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# Wikitopia: balancing intellectual property rights within open source research databases

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## **Wikitopia: Balancing Intellectual Property Rights within Open Source Research Databases**

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### **Abstract:**

Wiki “communities” based on the open access ideology allow any visitor to easily add, remove or edit content. However, there are a slew of ethics and policy challenges inherent in their use. Open source software developers are faced with the dilemma of openly sharing their intellectual property and prevent others from claiming proprietary rights from the code they freely shared to the public? Intellectual Property rights licensing, ironically, is the route by which open software developers have chosen to regulate their free code in cyberspace. Open source code is generally free on the surface, but in reality, it comes with obligations which are enforceable by law. Aside from the potential liability for intellectual property infringement, the use of open software raises competition law and tort liability issues. The European Union has developed the European Public License which is written in conformity with the copyright, product liability and consumer protection laws of the 27 member states. The EU Commission has also proposed a new Directive which will extend the principles of consumer protection rules to cover licensing agreements of products like software. This paper will address the various legal issues that may arise in open source community sharing.

### **1. Introduction**

Society has an intense interest in the progress of science. This is apparent in several important ways; for example, facilitating researcher access to research materials, encouraging investment in high quality research, ensuring that research is conducted in a responsible and ethical fashion<sup>1</sup> and encouraging the widest possible perpetual availability of scholarly literature and research for perpetuity and examination to the public.

For years, researches have been locked up in books and peer-reviewed subscription-based publications. Subscriptions are often too expensive for many scientists, especially in developing countries. A number of institutions do not have institutional repositories where

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<sup>1</sup> Natalie Ram, *Assigning Rights and Protecting Interests: Constructing Ethical and Efficient Legal Rights in Human Tissue Research*, 23 Harvard J. L & Tech. 119 (2009)

researchers can submit their reports in digital forms. In addition, in some organisations prohibit the data sharing to protect confidentiality or proprietary interest. These practices have limited the availability of data used for scholarly research to other investigators.

Because of the wide diversity in the types of data generated by research, various novel approaches to collecting, manipulating, combining, displaying, retrieving, managing, and disseminating them have been vital to making these data available for scientific collaboration and electronic use.<sup>2</sup> The advent of the ubiquitous network has created an opportunity for efficient, unlimited sharing of information. E mail and open source programmes have allowed scientists to form new communities where they can quickly share data and work together affectively in cyberspace. Collaboration is the key to all of this. Information obtained from discoveries and compiled in shared databases contributes to advancing knowledge by leveraging new possibilities for combining complex and diverse data.<sup>3</sup> The underlying objective is to foster innovation and scientific discoveries by removing the obstacles caused by intellectual property ownership.

The past several years have seen the growing popularity of user-generated collaborative communication. One of the most robust forms is the wiki. Wikis have also been used in the academic community for sharing and dissemination of information across institutional and international boundaries.

Wiki “communities” based on the open access ideology allow any visitor to easily add, remove or edit content. Editing can be done quickly, easily and without any special knowledge of authoring formats. This simplicity and ease make it an ideal tool for group projects.<sup>4</sup> This form of data sharing and methodology allow measures of reliability and objectivity since the data are openly available for careful scrutiny by other researchers, thus providing them the opportunities of replicating the research and validating (or invalidating) the findings. Wikis serve various communities. For example, a group of researchers and scientists from the Technische Universiteit Eindhoven are extending the scope of their activities via WikiTherapist. The objective of the project is to develop a novel design process enabled by end-user development technology for allowing health researchers and practitioners to create, produce and distribute technology supported therapy systems based on non-conventional forms of interaction. These technology supported therapy systems will simultaneously minimize the need for health practitioners to acquire programming expertise and minimize the need for technology manufacturers to provide specialized domain specific solutions.

A special community-driven portal (website) is being developed to allow the *programmer-therapist* to upload their newly-designed treatment programs onto the portal for other therapist across the globe to download and use. *Non-programmer-therapists* will have the option to download and use the files uploaded by the programmer-therapist. *Other programmer-therapists* have the possibility to download the software, modify the original program by changing the source code and uploading/sharing the "new" program onto the portal for other therapist to now download. The portal will also allow the group efforts of remote-software development where several therapists will have the ability to work together asynchronously in developing new therapy programme software for the tangible user

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<sup>2</sup> Judy Illes & Sofia Lombera, *Identifiable Neuro Ethics Challenges to the Banking of Neuro Data*, 10 Minn. J. L. Sci. & Tech. 71 (2009)

<sup>3</sup> See generally Shun-Ichi Amari et al., *Neuroinformatics: The Integration of Shared Databases and Tools Towards Integrative Neuroscience*, 1 J. Integrative Neuroscience 117, 117-28 (2002); Jan G. Bjaalie & Sten Grillner, *Global Neuroinformatics: The International Neuroinformatics Coordinating Facility*, 27 J. Neuroscience, 3613, 3613-15 (2007); International Neuroinformatics Coordinating Facility, <http://incf.org/>

<sup>4</sup> The first wiki software, WikiWikiWeb, was written in 1994. Robert J. Ambrogio, *Where There's a Wiki. There's a Way* 64-JUN Bench & B. Minn. 14 (2007)

interface.

However, the concept of open file sharing for therapeutic purposes raises a number of issues. How should the developer's rights be managed? What set of rules must govern the behaviour of the users?

The aim of this paper is three fold : first, it will enumerate what are protected in wikis ; second, the possible legal consequences of open file sharing with regards to the use of intellectual property developed for the good of the community and thirdly, it will discuss the various licensing models that can be used to govern this collaborative user-generated therapy system.

## 2.0 Community Based Data Sharing and Open Source

The use of open source software (OSS) in data sharing has become an important tool in the advancement of science. The OSS was developed as an economical alternative to organisation's reliance upon commercially supplied software that has tied up scarce development resources for higher value projects.

When a software program is open source, it means the program's source code is freely available to the public. The program can be modified and distributed by anyone and are often developed as a community rather than by a single organization.

