a cross-claim or counterclaim to a lawsuit). No hardware *per se* is licensed hereunder.<sup>387</sup> In a similar vein, subscribing to the theory that the best defence is a good offence, the second largest seller of the Linux kernel, Novell, made it clear that any patent litigation against the Linux kernel or the open-source com-

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<sup>384</sup> Välimäki 2004, p. 526.

<sup>385</sup> Bakels and Hugenholtz 2002, p. 23.

<sup>386</sup> Välimäki 2004, p. 523; Evans and Layne-Farrar 2004, § 60.

<sup>387</sup> See Red Hat's patent policy, available at <[http://www.redhat.com/legal/patent\\_policy.html](http://www.redhat.com/legal/patent_policy.html)>, site visited on 13 February 2005.

munity would give Novell cause to check any accuser's own software against Novell's extensive portfolio of patents for possible retaliatory litigation.<sup>388</sup>

Similarly, Sun Microsystems announced that it would provide programmers free access to 1,600 patents as part of a plan to make an open source version of its forthcoming Solaris 10 operating system.<sup>389</sup> The Solaris operating system is being released under the terms of the OSI-approved, CDDL (Common Development and Distribution License). One question that remains in this context is whether code released under terms of the CDDL can be used in combination with code released under the GPL. In January 2005, IBM has decided to let open source developers use 500 software patents without fear of an infringement lawsuit, a new step in its encouragement of the collaborative programming philosophy. In August 2004, the company had already pledged not to use its patent portfolio to attack Linux. IBM plans to grant royalty-free access to more patents in the future for open source use. It also plans to release patents for use in open standards – a move that could make it easier to embrace such standards within open-source and proprietary software.<sup>390</sup> Other big software companies may decide to follow the trend and offer a portion of their patent portfolio to open source developers.

### 6.2.2 Open source licences

Another way to reduce the risks associated with the use of patented software is to regulate the consequences of the use of such software inside the open source licence. An open source licence could provide for example, for a guarantee against third party infringement claims, for a prohibition to further distribute patented software, or for a free non-exclusive licence to use any software patented by an open source developer. Not all open source licences contain such language however. The BSD licence is one of them, in contrast with the GPL and the MPL. The details of each licence are given below, but it is worth noting, however, that the obligations laid down in the GPL and the MPL are directed strictly at the licensee. The licensor makes under these licences no

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<sup>388</sup> L. Greenemeier, 'Novell Warns Against Linux Patent Suits', CRN, 12 October 2004. <<http://www.crn.com/sections/breakingnews/dailyarchives.jhtml?articleId=49901223>>.

<sup>389</sup> Stephen Shankland, 'Sun's open-source gamble', 7 February 2005, *CNET News.com*, available at <[http://news.com.com/Suns+open-source+gamble/2008-1082\\_3-5564283.html](http://news.com.com/Suns+open-source+gamble/2008-1082_3-5564283.html)>, site visited on 13 February 2005.

<sup>390</sup> Stephen Shankland, 'IBM offers 500 patents for open-source use', 10 January 2005, *CNET News.com*, available at <[http://news.com.com/IBM+offers+500+patents+for+open-source+use/2100-7344\\_3-5524680.html](http://news.com.com/IBM+offers+500+patents+for+open-source+use/2100-7344_3-5524680.html)>, site visited on 13 February 2005.

representation guaranteeing that the code does not infringe third party patents, nor does he undertake not to obtain patent protection on the software.

The GPL is mainly concerned with the consequences of the incorporation of patented software into code that is distributed under the terms of the GPL. It also discourages developers from obtaining a patent on their computer-related invention. The preamble of the GPL states that ‘any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone’s free use or not licensed at all.’ Accordingly, Article 7 of the GPL stipulates the following:

‘If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.’

As Rosen points out, Article 7 could have been couched in much clearer terms. Uncertain is what the licensor means by ‘any other pertinent obligations’ and what ‘obligations under this Licence’ may be contradicted by the court judgment.<sup>391</sup> Article 7 of the GPL must be read in conjunction with Article 6 which

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<sup>391</sup> Rosen 2004, p. 134.

provides for the ‘copyleft’ effect of the licence. When read together, they reveal somewhat of a contradiction: a programmer cannot use the licence in circumstances where he is restricting rights of those beneath him, yet he can! Along with O’Sullivan, we consider that the somewhat obscure drafting of this section would need to be improved in any future versions of the GPL. The purpose of the section is, of course, to ensure that the free software distribution system is maintained, which appears to be an appeal to customary practices underlying the GPL.<sup>392</sup> It is also apparent from Article 7, however, that it takes more than the threat of patent infringement to invoke this provision. An actual patent dispute has to be alleged and either litigated or settled.<sup>393</sup>

The MPL is much more detailed and complex. In addition to regulating the consequences of the incorporation of patented software into code that is distributed under the terms of the MPL, it also contains an obligation to inform subsequent contributors of the existence of a patent right on part or whole of the code. According to Article 2.1(b) of the licence, the initial developer grants the licensee the right to make, use or sell the original code in a specific embodiment of software, without limiting the initial developer’s right to exclude others from making, using or selling other embodiments in other software. Article 2.2(b) of the licence deals with modifications submitted by contributors who are licensees of the original code. Each contributor grants a reciprocal licence for his patents to allow modifications to be made, used, or sold either alone or in combination with the original code.<sup>394</sup>

The MPL also contains a provision dealing with third party patent claims. Pursuant to Article 3(4) of the MPL, if a contributor who has knowledge that a license under a third party’s intellectual property rights is required to exercise the rights granted under the licence, he must include a text file with the source code distribution, describing the claim and the party making the claim in sufficient detail that a recipient will know whom to contact. If the contributor obtains such knowledge after the modification is made available, the contributor must promptly modify the file in all copies he makes available thereafter and must take other reasonable steps (such as notifying appropriate mailing lists or newsgroups) to inform those who received the covered code that new knowledge has been obtained. Similarly, if the contributor’s modifications include an application-programming interface (API) and he has knowledge of patent licences, which are reasonably necessary to implement that API, he must also include this information in the file. Article 3(4)(c) of the MPL states that the

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<sup>392</sup> O’Sullivan 2004, p. 344.

<sup>393</sup> Rosen 2004, p. 134.

<sup>394</sup> *Id.*, p. 152.

contributor represents that, except as disclosed pursuant to Article 3(4)(a), he believes that his modifications are his original creation and that he has sufficient rights to grant the rights conveyed by this license. Note that the initial developer is not obliged under the licence to make a similar representation. Although a guarantee against third-party infringement claims says nothing about whether or not the software infringes the rights of a third party, it does give the licensee recourse against his contracting partner, should it be the case. The guarantee is, of course, only worth as much as the economic strength of the contracting partner.<sup>395</sup> Finally, Article 8 of the MPL states that, should a licensee file a patent infringement lawsuit against the initial developer or a contributor, all copyright and patent licences on the software shall be terminated prospectively.<sup>396</sup>

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<sup>395</sup> Sedlmaier and Gigerich 2005, § 173.

