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INFORMATION TECHNOLOGY & LAW SERIES

Unravelling the Myth around Open Source Licences

An Analysis from A Dutch and European Law Perspective

L. Guibault and O. van Daalen

T·M·C·Asser Press

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Lucie Guibault

Ot van Daalen

Institute for Information Law
University of Amsterdam

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Editorial Office
NWO / IT*e*R
P.O. Box 93461
2509 AL The Hague, The Netherlands
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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 overheid)
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
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

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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.[1] 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.[2] 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

[1] Free Software Foundation Europe, <http://fsfeurope.org/documents/freesoftware.html>.
[2] Open Source Initiative, <http://www.ossl.nl/opensource.org/>.

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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.[3] 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.[4]

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.[5] 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

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

[4] S. Shankland, 'Adobe releases open-source interface software', 2 March 2005, CNET News.com.

[5] 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 the 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.

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.[6] 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.[7] 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.'[8] 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.

[6] See for example Creative Commons (licences 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/>.

[7] See Benkler 2002.

[8] Moglen 1999.

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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).[9] 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.'[10]

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.

---

[9] See for a concise overview Stallman 2003, pp. 3-5 and for a Dutch overview De Cock Buning 1993.

[10] 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 licence. 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.'[11] The Artificial Intelligence Lab of the Massachusetts Institute of Technology is one of the most important breeding grounds of this culture.[12] 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.[13] The importance attached to the sharing of information can partly be traced back to an academic tradition that has been developed during the En-

[11] See *above* others Levy 2001, pp. 40-49, and generally Himanen 2001.
[12] Levy 2001, pp. 40-41.
[13] Castells 2001, p. 39.

lightenment.[14] 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.[15] 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.[16]

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.[17] 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.[18]

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.[19] 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

[14] Castells, citing Tuomi 2001.
[15] See Tuomi 2001, p. 2.
[16] Raymond 1999, p. 10.
[17] See Castells 2001, p. 14.
[18] Castells 2001, p. 24.
[19] See DiBona, Ockman & Stone 1999, pp. 53-54, and Levy 2001, pp. 415-430.