The availability of source code to Open Source programs and the right to modify and make improvements in that source code are what distinguish Open Source software from standard commercial software.<sup>5</sup> Source code is the programming statements created by a programmer, commonly through the use of a text editor, which are readable by humans and which must be compiled before the programming statements can be run on a computer processor.<sup>6</sup> Most license agreements for commercial software prevent the licensee/user from having access to the source code. Open Source software changes this starting point by demanding that the licensee/user get access to the source code along with the more important right to make changes to the source code. However, simply making the source code available does not necessarily mean that a program meets the definition of open source software. In order to qualify as an open source, the software must comply with the following characteristics:<sup>7</sup>

- Source Code. The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of 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.
- Free Redistribution. 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. The license shall not require a royalty or other fee for such sale.
- Derived Works. 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

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<sup>5</sup> Dennis Kennedy, *A Primer on Open Source Licensing Legal Issues: Copyright, Copyleft and Copyfuture*, 20 St. Louis U. Pub. L. Rev. 345 (2001)

<sup>6</sup> See explanation of "source code," at [http://whatis.techtarget.com/WhatIs\\_Definition\\_Page/0,4152,213030,00.html](http://whatis.techtarget.com/WhatIs_Definition_Page/0,4152,213030,00.html)

<sup>7</sup> <http://www.opensource.org/osd.html>

software.

- Integrity of the Author's Source Code. 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 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.
- No Discrimination against Persons or Groups. The license must not discriminate against any person or group of persons.
- No Discrimination against Fields of Endeavour. The license must not restrict anyone from making use of the program in a specific field of endeavour.
- Distribution of License. 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.
- License Must Not Be Specific to a Product. The rights attached to the program must not depend on the program's being part of a particular software distribution. If the program is extracted from that distribution and used or distributed within the terms of the program's license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution
- License Must Not Restrict Other Software. The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be open-source software.
- License Must Be Technology-Neutral. No provision of the license may be predicated on any individual technology or style of interface

As such, the Open Source system of software development is community-based which means Open Source programs develop through the changes, suggestions and coding of potentially thousands of contributing programmers. Users who modify source code in ways that will improve the program contribute those programming changes, fixes and new features back to those responsible for the programs development.<sup>8</sup> The efforts of these volunteers are managed by a person or small group of people who are responsible for the Open Source program. These responsible parties incorporate selected contributions of volunteers and, from time to time, release new "official" versions of the software.<sup>9</sup>

Open source must not be confused with freeware and shareware. A freeware is software which can be downloaded, used, and copied without restrictions but the user has no access to the source code. Shareware follows a similar concept. The user does not have access to the source code and modify it. A shareware allows the user to download and try it for free but the intellectual property right belongs to the developer.

Open Source programs grew from the concept of "free software" conceived of by Richard Stallman in the early 1980's.<sup>10</sup> Stallman's useful dictum that the "free" in free software should

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<sup>8</sup> Kennedy, *supra*.

<sup>9</sup> In the case of Linux, perhaps the most well-known Open Source example, this person is Linus Torvalds and a small group of trusted assistants. Linus Torvalds, "The Linux Edge" in *Open Sources: Voices From the Open Source Revolution*, Chris DiBona et al., eds. (Sebastopol, CA: O'Reilly & Assoc., 2001)

<sup>10</sup> Richard Stallman, "The GNU Operating System and the Free Software Movement", in *Open Sources: Voices From the Open Source Revolution*, Chris DiBona et al., eds. (Sebastopol, CA: O'Reilly & Assoc., 2001)

be thought of as “free as in speech, not free as in beer”<sup>11</sup> is a memorable and useful way of thinking about Open Source software. Many Open Source programs are in fact free monetarily as well as generally available by downloading over the Internet. Companies in the Open Source sector generate revenues by methods other than selling software at a retail price, such as providing consulting services.<sup>12</sup> The “freedom” aspect of Open Source software is crucial when compared against most commercial software licenses which place limitations on how the software may be used. These limitations may include restricting the use of the software to certain machines, a specified numbers of users, internal business purposes and the like. Code-based control is seen as a powerful but “unofficial opportunity to influence the dynamics of the market.”<sup>13</sup> Open Source licenses, on the other hand, use license agreements in the opposite manner to minimize or eliminate restrictions on users that might prevent the free use of the software, source code and, in certain instances, derivative works based on the software.<sup>14</sup> As a result, an Open Source license reverses traditional licensing concepts by using the license to give the licensee more freedom rather than more restrictions.

The philosophy behind the open source software has been embraced in many forms of user-generated contents with wikis as the most popular form.

Wiki “communities” based on the open access ideology allow any visitor to easily add, remove or edit content. Editing can be done quickly, easily and without any special knowledge of authoring formats. This simplicity and ease make it an ideal tool for group projects.<sup>15</sup>

However, there are a slew of ethics and policy challenges inherent in their use. These include regulating the content of, access to, and use of databases. Further, data must remain confidential anonymous while simultaneously coordinate informed consent procedures allow for future use and commercialization of data. Managing unexpected findings, anonymous data, and re-contact procedures need to be in place. Designing tools to address these challenges in parallel to the technical development of databases is pivotal to its success.<sup>16</sup>

## 2.1 Wiki tools

The wiki software is collaborative software where the current contents and previous revisions are stored in file system or database. Wiki implementations offer a mark-up language, usually very different than HTML. There are numerous wiki software that collaborators can use. These Wiki implementations vary in their features, ease of installation, syntax, and semantics. The programming language could be NET, JAVA, PHP, MySQL, Python, Perl, Lisp and Ruby on Rails (etc).

Choosing a Wiki engine requires some care as it could be time consuming and difficult to switch from one implementation to another when new syntaxes emerge.

Most of the wiki software is either free or open software – which means that they are licensed to grant the right of users to use, study, change, and improve its design through the availability of its source code. Free software is generally available without charge, but can

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<sup>11</sup> Robert W. Gomulkiewicz, *How Copyleft Uses License Rights to Succeed in the Open Source Software Revolution and the Implications for Article 2B*, 36 Hous. L. Rev. 179 (1999) quoting Richard Stallman.