<sup>396</sup> See section 4.7 *supra*.



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## Chapter 7

# ENFORCEMENT OF OPEN SOURCE LICENCES

The previous chapters have highlighted the respective rights and obligations of the parties under the most commonly used open source licences. But a licence is of no use if the parties do not live up to their obligations or if it is not enforced in practice. As we have seen throughout this study, the main difference between open source licences and proprietary software licences lies first and foremost in the freedoms that the former type of licence grants to users and in the obligation to make the source code available to fellow developers. As Rosen rightly points out in the context of open source licences, why would a licensor who grants everyone the permission to copy, modify, and distribute the software, complain about someone doing these things? And why would a licensee who receives software with essentially unlimited rights to it need to demand even more from the licensor? When the software is distributed free of charge and is devoid of any guarantee, why would anyone take the trouble to sue?<sup>397</sup> But the occurrence of a dispute is not unthinkable, taking the enforcement of the share-alike clause or of the obligation to make the source code available to fellow developers, as examples.

The enforcement of open source licences is confronted with one major difficulty, namely the establishment of the chain of ownership of rights on the software. In the case of a work created by multiple, decentralised authors, who would be entitled to institute proceedings against alleged infringers? If the ownership is unclear, are there any options available to offset the difficulties posed by the multiple ownership of rights on open source programs? The first section of this chapter therefore considers the question of the standing to sue in the context of OSS licences. Considering the freedom conferred on the licensee and considering that the open source ideology is based to a large extent on peer review, how are open source licences typically enforced in practice? Until now, the enforcement of such licences as the GPL, the BSD or the MPL has not given rise to much litigation before the courts. The parties have so far settled most disputes outside of court. Nevertheless, a brief look at the current

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<sup>397</sup> Rosen 2004, p. 269.

practice regarding the enforcement of OSS licences appears in order in the second section of this chapter.

## 7.1 STANDING TO SUE

Depending on the circumstances, the licensor of an OSS licence may need to enforce the rights flowing from the licence either on the basis of an alleged breach of the contractual obligations or on the basis of an alleged infringement of copyright. The failure of a licensee to distribute modified versions of the software following the terms of the GPL, the fact that he charged a royalty for the use of the software or his failure to make the source code available to subsequent licensees would probably give rise to an action based on an alleged breach of the obligations under the contract. By contrast, if the licensee failed to mention the name of all contributing authors to the project, the licensor would probably start an action against him for infringement of copyright. These are only some of the possible causes of action involving software distributed under an open source licence, for third parties may also have a cause of action against either the licensor or the licensee(s) with respect to the software. Whatever the type of claim to be exercised, the question remains of who is entitled to institute proceedings against alleged infringers. To answer this question, one should first enquire who the parties to the licence are. As we have seen in section 4.2 above, the identification of the licensor is especially problematic in the context of on-line distribution of OSS. Contrary to conventional software licences, the text of the licence does not always contain a clear indication of the name(s) and address(es) of the physical or legal person(s) granting the licence. If the parties to the licence cannot be identified clearly, then one must try to determine who owns the copyright on the software.

As discussed abundantly in section 5.1 above, the question of authorship of rights with respect to a particular open source program is paramount, since it serves to establish who owns the rights in the work, and more specifically to determine who is entitled to exercise the exclusive rights on the software. Although the Dutch Copyright Act is rather laconic regarding the issue of the ownership of rights with respect to collective works, Article 26 of the Act does provide that ‘where the copyright in a work belongs jointly to two or more persons, it may be enforced by any one of them, unless otherwise agreed.’<sup>398</sup> It can be inferred from this provision that the co-authors of rights on a work,

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<sup>398</sup> Meijboom 1999, p. 71-12.

whose individual contributions cannot be distinguished, jointly own the rights on this work. The exercise of the rights held in joint ownership must in principle be exercised jointly by all co-authors.<sup>399</sup> In the case of distinguishable contributions, Article 26 of the Act states that each individual author may enforce these rights, including against another co-author.<sup>400</sup>

The provision of Article 26 of the Act applies, however, only as long as the parties have not provided otherwise in a contractual agreement. Neither one of the open source licences examined here contains any provision authorising one or more parties, jointly or independently, to institute proceedings against an alleged infringer. This means that, in the case of undistinguishable contributions, any action would have to be instituted with the consent of all co-authors. This principle can have serious practical repercussions, especially in the situation where the co-authors are located in different parts of the world or where a number of legal persons are involved by virtue of the application of the legal presumption according to which the employer owns the software realised in the course of their employee's functions. Getting all co-authors, e.g., all physical and legal persons who are possibly scattered across the planet, in one line concerning the course to follow with respect to the enforcement of the licence is no easy task. In the case of distinguishable contributions, each individual contributor to an open source program distributed under the GPL, the BSD or the MPL would be entitled to start an infringement action independently from the others with respect to part or the whole of the software. In practice, the individual exercise of rights by numerous co-authors has the potential of leading to the introduction of multiple actions in different jurisdictions with respect to different elements of the program, which may all have divergent outcomes.

The enforcement of rights on a 'collection of works' may be somewhat easier: the person under whose guidance and supervision the work as a whole has been made or the compiler of the various contributions has the power to independently institute proceedings against third parties for the alleged infringement of a contribution incorporated in the collection. The compiler is not obliged to obtain the co-operation of the authors of the underlying contributions, since he benefits from a right of his own.<sup>401</sup> Of course, the compiler is not entitled to institute proceedings if the third party has obtained the consent of each individual author. To give an illustration relevant to the open source context, Linus Torvalds would probably be the person having standing to sue with regard to the enforcement of the rights on the Linux kernel, as being either the person

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<sup>399</sup> Koelman 2004, p. 232.

<sup>400</sup> Van Lingen 2002, p. 30.

<sup>401</sup> Spoor, Verkade and Visser 2004, p. 36.

under whose guidance and supervision the work as a whole has been made or the compiler of the various contributions.

In the case of OSS, the licensees are often themselves contributors of original code giving them standing to sue either individually or together with the other co-authors. It may happen, however, that a licensee will distribute unmodified software or that his contribution is not original enough to obtain copyright protection. Does the licensee have standing to sue potential infringers in such a case? According to Article 27a of the Copyright Act, a licensee may file a claim only if he has obtained the authority to do so from the author or his successor in title. The licensee is, in general, dependent on the author whether he will or will not take measures against infringement by third parties or on the licensing contract that may give the user the authority to file a claim. Article 27a(2) of the Act specifies indeed that the licensee shall have, unless otherwise agreed, the right to request the court to order anyone who has infringed the copyright to hand over the profits originating from the infringement and to render account therefore, only if he has obtained the authority to do so from the author or his successor in title.<sup>402</sup> The situation may be called to change as a result of the future implementation of the Directive 2004/48/EC on the enforcement of intellectual property rights. Article 4(1)b of this directive requires that Member States recognise as persons entitled to seek application of the measures, procedures and remedies referred to in this chapter, among other persons: (a) the holders of intellectual property rights, in accordance with the provisions of the applicable law; (b) all other persons authorised to use those rights, *in particular licensees*, insofar as permitted by and in accordance with the provisions of the applicable law' (our emphasis).<sup>403</sup> With respect to the Netherlands, it remains to be seen how the Dutch legislator will implement this provision.<sup>404</sup>

Recognising the level of uncertainty arising from the fact that multiple authors may own the rights on the whole or part of the software, the Free Software Foundation Europe (FSF Europe) launched in February 2003 a Fiduciary Licence Agreement (FLA), which open source developers are invited to sign in its favour. This Licence, inspired by the Copyright Assignment of the FSF North America, aims at strengthening the legal fundament of Free Software by allowing Free Software authors to make the FSF Europe their fiduciary for all legal issues. The preamble of the Agreement explains that:

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<sup>402</sup> Spoor, Verkade and Visser 2004, p. 486.