<sup>12</sup> Frank Hecker, *Setting Up Shop: The Business of Open Source Software*, at <http://www.hecker.org/writings/setting-up-shop.html>

<sup>13</sup> Charles Vincent & Jean Camp, *Looking to the Internet for Models of Governance*, 6 Ethics and Information Technology 161 (2004)

<sup>14</sup> Free Software Foundation, *What is Copyleft?*, at <http://www.gnu.org/copyleft/copyleft.html>

<sup>15</sup> The first wiki software, WikiWikiWeb, was written in 1994. Robert J. Ambrogi, *Where There's a Wiki, There's a Way* 64-JUN Bench & B. Minn. 14 (2007)

<sup>16</sup> Illes & Lombera, *supra*.

have a fee. In particular, this means that source code must be available.

In contrast, a freeware does not require payment but the right holders retain their copyright. It is not allowed to modify it. On the other hand, proprietary wiki software is licensed under exclusive rights of the owners and any modifications or reverse engineering is absolutely prohibited. It can be distributed at no cost or for a fee. Some proprietary software comes with source code or provides offers to the source code, which is regarded as a trade secret by the owner. As such, the use of the software is governed by contract law and users are required to sign a non-disclosure agreement.

Since the first wiki implementation was launched in 1994, more sophisticated wikis have been created offering not only standard web functionality, but also content management and wiki functionality. In addition to wiki pages, they include blogs and discussion forums.

Some of the most popular wikis are:

- **Media Wiki.** This is the most popular wiki software and is used to run Wikipedia. It is licensed under the GNU General Public License (GPL).
- **TikiWiki** is a powerful open-source Groupware and Content Management System, written in PHP. TikiWiki can be used to create web sites and intranets. TikiWiki offers great resources if you use it for a collaboration tool. You can use TikiWiki for forums, chat rooms, poll taking, blog, file and image gallery, FAQ, calendar, and much more!
- **DokuWiki** is a standards compliant, simple to use Wiki, mainly aimed at creating documentation of any kind. It is targeted at developer teams, workgroups and small companies. It has a simple but powerful syntax which makes sure the data files remain readable outside the Wiki and eases the creation of structured texts. All data is stored in plain text files – no database is required.<sup>17</sup>
- **PmWiki** is wiki software in the PHP programming language and licensed under the GNU General Public License.
- **PhpWiki** is a web-based wiki software application written in PHP and mostly used to edit and format paper books for publication.

## **2.2 Possible Defects in Technical Tools**

**( describes what technical defects/ malfunctions on the sharing tools and see what damage/injury could possible arise & affect other users**

## **3. Wiki Governance: Legal Tools**

There are two types of legal tools which can be used in regards to wiki governance. The first is copyright. Copyright is a public right governed by specific legislation. The second tool is contract law manifested in licenses. Licenses are a private negotiation between two or more parties which agree the rules of the subject matter amongst themselves. There are underlying principles of contract law which must be taken into consideration and are implemented when necessary if forgotten in the original contract, but the details are formalized between the parties.

Software products can be sold in many different ways; for example, on CD-ROM, embedded on a device, transmitted over the internet, or distributed using countless other

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<sup>17</sup> <http://www.dokuwiki.org/dokuwiki>

forms.<sup>18</sup> This flexibility stems from the underlying nature of a finished program, which is ultimately only a machine-readable collection of ones and zeros.<sup>19</sup> The finished “executable program” is created by transforming the source code that the software developer wrote using one of many programming languages. The source code is where the real value lies; it serves as both the blueprint and the finished product.<sup>20</sup> A software developer tends to keep the source code secret and undistributed while selling the executable program. This strategy helps to protect the underlying intellectual property rights by preventing unauthorized modification and obstructing any competitor’s insight into the development process.<sup>21</sup> However, paradigm shifting licenses are being developed so that the source code is being released into the public domain along with usage restrictions, or open source.

### 3.1 Copyright: What is protected?

Under the Berne Convention, protection covers all “literary and artistic works.” This term encompasses diverse forms of creativity, such as writings, including scientific and technical texts and computer programs, databases that are original due to the selection or arrangement of their contents; musical works; audiovisual works (etc). Under article 10 of the TRIPS Agreement “Computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971).”<sup>22</sup>

Computer software can be protected through copyright in both its source code and object (binary) code forms. However, it should be noted that the courts have not always been willing to protect every element of a given piece of software via copyright law.<sup>23</sup>

Copyright law admits to three general categories of works: Original Work :A new work that is not derived from an existing work; Derivative Work , work that is derived from, includes or amends existing works; Compilations , work that is a compilation of existing new and derivative works.

Research databases are governed usually by a system where initial rights are allocated to traditional intellectual property rights holders, and subsequent rights are governed by license agreements. Given the capabilities and characteristics of the wikis, the open-editing function of the wikis makes it often difficult to determine clearly the authorship and the origin (even accuracy) of the data, even though most wikis contain an edit history. Even in a collaborative open space, the ownership and safeguarding of ideas are of paramount importance.

The most fundamental issue is the determination of the scope of protection in the digital environment-that is, how rights are defined, and what exceptions and limitations are permitted. Other important issues include how rights are enforced and administered in the wiki

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<sup>18</sup> Paul Kafasis, *The Fourth Age of Software Distribution*, INSIDE IPHONE, Aug. 24, 2008, <http://blogs.oreilly.com/iphone/2008/08/the-fourth-age-of-software-dis.html>

<sup>19</sup> See Rahul De, Indian Institute of Management Bangalore, *FOSS Business Models for Developing Countries in Asia* (2008), available at [http:// www.iosn.net/publications/research-white-papers/FOSS%20Business%20Models%20for%20developing%20countries%20in%20Asia.pdf](http://www.iosn.net/publications/research-white-papers/FOSS%20Business%20Models%20for%20developing%20countries%20in%20Asia.pdf)

<sup>20</sup> Id.

<sup>21</sup> Reverse engineering an executable program is always possible, yet complex software makes doing so both costly and difficult. As for providing intellectual property protection, the cost and difficulty of reverse engineering help to protect the copyrightable aspects of the source code but can do little to protect the underlying patentable methods that are immediately apparent from how the software functions. Pamela Jones, *Software, Reverse Engineering and the Law*, LWN.NET, May 4, 2005, <http://lwn.net/Articles/134642/>

<sup>22</sup> Art. 10(1) TRIPS (Trade Related Aspects of Intellectual Property Rights)

<sup>23</sup> See *Computer Associates International, Inc. v. Altai, Inc.*, 982 F.2d 693, 703-12 (2d Cir. 1992) (holding that a program consisted of a number of different elements and that noncopyrightable elements of the program should be excised before a court can consider the overall copyrightability of the program in question).

community.