<sup>403</sup> Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights, *OJCE*, L 195/16, 2 June 2004.

<sup>404</sup> Koelman 2004, p. 232.

'Like any freedom, freedom of software also requires protection. In a globally networked world this has to happen worldwide. Uncovering possible violations of an author's rights and upkeeping them in court, if necessary, is a difficult, but seminal task.

This agreement empowers the FSF Europe – and its sister organizations – to uphold the interests of Free Software authors anywhere on the planet and protect them in court, if need be. The author gets freed from the obligation of having to do this her- or himself. Furthermore the agreement allows bundling the interests (sic) of authors worldwide.

Additionally, this agreement grants the author an unlimited amount of non-exclusive licences by the FSF Europe, which allow using and distributing the program in other projects and under other licences.

The contracting parties sign the following agreement in full consciousness that by the grant of exclusive licence to the Free Software Foundation Europe e.V. and by the administration of these rights the FSF Europe becomes trustee of the author's interests for the benefit of Free Software.<sup>405</sup>

The FLA purports to operate an assignment of rights from the contributor of code to the FSF Europe, or in countries where an assignment is not possible, to grant the FSF Europe an exclusive licence with respect to the rights on the software. The FLA has therefore been drafted to take account of the different approaches that national legislation takes regarding the transfer of authors' rights. Indeed, Austria and Germany differ from most countries of continental Europe in that they follow a 'monist' approach to author's rights. Under this approach, the author's economic and moral rights are considered to be so thoroughly intertwined that the economic aspect of the right cannot be dissociated from the right's personality aspect.<sup>406</sup> Following the monist approach, copyright is a unitary right that protects the author with respect to intellectual and personal relations to his work, as well as with respect to the exploitation of his work. The Austrian and German copyright acts allow authors to grant licences to use their works, but does not permit transfer of ownership, except by testamentary disposition.<sup>407</sup> Most, if not all,<sup>408</sup> other Member States of the European Union, including France, Greece, Spain, Italy and the countries of the Benelux, clearly follow a 'dualist' approach, whereby the author's right is considered to consist of two separate elements: the pecuniary element, or 'economic right', and a personality element, or the 'moral right'.<sup>409</sup> In dualist systems, economic rights

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<sup>405</sup> See <<http://www.fsfeurope.org/projects/fla/FLA-1.0.en.pdf>>, site visited on 1 April 2005.

<sup>406</sup> Schricker 1999, p. 553.

<sup>407</sup> Austrian Copyright Act, § 23 (3); German Copyright Act, § 29.

<sup>408</sup> We have unfortunately no information on this point from the 10 new Member States.

<sup>409</sup> For a comparative study on authors' contract law, see Guibault and Hugenholtz 2002.

can be freely assigned, either *inter vivos* or *mortis causa*, while moral rights are considered to be inalienable.<sup>410</sup>

Paragraph 1 of the Agreement provides that ‘subject to the provision of § 3, Beneficiary grants to FSF Europe the Copyright in computer programs and other copyrightable material for countries where such a grant is legally feasible (countries following the ‘Copyright’ tradition, such as the USA, Great Britain, etc.).’ Contrary to what paragraph 2 states, this provision would in our opinion also apply, among others, in countries such as France, Italy, Belgium, and the Netherlands that follow a ‘dualist’ approach to authors’ rights. If one follows the spirit of the Agreement rather than its letter, a Dutch developer would probably be required to transfer ‘all’ his rights to the FSF, according to paragraph 1 of the FLA, which simply refers to ‘the Copyright’ without giving any further details. Although the Dutch Copyright Act does not prohibit such broad transfers of rights,<sup>411</sup> Article 2 of the Act does require that it be effectuated by means of a written deed. A copy of the FLA signed by the parties would most likely meet this criterion. Furthermore, pursuant to the same statutory provision, ‘the assignment shall comprise only such rights as are recorded in the deed or necessarily derive from the nature or purpose of the title.’ It follows from this provision and from the relevant jurisprudence that, in case of doubt, a transfer of rights should be interpreted restrictively following the Haviltex-rule, where a court would look at the reasonable intention of the parties at the time of concluding the agreement.<sup>412</sup>

Putting aside the inaccuracy concerning the countries that follow a monist or a dualist approach to authors’ rights, it is interesting to note that in effect, the transfer of rights would appear to be much broader in countries where an assignment of Copyright is possible other than in countries where such an assignment is not possible. Paragraph 2 of the FLA states that Beneficiary grants to FSF Europe the following exclusive rights and licences:

1. The right to copy in original or modified form;
2. The right to redistribute in original or modified form;
3. The right of making available in data networks, in particular via the Internet, as well as by providing downloads, in original or modified form;
4. The right to authorize third parties to make derivative works of the Software, or to work on and commit changes or perform this conduct themselves.

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<sup>410</sup> Belgian Copyright Act, Art. 3.

<sup>411</sup> Spoor, Verkade and Visser 2004, p. 423.

<sup>412</sup> Hugenholtz and Guibault 2004, pp. 7-10.

This transfer is obviously much more limited in scope than the transfer under paragraph 1 of the Agreement, where the transfer ‘the Copyright’ in a work would seem to imply the operation of a global assignment of all the prerogatives of the author. Does the FSF Europe really need such a broad transfer of rights, i.e., one that would include all forms of reproduction, of communication to the public and of making available to the public? In our opinion, it makes no sense to assign all rights to the FSF with respect to a work in the UK and licence only a few rights with respect to a work in France. We submit that it may even go against the philosophy of the FSF Europe to claim from the author more than what is strictly necessary for the exploitation of the rights or the enforcement of the licence. The transfer, whether assignment or licence, should have the same scope wherever it has to take effect. It may be worth considering the possibility of taking paragraph 1 of the FLA out of the licence entirely. For, if a transfer of rights in respect to dualist countries were effectuated pursuant to paragraph 1 of the FLA, it would probably be held invalid, at least in France and Belgium, since the legislation there requires that a contract enumerate each form of exploitation transferred and that the field of exploitation be defined as to ‘its scope and purpose as well as to place and duration.’<sup>413</sup>

The difference in treatment under the FLA depending on where the licence is to take effect is especially evident when one reads the remainder of paragraph 2 of the FLA. Pursuant to paragraph 2 (but not to paragraph 1 of the FLA), ‘Beneficiary’s moral or personal rights remain unaffected by this Agreement.’ Must one understand from this distinction that a British or Irish contributor transfers (or waives) his moral rights as well as his exploitation rights? Does the FSF Europe need to obtain a waiver of moral rights from the contributors in order to exercise the rights properly? In addition, paragraph 2(3) of the FLA emphasises the following:

‘The European copyright directives determine that software or code, that was developed and written in an employer-employee relationship, automatically become the employer’s ownership with regard to the exclusive licence in the software, unless a deviating agreement was entered into between employer and employee. Beneficiary is aware of these provisions, and therefore warrants, represents and guarantees that the Software is free of any his or her employer’s exclusive exploitation rights.’