### 3.1.1 What is protected?

First, research consists of mainly images, text, and code; and thus, the most obvious choice is copyright. There is no requirement of formality necessary for copyright to vest in each creation. The categories of elements that may receive copyright protection under a current understanding of copyright law are as follows: text (data and code), digital images, computer generated works, and multimedia/database. Secondly, as researchers use and manipulate visual and textual data from the database, copyright is directly implicated. There is the possibility of derivative works. There is also the argument to be made that a transformative work has been created.

#### a. Text: Data

Within most wiki environments, people interact textually with each other. They may have discussions with other people, examine items more fully, or demonstrate a theory - and this entire experience is textual. Texts are at the very core of copyright law, extending protection to original literary “works of authorship fixed in any tangible medium of expression.”<sup>24</sup> The two issues that must be addressed in determining whether text is copyrightable are whether they are original and whether they are fixed in a tangible medium.

The originality requirement remains a low hurdle. The United States Supreme Court in *Feist Publications, Inc. v Rural Telephone Service Co.* held that “the requisite level of creativity is extremely low; even a slight amount will suffice.”<sup>25</sup> Likewise, the United Kingdom’s court in *Ladbroke (Football) Ltd v William Hill (Football) Ltd.* maintained a similarly low hurdle that “only that the work should not be copied but should originate from the author.”<sup>26</sup> As long as the texts are even remotely creative, they pass the requirement for originality. While the bar is indeed set low, short phrases<sup>27</sup> and simple shapes<sup>28</sup> remain unprotected by copyright. Much of the textual dialogue is indeed quite short and may fail to pass this low hurdle. While each individual phrase may not itself merit copyright protection, the dialogue in its totality would most likely be sufficiently original to garner copyright protection.

Providing a greater quandary is the requirement that the work of authorship be fixed in a tangible medium.<sup>29</sup> Much of the textual interplay is quite transitory; unless researchers record conversations or events, the text will be lost. It may not be necessary that a work be recorded to be considered fixed. In the United States, the Ninth Circuit held in *MAI Systems Corp. v Peak Computer, Inc.*<sup>30</sup> that a computer program is copied when the software is temporarily stored in RAM. If a RAM copy suffices as fixation for purposes of infringement, it could be argued that it should suffice for purposes of granting copyright.

There is no doubt that the text, if it clears the hurdles of originality and fixation, should receive copyright protection. But there is yet another hurdle which was discussed earlier: determining authorship. People become members of collective research. One way to solve

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<sup>24</sup> CDPA 1988, ss 1-8; 17 U.S.C.A. §102(a) (1996)

<sup>25</sup> 499 U.S. 340 (1991)

<sup>26</sup> [1964] 1 WLR 273

<sup>27</sup> *Magic Mktg, Inc. v Mailing Services of Pittsburgh, Inc.*, 634 F. Supp. 769, 772 (W.D. Pa. 1986) holding that short words and phrases on envelopes ‘do not exhibit a sufficient degree of creativity to be copyrightable.’

<sup>28</sup> *John Muller & Co. v N.Y. Arrows Soccer Team, Inc.* 802 F.2d 989, 990 (8<sup>th</sup> Cir. 1986) holding that a simple logo for a soccer team did not demonstrate ‘certain minimal levels of creativity and originality.’

<sup>29</sup> CDPA, s.3(2) and s. 178; 17 U.S.C. §102

<sup>30</sup> 991 F. 2d 511 (1993)

the problem is to consider the entire collective research as a compilation. Authorship of the whole could be granted to all participants, while each person would retain authorship of his personal contribution to the text, as long as it met the requirements for originality and fixation.<sup>31</sup> Another solution would be to consider the collective research as a work of joint authorship, thereby granting ownership of the whole to all participants, as long as each participant made copyrightable contributions and intended to be a co-author.<sup>32</sup>

#### **b. Text: Code**

Wiki environments are created by code. The creators of these environments write software code that, when run, creates a shared space. Further researchers may write code. While the interface provides a useful environment for creation, it also serves to insulate people from code; each act of creation using the interface creates underlying code, invisible but essential. This code, although invisible to its creator, may be protected by copyright. On the whole, copyright law treats software as a type of literary work and grants copyright in the code that makes up a piece of software. This principle was established under international law by article 10 of the TRIPS Agreement, which reads: “Computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971).”<sup>33</sup> Though by tradition, WTO member states have interpreted international treaties in subtly different way when enacting or revising national laws.<sup>34</sup>

The United States follows the general thrust of international law and most national laws stating: “A ‘computer program’ is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.”<sup>35</sup> The Third District U.S. Court in *Apple Computer, Inc. v Franklin Computer Corp.*, held that “a computer program, whether in object code or source code, is a ‘literary work’ and is protected from unauthorized copying, whether from its object or source code version.”<sup>36</sup> The written code is therefore protected as a ‘literary work’ as long as it meets the other requirements of originality and fixation. The judgement also re-enforced that “it is only the instructions themselves” that are covered.<sup>37</sup> This scope excludes two areas: the idea for a program as opposed to an individual express expression as recorded in code; and data upon which instructions operate. This follows the House Report accompanying 17 U.S.C. §102(b) which states: “Section 102(b) is intended, among other things, to make clear that the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or methods embodied in the program are not within the scope of the copyright law.”<sup>38</sup>

The European position is slightly more ambiguous. The European ‘Software Directive’ states “the term ‘computer program’ shall include programs in any form.”<sup>39</sup> The United Kingdom’s implementation of this directive into law provides no explicit definition of software whatsoever. Instead the Copyright, Designs and Patents Act, defines a ‘literary work’ variously as: “A table or compilation other than a database, a computer program,

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<sup>31</sup> *Macmillan & Co. Ltd. v K & J Cooper* (1923) 40 TLR 186

<sup>32</sup> CDPA ss 10 and 88(5); 17 U.S.C.A. §101 (1996)

<sup>33</sup> Art. 10(1) TRIPS (Trade Related Aspects of Intellectual Property Rights)

<sup>34</sup> The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994.

<sup>35</sup> 17 U. S. C. §101B

<sup>36</sup> 714 F.2d 1240 (3<sup>rd</sup> Cir. 1983)

<sup>37</sup> *Id.*

<sup>38</sup> H.R. Rep. No. 1476, 94<sup>th</sup> Cong., 2d Sess. 57 (1976), reprinted in 1976 U.S.C.C.A.N. 5659, 5670

<sup>39</sup> Council Directive 91/250/EEC of 14 May 1991 *on the legal protection of computer programs* Official Journal L 122 , 17/05/1991 P. 0042 – 0046

preparatory design material for a compute program, a database.”<sup>40</sup> British law, thus, relies heavily on case law rather than legislation to define the scope of software, and case law (at least in respect of software) rests heavily on the interpretive procedures and definitions created in American courts.<sup>41</sup>

The defining case in the United Kingdom is *Richardson v Flanders*.<sup>42</sup> In this case the judge, Ferris J, establishes a scope parallel between ‘the detail of certain routines’ and ‘the plot of a book or other literary work’ which mirrors arguments in the Third Circuit case *Whelan v Jaslow*, a case that set out certain idea-expression tests which set limits on the scope of the application of copyright to code in the form of source or object code.<sup>43</sup> Ferris J also applies tests established in the case of *Computer Associates v Altai*, which, amongst other things, deals with the nature of non-literal copying of a computer program.<sup>44</sup>

First, the originality requirement would be satisfied as long as the code demonstrated ‘some creative spark’ or reflected the author’s personality.<sup>45</sup> However, if development tools are used, the generic code generated may not demonstrate any creative spark or the author’s personality. However, this creativity could be evidenced by unique, player-defined attributes and descriptions embodied in the code and reflected in the virtual creation. Hence, any creativity embodied in the code would depend on the degree of creativity that the player used during the process of creation. Creativity would lie in the type of object created, the attributes assigned to that object, and the descriptions accompanying that object. Therefore, the code that renders a rock, designed by the player with the assistance of a design environment, would probably not be sufficiently creative, assuming the rock is just an ordinary rock; however, the code underlying a well-defined character, similarly designed by the player with the aid of a development environment, would probably evidence sufficient creativity. Second, the fixation requirement would offer no hurdles here, because the code would be maintained in internal storage on the server.

In an Open Source development, the general principle is that the author of the code remains the copyright owner and that he or she simply applies the Open Source license to his or her code.<sup>46</sup> Questions then arise as to ownership of particular aspects of the source code. The popular conception of Open Source development is one of programmers working on their own in their homes late into the night creating code for specific programs. On the other hand, there is a growing amount of professional development in Open Source. In either case, there will be questions as to whether some of the software was developed as part of a scope of employment and, therefore, subject to the work made for hire doctrine under copyright law.<sup>47</sup> If the work made for hire doctrine applies, the employer, rather than the individual programmer, would be the owner of the code and the one with authority to grant the license. Further, a programmer may be subject to employment or development agreements that would not give them the right to contribute source code as part of Open Source development or to apply the Open Source license to the code. Ignorance of one’s position causes difficulties when sorting out ownership issues in the event of a dispute. The possibility that some code in an Open Source project may have been licensed by people without the authority to grant the license is high. This leads to questions not only of ownership of the project, but who would

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<sup>40</sup> CDPA s 3(1), as amended by the Copyright (Computer Programs) Regulations 1992

<sup>41</sup> Mark Lemley, *Convergence in the Law of Software Copyright?*, 10 High Technology Law Journal 1 (1995)

<sup>42</sup> [1993] FSR 497

<sup>43</sup> 797 F.2d 1222, 230 USPQ 481 (3d Cir. 1986), cert. denied, 479 U.S. 1031 (1987)

<sup>44</sup> 775 F. Supp. 544, 20 USPQ 2d 1641 (E.D.N.Y. 1991)

<sup>45</sup> *Apple Computer, Inc. v Franklin Computer Corp.*, 714 F.2d 1240 (3<sup>rd</sup> Cir. 1983)

<sup>46</sup> FSF, GNU General Public License, Preamble, at <http://www.gnu.org/copyleft/gpl.html>

<sup>47</sup> CDPA s. 11(2); *Cyprotex Discovery Ltd v University of Sheffield*, [2004] RPC 887; *Noah v Shuba* [1991] FSR

have the right to enforce the copyright in an infringement action.

The "copyright notices" usually included in source files are not copyrights, but rather notices that a party asserts that they hold copyright to the material or to part of the material.

### **c. Digital Images**

Wiki environments abound with images. These digital images may take many forms, ranging from photos to creative art, and may be used to illustrate places or represent theories. Artistic works are at the heart of copyright protection. Copyright law includes 'pictorial, graphic, and sculptural works' among the defined categories of 'works of authorship.'<sup>48</sup> Digital images qualify as pictorial or graphic works. Again, the only remaining issues are originality and fixation. According to the Jacob LJ in *Nova Games Ltd. v Mazooma Productions Ltd.*, "all the things falling within the artistic work category have one thing in common in that they are all static, non-moving. Although a screen display shown during the playing of a computer game is undoubtedly a graphic work, there is no separate copyright in a series of such images."<sup>49</sup> This view is supported by the existence of films as a separate category of copyright work which is seen to protect computer games.<sup>50</sup>

Under the U.S. Copyright Act, a work is 'fixed' when "its embodiment in a copy . . . is sufficiently permanent and stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration."<sup>51</sup> As further explained in the legislative history, "the definition of 'fixation' would exclude from the concept purely evanescent or transient reproductions such as those projected briefly on a screen, shown electronically on a television or other cathode ray tube, or captured momentarily in the 'memory' of a computer."<sup>52</sup> As long as the work demonstrates the author's personality and is fixed, then copyright law will protect the image. What does this mean for a research database? The U.S. Copyright Office has ruled that "all copyrightable expression owned by the same claimant and embodied in a computer program, or first published as a unit with a computer program, including computer screen displays, is considered a single work and should be registered on a single application form. . . . Ordinarily, where computer program authorship is part of the work, literary authorship will predominate, and one registration should be made on application Form TX. Where, however, audiovisual authorship predominates, the registration should be made on Form PA."<sup>53</sup>

### **d. Multimedia/Audiovisual**

Wiki environments can display an audiovisual feast. They can be rich with images and sound played in combination to create a unified cyber experience. Researchers, through participation, may create part of the audiovisual exhibition, while other aspects are inherent in the database itself, ingrained in the design. In the United Kingdom, multimedia experiences are possibly protected by copyright law. They will be protected by copyright in so far as their parts are protected by copyright; the work as a whole might fall within the UK's generous definition of a film; or the compilation may attract protection. 'Film' is defined as 'a recording on any medium from which a moving image may by any means be reproduced' and they include the film soundtrack.<sup>54</sup> The law of copyright in the United Kingdom, provides for copyright in a 'compilation' as distinct from the rights that may be held in any individual part

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<sup>48</sup> CDPA ss 1-8; 17 U.S.C. §102(a) (1996)

<sup>49</sup> [2007] RPC 589 para 16

<sup>50</sup> Id.