Why has this provision not been included in paragraph 1 of the FLA as well? It would have been all the more indicated, in our opinion, to take this precision

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<sup>413</sup> In France: Art. L. 131-1 CPI; in Belgium: Art. 3(1)(4) of the Copyright and Related Rights Act of 1994. See Guibault and Hugenholtz 2002.

up inside paragraph 1, knowing that countries like the UK, Ireland, and the Netherlands admit the doctrine of ‘works made for hire’. In accordance with the open source ideology, should not a Beneficiary assigning his rights with respect to any of these countries also be required to ‘warrant, represent and guarantee that the Software is free of any his or her employer’s exclusive exploitation rights’?

According to paragraph 3 of the Fiduciary Agreement, which states that for the purpose of the Agreement, ‘Software’ means ‘all computer programs, copyrightable sections of computer programs or modifications of computer programs that have been developed or programmed by Beneficiary’, the transfer is limited to the contributions realised by the Beneficiary. Paragraph 3 further specifies that ‘the rights and licences granted under this Agreement by Beneficiary shall also include future developments, future corrections of errors or faults and other future modifications and derivative works of the software that the Beneficiary obtains copyright ownership in. However, identifiable portions of such modifications, that are not derived from the computer program and that have to be regarded as independent and original software, shall not be encompassed by the scope of the rights and licences granted under this Agreement.’ This means in practice that in the case of a reasonable size open source project, the FSF would have to obtain the transfer of rights from several tens, hundreds, if not thousands of contributors, in order to be able to fully exercise the exploitation rights with respect to the entire software.

Paragraph 3 of the FLA raises additional difficulties in a number of Member States of the European Union, like Germany, France, and Belgium, where the transfer, c.q. exclusive licensing, of rights with respect to future works or to future modes of exploitation is either expressly prohibited or strictly limited.<sup>414</sup> In the Netherlands, the legislation currently in force does not expressly prevent contributors from transferring rights with respect to future works or to future modes of exploitation. The transfer of rights with respect to future works would probably be allowed on the basis of Article 3:97 of the Dutch CC, provided that the work is sufficiently specified with respect to the content and the type of the work or performance involved.<sup>415</sup> In other words, a *global* transfer on *all* future of works of an author would probably be held invalid for it would probably not qualify as a transfer with respect to a work the content and type of which are sufficiently ‘specified’. The transfer of rights with respect to future modes of exploitation could be allowable, according to the case law, only if it ‘necessarily derives from the nature or purpose of the title.’<sup>416</sup>

<sup>414</sup> See for example: Spindler 2003, p. 39.

<sup>415</sup> Spoor, Verkade and Visser 2004, p. 435; and Koelman 1998, p. 76, 77.

<sup>416</sup> Hugenholtz and Guibault 2004, pp. 7-10.



Paragraph 4 of the FLA sets out the rights and obligations of the FSF under the Agreement. It stipulates that FSF Europe shall exercise the granted rights and licences in its own name. Furthermore, FSF Europe shall be authorised to enjoin third parties from using the software and forbid any unlawful or copyright infringing use of the Software, and shall be entitled to enforce all its rights in its own name in and out of court. FSF Europe shall also be authorised to permit third parties to exercise FSF Europe's rights in and out of court. In return, FSF Europe grants to the Beneficiary a non-exclusive, worldwide, share-alike, and unrestricted licence in the Software. The scope of these rights and licences shall encompass and include all the rights and licences specified in paragraphs 1 and 2 of the Licence. FSF Europe grants to Beneficiary furthermore additional non-exclusive, transferable rights to use the Software as needed for releases of the Software under other licences. This re-transfer shall not limit the scope of the FSF Europe's exclusive licence in the Software and FSF Europe's rights pursuant to paragraphs 1, 2, and 3. FSF Europe further undertakes to only exercise the granted rights and licences in accordance with the principles of Free Software. The FSF Europe guarantees to use the rights and licences transferred in strict accordance with the regulations imposed by Free licences, in particular the GNU General Public Licence or – as far as this is necessary to achieve the aims of Free Software – the GNU Lesser General Public Licence in the current version respectively. In the event FSF Europe violates the provisions of these Free licences, all granted rights and licences shall automatically return to the Beneficiary and the licences granted hereunder shall be terminated. Finally, the transfer of the rights and licences specified in paragraphs 1 and 2 shall be unrestricted in territory and thus shall apply worldwide and be temporally unlimited.

Although the objectives of the FLA are certainly very commendable, the text of the licence agreement would surely benefit from a revision in order to make its provisions even more compatible with European continental copyright law. Unfortunately, there is at this time, no information available on the extent to which European OSS contributors have signed the FLA. It is therefore impossible for anyone to evaluate the impact of this Fiduciary licence on the enforcement of rights on OSS.

## 7.2 ENFORCEMENT IN PRACTICE

As mentioned earlier, relatively little case law has emerged so far with respect to the enforcement of OSS licences. The lack of relevant case law can to a large extent be attributed to the philosophy underlying the OSS movement: the GPL's

enforcement mechanisms are informal and dependent on customary practices rather than on legal processes. There is significant social pressure on participants to comply with the licence, owing to the threat of negative publicity and litigation. As Moglen stresses: ‘Our way of doing law has been as unusual as our way of doing software, but that’s just the point.’<sup>417</sup> Moglen uttered this remark in reaction to the suggestion coming from certain circles that open source licences, such as the GPL, are not unenforceable in law. On the basis of the findings in this study, we believe on the contrary that the terms of a typical open source licence are valid and enforceable, provided of course that the agreement is validly concluded between the parties. Along with O’Sullivan, we think that if courts refused to uphold the validity of an open source licence, the consequences for the open source community which relies on such a licence for the continuity of its developing practices could be devastating. The strength of the GPL and other open source licences lies precisely in their moral force. If a court were to decide in favour of a violator of the licence, this moral force would be depleted, since much of the threat of negative publicity, which actually ensures compliance with open source licences, would simply fade away.<sup>418</sup>

The informal character of the enforcement process of the GPL is clearly illustrated by Moglen’s description of the manner in which alleged violations are dealt with in the United States:

‘So what happens when the GPL is violated? With software for which the Free Software Foundation holds the copyright (either because we wrote the programs in the first place, or because free software authors have assigned us the copyright, in order to take advantage of our expertise in protecting their software’s freedom), the first step is a report, usually received by email to [license-violation@gnu.org](mailto:license-violation@gnu.org). We ask the reporters of violations to help us establish necessary facts, and then we conduct whatever further investigation is required.