<sup>51</sup> 17 U.S.C. §101

<sup>52</sup> H.R. Rep. 94 – 1476 52-53 (1976)

<sup>53</sup> Registration and Deposit of Computer Screen Displays, 53 Fed. Reg. 21, 817-18 (1988)

<sup>54</sup> CDPA, s 5B

of that collection. The test for where copyright subsists in a collection is that there has been sufficient 'skill, industry or experience applied in the production of the collection'<sup>55</sup> This test also applies to the original works of copyright but with the exception of databases which, under s 3A(2)<sup>56</sup>, are original for copyright purposes if, and only if, by reason of the selection or arrangement of the contents of the database, the database constitutes the author's own intellectual creation.<sup>57</sup>

In system terms a piece of research may be individuated by an entry in a data set - generally held in a database. This raises the question of whether combined pieces of research are a database in legal terms and thus what rights would be afforded to whom. Where a database is created by direct human skill or judgment, it may be a work of copyright even if the constituent parts are commonplace. This would argue that although the database creator owns all of the underlying database entries, the individual researchers are using direct human skill and judgment to compile their own individual database within the greater wiki environment. Decisions, as to what to include, what to exclude, what sort of information to collect and how that information will be structured and arranged, may require an act of intellectual creation. In this respect, compilations can be original even though their constituent parts are not original, such as in *Macmillan & Co Ltd v K & J Cooper*,<sup>58</sup> remains good law.

Now, the law incorporates the European Union Database Directive implementing the Copyright and Rights in Database Regulations 1997, which defines a database as a legal object for the first time and created a *sui generis* database right.<sup>59</sup> Under the directive a database is defined as "a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means."<sup>60</sup> The directive defines that copyright subsists if and only if "[the databases] which, by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation."<sup>61</sup> Similarly the Directive grants a *sui generis* database right, this time to a 'maker' (not author) such that "qualitatively and/or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents to prevent extraction and/or re-utilization of the whole or of a substantial part evaluated qualitatively and/or quantitatively, of the contents of that database."<sup>62</sup> The directive goes on to provide rights in respect of extraction and re-utilization.

Databases do not exist in the legal ontology of American copyright. There is no *sui generis* right in databases either. Hence the situation is akin to the pre-1988 situation in the United Kingdom with a databases being seen as a collection, falling under the general provisions for literary work as interpreted in case law. As mentioned earlier, the foundation case in the interpretation of copyright in collections is *Feist v Rural Telephone Service*.<sup>63</sup> *Feist* established that just as copyright does not subsist in facts alone - it does not subsist in collections of facts simply in virtue of the effort taken to compile them. That is, *Feist* rejected the 'sweat of the brow' test as basis for copyright.<sup>64</sup> Since *Whelan v Jaslow*<sup>65</sup> overturned an

<sup>55</sup> *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 WLR 273

<sup>56</sup> Copyright and Rights in Databases Regulations 1997, SI 1997/3032

<sup>57</sup> Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, OJ L 77,27.03.1996, p.20

<sup>58</sup> (1923) 93 LJPC 113.

<sup>59</sup> Council Directive No. 96/9/EC of 11 March 1996 (O.J. No. L77, 27.3.96, page 20) *on the legal protection of databases* enacted into UK law under The Copyright and Rights in Databases Regulations 1997 which amended The Copyright, Designs and Patents Act 1988.

<sup>60</sup> Id. at s 1(d)

<sup>61</sup> Id. at s 3(1)

<sup>62</sup> Id. at s 7(1)

<sup>63</sup> 499 US 340 (1991)

<sup>64</sup> Id.

argument from *Baker v Seldon*,<sup>66</sup> the idea-expression dichotomy ruled out copyright in forms, holding that “blank forms may be copyrighted if they are sufficiently innovative that their arrangement of information is itself informative.”<sup>67</sup> *CCC Information Services v Maclean Hunter Market Reports* later ruled that copyright could subsist in both items within the collection and the collection as a whole stating “listings also embody sufficient originality to pass Feist’s low threshold. These include the selection and manner of presentation of optional features for inclusion.”<sup>68</sup>

On the other hand, multimedia is explicitly protect by copyright law as an audiovisual work<sup>69</sup> which is defined as “works that consist of a series of related images which are intrinsically intended to be shown by the use of machines or devices ... together with accompanying sounds, if any, regardless of the nature of the material objects ... in which the works are embodied.”<sup>70</sup> This provision has been used to protect the audiovisual experience of video games, which seems an apt analogy for interactive wiki environments. So does it matter whether a wiki environment is treated as literary work or an audiovisual work? *Manufacturer’s Technologies, Inc. v CAMS Inc.* approached the protectability of screen displays by treating “the single registration of a computer program as accomplishing two interrelated yet distinct registrations; one of the program itself and one of the screen displays or user interface of that program, to the extent that each contains copyrightable subject matter.”<sup>71</sup>