We reach this stage dozens of times a year. A quiet initial contact is usually sufficient to resolve the problem. Parties thought they were complying with GPL, and are pleased to follow advice on the correction of an error. Sometimes, however, we believe that confidence-building measures will be required, because the scale of the violation or its persistence in time makes mere voluntary compliance insufficient. In such situations we work with organizations to establish GPL-compliance programs within their enterprises, led by senior managers who report to us, and directly to their enterprises’ managing boards, regularly. In particularly com-

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<sup>417</sup> Moglen 2001b.

<sup>418</sup> O’Sullivan 2004, p. 344.

plex cases, we have sometimes insisted upon measures that would make subsequent judicial enforcement simple and rapid in the event of future violation.’

In view of the broad freedom granted to the licensee under most OSS licences, the disputes most likely to arise between parties will concern either the licensee’s failure to distribute modified code under the terms of the GPL, thereby ‘closing-up’ the code, or his failure to make the source code available. Both types of omissions were actually at the heart of the decision of the District Court of Munich in the case *Netfilter v. Sitecom*,<sup>419</sup> which represents the first judgment ever upholding the validity of the GPL. In this case, the plaintiff, Mr. Harald Welte, as the ‘maintainer’ of the open source project ‘netfilter/iptables’, offered the software for download under the conditions of the GPL to which reference was made on the corresponding web site. The defendant was the German subsidiary of the Dutch corporation Sitecom Europe B.V., which advertised and distributed a Wireless Network Broadband Router through its web site. The firmware offer for download along with the Router contained the Linux kernel, as well as the ‘netfilter/iptables’ in object code, the software modules ‘PPTP helper for connection tracking and NAT’ and ‘IRC helper for connection tracking and NAT’, all of which were developed by the plaintiff. The litigation arose mainly from the failure by Sitecom to mention the fact that the firmware contained software licensed under the GPL, to join the text of the licence and to distribute the source code of the software ‘netfilter/iptables’. The plaintiff’s counsel argued that the defendant infringed plaintiff’s copyright by offering the software ‘netfilter/iptables’ for download and promoting its distribution without abiding by the licence conditions of the GPL. In its final ruling, the District Court of Munich concluded that the distribution of the software without complying with the conditions of the GPL constitutes an infringement of copyright giving rise to a claim for injunctive relief pursuant to the German Copyright Act.<sup>420</sup> In appeal of an injunctive order, the Court upheld Articles 2, 3, 4 of the GPL as valid general conditions of sale that are in compliance with the provisions of the Copyright Act.

While this court decision has been acclaimed as finally bringing legal certainty for the open source community, is it really the case? The decision of the District Court of Munich is only a first instance ruling, which brings clarity only with respect to the specific points raised by the case. Moreover, several clauses of the GPL remained undiscussed, such as the clauses governing the

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<sup>419</sup> District Court of Munich I, 19 May 2004, (*Netfilter v. Sitecom*), *Computerrecht* 2004/10, pp. 774-776, with annotation by T. Hoeren and A. Metzger.

<sup>420</sup> Höppner 2004, p. 2; Visser 2004a, p. 186.

warranty disclaimer and the limitation of liability.<sup>421</sup> Several legal issues raised by the enforcement of the GPL under German law were also left unexamined: for example, the question of the applicable law, of the use of general conditions in a foreign language and of the automatic termination clause in case of breach of some of the obligations under the contract. Nevertheless, this first decision is important insofar as it contributes in a significant way to the acceptance of the phenomenon of open source licensing.<sup>422</sup> With respect to general awareness and acceptance of open source licences, it is interesting to note that, at the close of the legal dispute between Netfilter and Sitecom, the ‘maintainer’ of the ‘netfilter/iptables’ project, Mr. Harald Welte, started a web site called [www.gpl-violations.org](http://www.gpl-violations.org). The site’s main purpose is to raise public awareness of the infringing use of free software, thereby putting pressure on the infringers; to give users who detect or suspect that GPL-licensed software is being misused, a way to report it to the copyright holders, as this is the first step in enabling the copyright holders to push for license compliance; and to assist copyright holders in any action against GPL infringing organisations.

In the United States, while the GPL and other open source licences have been the object of some consideration by the courts – mainly in the context of interim orders and injunctive relief actions – their enforceability must still be confirmed in a court decision. Most disputes are settled informally out of court. They concern either the licensee’s failure to distribute modified code under the terms of the GPL, thereby ‘closing-up’ the code, or his failure to make the source code available. One of these disputes opposed Progress Software Corporation to MySQL AB, in which MySQL AB claimed, among other things, that there Progress Software had allegedly violated MySQL’s programs licensed under the GPL, by distributing them without giving access to the source code. The parties settled out of court in 2002. In a similar case, Drew Technologies filed a lawsuit against the Society of Automotive Engineers in October 2003 for allegedly having distributed software programs without reference to the GPL and without making the source code available.<sup>423</sup> Upon completion, the software was claimed by a standards organization as its own copyrighted work although it had been developed by third party engineers who had released it under the GPL. In the end, by way of settlement and not judgment, the stan-

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<sup>421</sup> Visser 2004a, p. 188.

<sup>422</sup> Schultz 2004, p. 574; Visser 2004a, p. 188.

<sup>423</sup> *Drew Technologies, Inc. v. Society of Automotive Engineers, Inc., et al.*, No. 03-CV-74535-NGE-PJK (E.D. Mi.).

dards group accepted that the GPL governed, and it paid the engineering group \$75,000.<sup>424</sup>

It may also happen that a proprietary software company will institute proceedings against an OSS developer for having included proprietary code into an open source project, thereby ‘opening up’ closed software. This is essentially the core of the legal saga between the SCO Group (‘SCO’) and IBM. In March 2003, SCO introduced an action against IBM, alleging breach of contract, unfair competition and misappropriation of trade secrets. SCO’s claim was essentially that IBM improperly destroyed the economic value of their intellectual property in UNIX by transferring portions of the proprietary UNIX source code into Linux, which is open-source. IBM launched a counter-suit against SCO in August 2003. IBM alleged, among other things, breach of contract, unfair competition, and infringement of IBM’s patents and copyrights. The heart of IBM’s cross-complaint was that SCO breached the GNU General Public License. SCO answered IBM’s cross-complaint in October 2003, averring that the GPL is unenforceable and inapplicable. The legal battle between SCO and IBM is still raging and new developments in the case are reported almost daily.<sup>425</sup> It is therefore still premature to say what impact the dispute between SCO and IBM will have on Linux or on the development of OSS. Along with other commentators, we believe however, that this case merits close attention for it has the potential of derailing the momentum that has been building behind the open source movement.<sup>426</sup> It is also clear that the uncertainty regarding the chain of title of the UNIX code is at the root of the whole dispute, for in SCO’s case, the issue of copyright ownership depends largely on contract interpretation. The scale of the litigation between SCO and IBM should serve as a lesson to anyone, who assigns or licenses rights with respect to software, to always carefully identify the object of the transfer inside the agreement so as to avoid future disputes.