Can a wiki environment be considered a ‘joint work’? According to the *Childress* court, it would.<sup>72</sup> The U.S. Copyright Act defines a ‘joint work’ as “a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole.”<sup>73</sup> Thus, in order to be considered ‘joint authors,’ the putative joint authors must manifest this intention.<sup>74</sup> The *Childress* decision recognized that the authorship question in the context of joint authorship is particularly sensitive and difficult: “Care must be taken to ensure that true collaborators in the creative process are accorded the perquisites of co-authorship and to guard against the risk that a sole author is denied exclusive authorship status simply because another person rendered some form of assistance. Copyright law best serves the interests of creativity when it carefully draws the bounds of ‘joint authorship’ so as to protect the legitimate claims of both sole authors and co-authors.”<sup>75</sup> Judge Newman noted that “[a] more substantial issue arising under the statutory definition of ‘joint work’ is whether the contribution of each joint author must be copyrightable or only the combined result of their joint efforts must be copyrightable.”<sup>76</sup> Further he concluded, “The case law supports a requirement of copyrightability of each contribution.”<sup>77</sup> *Childress* established that in order to be considered an ‘author,’ one must contribute something that is

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<sup>65</sup> 797 F.2d 1222 (1986)

<sup>66</sup> 101 U.S. 99 (1879)

<sup>67</sup> *Whelan* at 1222

<sup>68</sup> 44 F.3d 61 (2d Cir. 1994)

<sup>69</sup> 17 U.S.C. §102

<sup>70</sup> 17 U.S.C. §101

<sup>71</sup> 706 F. Supp. 984 (D. Conn. 1989)

<sup>72</sup> *Childress v Taylor*, 945 F.2d 500 (2nd Cir. 1991)

<sup>73</sup> 17 U.S.C.A. §101

<sup>74</sup> *Childress* at 507

<sup>75</sup> *Id.* at 504

<sup>76</sup> *Id.* at 506

<sup>77</sup> *Id.*

copyrightable.<sup>78</sup>

In the United Kingdom, a similar case was heard. According to the *Brighton* court, it probably would be too as collaboration amongst the people would not be distinct.<sup>79</sup> The court held that the basic provisions of the CDPA ss 9 and 10 as to ownership were qualified to the extent that under s 104(2), there was a presumption that the author named on the work was the actual author.<sup>80</sup> Miss Jones had been; however, Miss Brighton failed to prove that she also was named.<sup>81</sup> It was further established that copyright infringement ('altered copying') existed if B took A's story and wrote a play based on it but did not have a licence from A to do so.<sup>82</sup> The court held that Miss Jones had indeed used a significant part of the draft in the 'altered copying' sense, but not in the 'language copying' sense. She accepted that this was true and actually quite extensive. The court, however, reject Miss Brighton's claim stating that she had given Miss Jones an implied open-ended licence to use the work.<sup>83</sup>

The court then explored the claim of joint authorship. Joint authorship under s 10(1) requires 'collaboration ... in which the contribution of each author is not distinct from that of the other author or authors.'<sup>84</sup> Miss Brighton's case was that this provision applied to the manner in which rehearsals had proceeded. The court went on to review the case law required: (i) a person claiming joint authorship needed to have made a significant contribution to the creation of the work;<sup>85</sup> (ii) the contribution had to be a contribution towards the creation of the work;<sup>86</sup> and (iii) a person can become a joint author without putting pen to paper, so long as someone else has effectively written what that person has created.<sup>87</sup>

#### e. Computer Generated Works

The concept of a computer-generated work is specifically referenced in British law. "In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken."<sup>88</sup> "Computer-generated," in relation to a work, means that "the work is generated by computer in circumstances such that there is no human author of the work."<sup>89</sup> This provision in the Act was created to reflect that fact that in an increasingly computerised society a growing number of works may fall outside copyright as no human author is directly responsible for the creation of the work.<sup>90</sup> As with 'computer program' the term 'computer-generated' is not defined further.

However in the case of *Express Newspapers v Liverpool Daily Post & Echo*, the work under consideration was seen to fall within the scope of computer-generated.<sup>91</sup> Here, a

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<sup>78</sup> Russ VerSteeg, *Defining 'Author' for Purposes of Copyright* 45 Am. U.L. Rev. 1323 (1996); see also, Laura Lape, *A Narrow View of Creative Cooperation: The Current State of Joint Work Doctrine*, Albany Law Review (Fall, 1997); see also, Roberta Rosenthal Kwall, *Fame*, 73 Ind. L.J. 1 (1997)

<sup>79</sup> *Brighton and another v Jones* [2004] EWHC 1157

<sup>80</sup> CDPA ss 9, 10 and 104(2)

<sup>81</sup> *Brighton* at 1158

<sup>82</sup> *Designers Guild Ltd v Russell Williams (Textiles) Ltd* [2000] 1 WLR 2416 at 2422H and 2431D; *Ravenscroft v Herbert* [1980] RPC 193; and *Harman Pictures NV v Osborne* [1967] 1 WLR 723

<sup>83</sup> *Brighton*, *supra*.

<sup>84</sup> CDPA s 10(1)

<sup>85</sup> *Robin Ray v Classic FM plc* [1998] FSR 622

<sup>86</sup> *Fylde Microsystems Ltd v Key Radio Systems Ltd* [1998] FSR 449

<sup>87</sup> *Cala Homes (South) Ltd v Alfred McAlpine Homes East Ltd* [1995] FSR 818

<sup>88</sup> CDPA s 9(3)

<sup>89</sup> CDPA s178

<sup>90</sup> Millard, C. (2002). 'Copyright', In *Computer Law* (Eds, Reed, C. and Angel, J) Oxford: Oxford University Press

<sup>91</sup> [1985] 1 WLR 1089

computer program was used to generate unique five letter sequences which were printed on 22 million cards as part of a competition called Millionaire of the Month. Council for the defence argued that as there was no human author, copyright did not subsist – hence the defendant was free to publish the winning sequence in their newspaper.<sup>92</sup> Justice Whitford defined the role of the computer as instrumental, saying “The computer was no more than a tool” and rejected the defence argument stating “it would be to suggest that, if you write your work with a pen, it is the pen which is the author of the work rather than the person who drives the pen.”<sup>93</sup> In the ruling the author of the work was adjudged to be the programmer.<sup>94</sup>

*Express v Liverpool Daily Post* establishes that in practice copyright can subsist in computer-generated works under British law. Moreover the case seems to suggest that a work is computer-generated when the computer is in sense acting on its own to produce the actual works. In this case, an algorithm was used to select each of the five letter sequences rather than a human making any decision or creative act in each case. Most relevant to the matter at hand, the ruling seems to interpret “arrangements necessary for the creation of the work” as the use of a computer program, as opposed to the creation of that program. While Justice Whitford’s pen analogy supports this reading of the Act (i.e. it is the user of the pen not the designer or maker of the pen that is the author), the ruling is slightly ambiguous as the person adjudged to be the author was both the user of the program and the programmer.