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<sup>424</sup> See ‘A GPL Win in Michigan – DrewTech v. SAE’, *Growklaw*, 20 March 2005, available at <<http://www.groklaw.net/article.php?story=20050225223848129>>, site visited on 5 April 2005.

<sup>425</sup> See <<http://www.groklaw.net>>.

<sup>426</sup> Goettsch 2003, p. 588; Determann and Coan 2003, p. 167.



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## Chapter 8

### CONCLUDING REMARKS

This book gives an overview of the current legal situation regarding the use of OSS licences under Dutch and European law. In general, we find that the distinct production and distribution model of open source licences does fit within the current legal framework, although a number of remaining uncertainties could be attenuated by making some adaptations to the licence terms.

From a private law perspective, our survey shows that the warranty disclaimer, the limitation of liability, and the termination clause found in most if not all types of open source licences are compatible with the requirements of the European legislation and of the Dutch CC on the subject. The main argument militating in favour of the validity of these stipulations in an OSS licence is the fact that the software is provided for free. While the existing legal environment does in principle support the use of open source licences, this does not exclude the fact, however, that some adaptations to the licence terms would be appropriate in order to facilitate the deployment and use of OSS licences in Europe, and more particularly in the Netherlands. Among the aspects of the open source licences that remain uncertain or unclear are the identification of the licensor, the process of formation of the contract, the share-alike clause, and the determination of the copyright ownership in the software.

The identification of the parties to an open source licence remains a complex issue, especially since it is not unusual to see that the text of the licence often contains no clear indication of the name(s) and address(es) of the physical or legal person(s) granting the licence. Not only would it be contrary to the obligation imposed on every ‘ISS’ by the European electronic commerce directive to provide information about itself, but the lack of proper identification of the licensor could have practical consequences in at least two situations: first, in relation to the enforcement of the purely contractual obligations deriving from the licence; and second, in relation to the proper functioning of the share-alike clause of the GPL.

First, we believe that a sharp distinction should be made between the copyright owner(s) on the software and the licensor(s) of the software. The identity

of the copyright owner is a factual question, which must be decided on a case-by-case basis and which must take into account subsequent transfers of rights. Since we generally regard open source licence agreements as a contract, the identity of the licensor must be established according to the principles laid down in contract law, i.e., taking the respective expectations of the parties into account. In principle, the licensor and the copyright owner can, but need not necessarily, be the same person for the licence to be valid. Moreover, even if the licence must be considered as a whole, this does not take away the fact that a number of obligations contained in a typical open source licence may be regarded as the exercise of the prerogatives flowing from the copyright protection, while the remaining obligations derive exclusively from the contractual agreement itself. For example, the GPL imposes a number of contractual obligations on the licensee (such as the obligation to disclose the source code, to distribute modifications of the code under the GPL, to put a copyright notice with the names of all authors and the prohibition to ask for royalties), which have nothing to do with copyright protection. It is not – and will never be – an infringement of copyright law to do any of these acts. The only way that a licensor can enforce these specific obligations is on the basis of the GPL, not on the basis of the copyright act. In order to facilitate the future enforcement of the licence, it would therefore be important not only to ascertain who the copyright owner is, but also who the licensor is.

Second, the lack of proper identification of the licensor can make the application of the share-alike clause more difficult. According to Article 6 of the GPL, ‘each time you [a programmer] redistribute[s] the Program (or any work based on the Program), the recipient automatically receives a licence from the original licensor (...).’ If the contact details of the licensor(s) are not mentioned in the licence, how can a subsequent user ascertain with whom he is contractually bound? Moreover, given the layered structure of open source production, it is unclear whether the licensee obtains a licence only from the very last programmer in the chain or also from every programmer involved in the development process of the particular version of that software. Does the GPL licence only bind the last licensee with the original licensor or does it also bind all other developers in the chain? For the open source ideology to reach its objective, one would think that the licensee should be contractually bound to all developers in the chain. Again, without proper identification of the licensors along every step of the development process, how can a subsequent user ascertain with whom he is contractually bound? The MPL is perhaps the most evident from the three types of licences examined here. Article 2 of the Mozilla licence provides for the grant of a licence to the licensee from the initial developer, as well as from each contributor.



With respect to non-negotiated contracts, which is a characteristic of most OSS licences, the juridical act leading to the formation of an agreement can be divided under the contract law of most continental European countries, into a sequence of three elements: the exchange of consent between the parties, the acceptance of the core stipulations of the agreement and the applicability of the general conditions of sale. In relation to the doctrine of offer and acceptance, we believe that a user would be bound to the licence terms as a result of his actions only if he actually accepted the legal consequence of his actions, and accomplished these actions with the specific intention to be bound by the licence. It follows from this that, in the case where the user is not asked to actively manifest his assent before downloading or installing the software, a Dutch court would probably make a distinction between a *professional user* and a *consumer*. In the context of OSS, we would define a professional user as a software developer, whether employed or unemployed, who develops and distributes software as his main occupation or hobby. From professional users, one could expect that they are aware of the terms of the GPL, or of any other open source licence, and that if they choose to download or otherwise acquire a particular OSS, it is with the specific intention of being bound by the licence terms. There is indeed a strong awareness to the terms of the licences within the OSS community. On the other hand, a consumer, generally defined as a physical person whose occupation or hobby is not to develop and distribute software, may not be aware of the licence terms. A consumer may download a specific open source programme only because it is freely accessible and free of charge, without realising that a licence is attached to it. In such a case, one may seriously doubt whether the continued use of the software constitutes a manifestation of assent to the licence terms on the part of the consumer. The same certainly holds true of software downloaded from an anonymous web site, or obtained through a peer-to-peer system. In such circumstances, no contract would be concluded insofar as there would be between the parties no exchange of consent to speak of.

Regarding the applicability of the standard terms included in an open source licence, the key question is whether the other party understood or must have understood that, by clicking in a box 'I agree' or performing a certain act, he accepted the applicability of the standard form contract. For this, however, this other party must have been given sufficient opportunity to take cognizance of the general conditions during or before the formation of the contract. In practice, the manner in which OSS licences are presented to the other party varies considerably from one project to another. In some cases, the method used to give the other party the opportunity to take notice of the general conditions clearly complies with the requirements of the law, while at other times, it is

highly problematic. Open source software that can be downloaded and installed only once the user has accepted the terms with the click of a button would no doubt be compatible with the requirements of the law, provided of course the general conditions available to the other party during or before the formation of the contract are given in such a manner that allow the other party to store and reproduce them so that he can access them at a later stage. One of the more troublesome ways to present licence terms to the user is probably the one chosen for the on-line distribution of the Linux kernel. In our opinion, the method used by most distributors of the Linux kernel to present the terms of the GPL to the other party would probably not comply with the requirements of the European Directive on electronic commerce, mainly because they usually make no effort to attract the user's attention to the general conditions. Instead, the terms of the licence are scattered in files called COPYING contained in several different directories.

From a copyright law perspective, the power to grant users the freedom to use, reproduce, and modify the software, and the freedom to distribute or re-distribute the work falls under the prerogatives of the exclusive rights holder. Even the prohibition to charge a royalty for the distribution of the software poses, in our opinion, no problem under copyright law. In view of the collaborative and incremental mode of development of OSS, the mention of the author's name has great practical significance, for it serves to prevent the possibly damaging association of the initial programmer with derivative works created from the original code. The respect of each author's moral rights is thus built in the obligation to distribute any new version of the software along with a proper copyright notice, an obligation which purports to protect the reputation of all contributing authors.

In view of the increased popularity of OSS among all levels of the public, we believe that consumers should obtain a valid licence for the use of the software. For, without a licence, consumers like professional software developers are restricted to the acts mentioned in the Copyright Act. For example, Article 45j of the Act permits a lawful acquirer to perform only those acts that are necessary for the use of the work for its intended purpose, apart from the limited acts of loading, displaying, or correcting errors. Moreover, even the making of private copies of software, let alone their distribution among friends and family, is strictly prohibited under the law. The freedom of use and reproduction granted under a typical open source licence is generally much broader than what is allowed under copyright law, making the need to obtain a valid licence if not necessary at least recommendable. We believe therefore that the open source community should adapt its licensing practice to the new reality and

make sure that the content of the licence and the contract formation process meet the requirements of the law with respect to all categories of users.

From a patent law perspective, it is important to emphasise that an analysis of the complex issue of the desirability of patenting computer-implemented inventions would have gone far beyond the bounds of this study. Nevertheless, in view of the recent debate around the proposal for a European directive on the patentability of computer-related inventions, we submit that, in the general interest of preserving the integrity of the patent system as a whole, the European legislator should always be careful not to open the door to the patentability of innovations that bring little or no technical contribution to the state of the art.

Until this matter is settled at the European Union level, the reality is, however, that patents are actually being granted with respect to computer-implemented inventions both at European and the national levels. What are, then, the possible implications of granting patents on such inventions for the development of OSS? The open source community consistently maintains that software patents are incompatible with the open source ideology. The foundation of the open source development model lies on the possibility for developers to share parts of the source code and to use the source code in one's own work. This freedom is severely curtailed whenever a new piece of code ends up fulfilling the same function as that of a patented invention. In such circumstances, the manufacturing, use, and distribution of the potentially infringing code would be impossible without the patent holder's authorisation, a requirement that goes against the philosophy of the open source development model. The chance that a particular piece of code unwittingly infringes a patent is not purely theoretical. The risk for a software developer of being involved in a patent infringement lawsuit and of having to start the development process from scratch is especially acute for small software firms or freelance developers who rarely have the sufficient resources to hire a patent lawyer to conduct a search prior to the development of new software. However, the risk of facing an infringement lawsuit may be greater for OSS developers than for developers of proprietary software, insofar as the disclosure of the source code that is typical for any open source project makes the detection of possible infringement much easier than would otherwise be the case.

The last chapter of this book considered the issue of the enforcement of OSS licences. The enforcement of open source licences is confronted with one major difficulty, namely the establishment of the chain of ownership of rights on the software, coupled with a lack of proper identification of the licensor. In the case of a work created by multiple, decentralised authors, who would be en-

titled to institute proceedings against alleged infringers? If the ownership of rights is unclear, are there any options available to offset the difficulties posed by the multiple ownership of rights on open source programs? The assignment of copyright in favour of the FSF Europe is certainly an effective way to gather the rights of all contributors to a single project in the hands of one entity in order to facilitate the exploitation of the software. However, under the current text of the FLA, the assignment of rights operated in favour of FSF Europe widely differs in scope depending on where the transfer is to take effect, either in a country covered by paragraph 1 of the licence or in a country covered by paragraph 2. We submit that the transfer of rights should have the same scope in all countries where it is to take effect and should be limited to only those rights that FSF Europe needs for the enforcement of the licence and the exploitation of the OSS.

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## Chapter 9

# PRACTICAL RECOMMENDATIONS

To facilitate the use and enforcement of OSS licences in Europe, and more particularly in the Netherlands, we would recommend OSS developers and distributors to implement the following recommendations.

### 9.1 RECOMMENDATION 1: NAME THE PARTIES TO THE CONTRACT

The proper identification of the parties to the agreement is essential to ensure that all parties know to whom they should turn for the execution of the respective obligations under the contract. The text of an open source licence should therefore always contain a clear indication of the name(s) and address(es) of the physical or legal person(s) granting the licence. In other words, standard form contracts should be customised to the extent that the names and addresses of the parties are clearly apparent on the contract.

### 9.2 RECOMMENDATION 2: ENSURE PROPER FORMATION OF CONTRACT

When transacting on-line, all distributors of OSS should make sure that they comply with the minimum information requirements of the European Directive Electronic Commerce. Distributors should therefore render easily, directly and have permanently accessible to the recipients of the software, their name and geographic address as well as their electronic mail address, through which they can be contacted rapidly and communicated with in a direct and effective manner.

When offering software under general conditions of sale, OSS distributors should make sure that they comply with the requirements of the European directive electronic commerce and of the European directive on distance contracts. Any distributor of OSS through electronic means must make the general conditions available to the other party during or before the formation of the contract in such a manner that allows the other party to store and reproduce them so that he can access them at a later stage. If this is not reasonably possible, the user of the general conditions must be informed before the conclusion of the con-

tract inform the other party of the site where the conditions may be electronically consulted, and of the fact that a copy of the general conditions may, upon request, be sent electronically or by other means to the other party.

This could be done, among other means, by using a ‘click-wrap’ licence system, which allows the user to take cognizance of the terms of the licence before the completion of the transaction and to clearly manifest his or her acceptance of the terms. If the use of ‘click-wrap’ licences is technically impossible because it conflicts with important methods of software distribution, an alternative should be provided in order to present the licence terms in other formats so that the other party has the possibility to take notice of them before the conclusion of the transaction. One solution may be to implement a splash-screen to indicate licence terms. The mere insertion a file called ‘COPYING’ in a directory would most probably be regarded as an insufficient means of drawing the other party’s attention to the standard terms. Such a method should be avoided, most of all in transactions with consumers.

### 9.3 RECOMMENDATION 3: CLARIFY THE COPYRIGHT OWNERSHIP

The uncertainty around the ownership of rights on a major software product is not unique to OSS: ownership issues also arise with respect to proprietary software. Nevertheless, any uncertainty regarding the copyright ownership on a piece of code can make the exploitation of the software more complex or lead to unnecessary and very costly litigation. The main advantage of having a clear definition of the rights ownership is that everyone can find out who is entitled to exercise the exclusive rights on the work and act as the licensor.

Although all OSS licences attempt to address this concern, mainly by requiring that a copyright notice be distributed along with the software, it still happens that the ownership of rights on a reasonable size open source project is unclear. The question of the authorship and ownership of rights on an open source programme is especially problematic in cases where hundreds or thousands of persons make contributions to the code, and where a number of them are creating software in the course of their employment. At this time, the ownership of rights on a particular open source program can only be determined by a judge on a case-by-case basis. To resolve the uncertainty regarding copyright ownership on OSS, one option could be to create a logbook containing the names of all contributors to a project. An alternative would be for every individual contributor to make a representation in the licence that contributed lines of code are not infringing another’s copyright.

#### 9.4 RECOMMENDATION 4: CLARIFY THE SCOPE OF THE SHARE-ALIKE CLAUSE

It would be advisable to confer on the licensee the right to grant sub-licences with respect to the reproduction, modification and distribution of the programme. This solution would address the problem of a possible lack of continuity in the licensing chain. Imagine the creation process of a good size OSS project in which more than a hundred programmers are simultaneously and/or successively involved. With the current wording of Article 6 of the GPL, the question arises whether the last developer in the chain, who acquires a copy of the programme after it has been modified by more than a hundred other persons, obtains a valid licence from all previous hundred developers who contributed original lines of code. Do all the programmers in between have licences on their respective improvements? Ideally, the GPL and other copyleft licences should allow the necessary cross-licensing between all contributors, not only between the original licensor and each subsequent contributor.

#### 9.5 RECOMMENDATION 5: REVIEW THE FSF EUROPE FIDUCIARY LICENCE AGREEMENT

The assignment of copyright in favour of the FSF Europe is an effective way to gather the rights of all contributors to a single project in the hands of one entity in order to facilitate the exploitation of the software. However, under the current text of the FLA, the assignment of rights operated in favour of FSF Europe widely differs in scope depending on where the transfer is to take effect, either in a country covered by paragraph 1 of the licence or in a country covered by paragraph 2. The Fiduciary licence should be revised so that the transfer, whether in the form of an assignment or a licence, has the same scope wherever it has to take effect. In our opinion, it makes no sense to assign all rights to the FSF with respect to a work in the UK and licence only a few rights with respect to a work in France. We submit that it may even go against the philosophy of the FSF Europe to claim from the author more than what is strictly necessary for the exploitation of the rights or the enforcement of the licence. It may be worth considering the possibility of taking paragraph 1 of the FLA out of the licence entirely.

Consequently, the transfer of rights should be limited to only those rights that FSF Europe needs for the enforcement of the licence and the exploitation of the OSS. In the same vein, FSF Europe should revisit the need – and the legality in countries like France, Germany, and Belgium – for a transfer of

rights with regard to future works and future modes of exploitation. The clause concerning the ownership of rights on software code created by a person in the course of his employment should apply to all assignors, irrespective of where the licence is to take effect. The provision in the FLA on the transfer of rights could read as follows:

‘(1) The author assigns, or in the countries where assignments of rights are not possible, grants an exclusive licence with respect to the following rights:

1. The right to copy in original or modified form;
2. The right to redistribute in original or modified form;
3. The right of making available in data networks, in particular via the Internet, as well as by providing downloads, in original or modified form;
4. The right to authorize third parties to make derivative works of the Software, or to work on and commit changes or perform this conduct themselves.

(2) In some countries, the law may provide that the employer is deemed to be the owner of the rights on software developed by an employee in the course of his or her employment, unless the parties have agreed otherwise. The Beneficiary is aware of these provisions, and therefore warrants, represents and guarantees that the Software is free of any of his or her employer’s exclusive exploitation rights.’

Such a provision would comply with the legal requirements of every country and would ensure that the assignment/licence of the author to the benefit of the FSF has the same scope irrespective of the country in relation to which the transfer is made.



## ANNEXES

### 1. GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

#### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation’s software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE  
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND  
MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

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(3) The European Copyright Directives determine that software or code, that was developed and written in an employer-employee relationship, shall automatically become the employer's ownership with regard to the exclusive licence in the software, unless a deviating agreement was entered into between employer and employee. Beneficiary is aware of these provisions, and therefore warrants, represents and guarantees that the Software is free of any his or her employer's exclusive exploitation rights.

### § 3 SUBJECT MATTER

The rights and licences granted in x 1 and x 2 are subject to all "Software." For the purpose of this Agreement, "Software" shall mean all computer programs, copyrightable sections of computer programs or modifications of computer programs that have been developed or programmed by Beneficiary and that are specified in this Agreement below or that are listed in Exhibit A attached to this Agreement and dated and signed by the contracting parties:

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The rights and licences granted under this agreement by Beneficiary shall also include future developments, future corrections of errors or faults and other future modifications and derivative works of the software that Beneficiary obtains copyright ownership in. However, identifiable portions of such modifications, that are not derived from the computer program and that have to be regarded as independent and original software, shall not be encompassed by the scope of the rights and licences granted under this Agreement.

### § 4 FSF EUROPE'S RIGHTS AND RE-TRANSFER OF NON-EXCLUSIVE LICENCE

(1) FSF Europe shall exercise the granted rights and licences in its own name.

Furthermore, FSF Europe shall be authorized to enjoin third parties from using the software and forbid any unlawful or copyright infringing use of the Software, and shall be entitled to enforce all its rights in its own name in and out of court. FSF Europe shall also be authorized to permit third parties to exercise FSF Europe's rights in and out of court.

(2) FSF Europe grants to Beneficiary a non-exclusive, worldwide, share-alike and unrestricted licence in the Software. This right's and licence's scope shall encompass and include all the rights and licences specified in x 1 and x 2. FSF Europe grants to Beneficiary furthermore additional non-exclusive, transferable rights to use the Software as needed for releases of the Software under other licences. This re-transfer shall not limit the scope of the FSF Europe's exclusive licence in the Software and FSF Europe's rights pursuant to xx 1, 2 and 3.

(3) FSF Europe shall only exercise the granted rights and licences in accordance with the principles of Free Software. The FSF Europe guarantees to use the rights and licences transferred in strict accordance with the regulations imposed by Free licences, in particular the GNU General Public Licence or – as far as this is necessary to achieve the aims of Free Software – the GNU Lesser General Public Licence in the current version respectively. In the event FSF Europe violates the provisions of these Free licences, all granted rights and licences shall automatically return to the Beneficiary and the licences granted hereunder shall be terminated and expire.

(4) The transfer of the rights and licences specified in x 1 and x 2 shall be unrestricted in territory and thus shall apply world-wide and be temporally unlimited.

## § 5 MISCELLANEOUS

(1) Regarding the succession of rights in this contractual relationship, the statutory regulations shall apply, unless this Agreement imposes deviating regulations. In case of the Beneficiary's death, the assignment of exclusive rights shall continue with the heirs. In case of more than one heir, all heirs have to exercise their rights through a common authorized person.

(2) Place of jurisdiction for all legal conflicts arising out of or in connection with this Agreement is Hamburg, Germany.

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(Beneficiary)

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(FSF Europe)



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