In contrast, American laws lack the categories provided under British law. Hence each option for authorship (user, developer-publisher, user and developer-publisher, computer or no one) has to be examined individually on the basis of case law.

#### **f. Derivative Works**

Platform providers are not always keen to concede that contributors are joint authors. Instead, they prefer to classify any contributions as a potentially-infringing derivative work. To constitute a derivative work, “the infringing work must incorporate in some form a portion of the copyrighted work.”<sup>95</sup> In addition, the infringing work must be substantially similar to the copyrighted work.<sup>96</sup> The clearest example of this issue is seen in interactive multiplayer online games. “Even if a player did not use items already created by the game company but modified them in a wholly new way, the resulting works would at best be unauthorized derivative works and hence unprotectable by copyright. . . .”<sup>97</sup>

In many instances, computer game software manufacturers encourage the development of ‘add-on’ software so as to make their products more attractive to users and to build larger networks of users. They have become wiki environments without the underlying wiki culture. The case that supports this position is not directly on point. In *Micro Star v Formgen, Inc.*, the Ninth Circuit classified user-created levels for *Duke Nukem 3D*, a pioneering first-person game released in 1996, when sold in bulk by Micro Star to be infringing derivative works.<sup>98</sup> Judge Kozinski held that the user-created levels were derivative works of the original story. “A copyright holder holds the rights to create sequels . . . and the stories in the [files containing the user-level information] are surely sequels, telling new (though somewhat competitive) tales of Duke’s fabulous adventures.”<sup>99</sup> The Court further held that because

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<sup>92</sup> Id.

<sup>93</sup> Id.

<sup>94</sup> Id.

<sup>95</sup> *Litchfield v Spielberg*, 736 F.2d 1352, 1357 (9<sup>th</sup> Cir. 1984), cert. denied, 470 U.S. 1052 (1985)

<sup>96</sup> Id.

<sup>97</sup> E. Gourvitz, of Fross Zelnick Lehrman & Zissu quoted in *Virtual Gaming Environments Test Boundaries of Intellectual Property Law*, Panellists Say, 11 Electronic Comm. & L. Rep. (BNA) 143 (2006)

<sup>98</sup> 154 F.3d 1107 (1998)

<sup>99</sup> Id. citing *Trust Co. Bank v MGM/UA Entm’t Co.*, 772 F.2d 740 (11<sup>th</sup> Cir. 1985)

Micro Star's distribution of the derivative works failed to qualify as fair use, then the implied license of Formgen which was given to individual people did not apply to Micro Star. Formgen specifically limited any license by including a written licence that states, "Any new levels the people create 'must be offered [to others] solely for free.'"<sup>100</sup> Micro Star went too far when it collected and commercially distributed these levels.

It is unfortunate that Judge Kozinski did not consider that the user-created levels as joint works but relied upon the case regarding sequels. However, the cases are distinguishable in that the *Trust Company* case is missing an important element which was clearly present in the *Micro Star* case. "The distinction [between a derivative work and a joint work] lies in the intent of each contributing author at the time his contribution is written."<sup>101</sup> In *Trust Company*, the original author conveyed her intent that no sequels were to be written. Margaret Mitchell, author of *Gone with the Wind*, was adamant that her story was complete as written. "Ms. Mitchell was opposed to any effort to carry on the story of Rhett and Scarlett beyond the end of the novel, primarily because she believed that any resolution of what happened to Scarlett and Rhett would undermine the integrity of the original story."<sup>102</sup> MGM tried to argue that Ms. Mitchell and her heirs contractually conveyed sequel rights to the movie studio.<sup>103</sup> Ms. Mitchell's intent was among other things, a critical element in the Court's affirmation of the ruling against MGM. The author's intent in *Trust Company* is in sharp contrast to the *Duke Nukem* scenario where Formgen, by providing the means and encouragement, intended that people would build new levels that would act as 'sequels' to the game.

On the other hand, it was held in *Lewis Galoob Toys, Inc. v Nintendo of American, Inc.* that the Game Genie device and program manufactured by Galoob which allows the player to alter up to three features of a Nintendo game is not an infringing derivative work.<sup>104</sup> The Game Genie is inserted between the game cartridge and the Nintendo Entertainment System which then block the value for single data bytes sent by the cartridge to the system. It does not alter the data stored in the game cartridge. Its effects are temporary.<sup>105</sup> The court concluded that "even if the audiovisual displays created by the Game Genie are derivative works, Galoob is not liable because the displays are a fair use of Nintendo's copyrighted displays."<sup>106</sup> "The doctrine of fair use allows a holder of the privilege to use copyrighted material in a reasonable manner without the consent of the copyright owner."<sup>107</sup> Further, "an attempt to monopolize the market by making it impossible for others to compete runs counter to the statutory purpose of promoting creative expression and cannot constitute a strong equitable basis for invocation of the fair use doctrine."<sup>108</sup>

As seen in the United Kingdom, a computer program is protected as a literary work with all the provisions attached to it. Here, the concern is with the making of an adaptation. An adaptation is defined as an arrangement or altered version of the program or a translation of it.<sup>109</sup> For computer programs, a translation includes: "... a version of the program in which it is converted into or out of a computer language or code or into a different computer

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<sup>100</sup> Id.

<sup>101</sup> Chisum & Jacobs, 1999); *Weissmann v Freeman*, 868 F.2d 1313, 10 U.S. P.Q. 2 1014 (2<sup>nd</sup> Cir. 1989)

<sup>102</sup> *Trust Co. Bank* at 742

<sup>103</sup> Id.

<sup>104</sup> 964 F.2d 965 (9<sup>th</sup> Cir. 1992)

<sup>105</sup> Id.

<sup>106</sup> Id.

<sup>107</sup> *Narell v Freeman*, 872 F.2d 907 (9<sup>th</sup> Cir. 1989)

<sup>108</sup> *Sega Enterprises Ltd. v Accolade, Inc.*, 977 F.2d 1510 (9<sup>th</sup> Cir. 1992)

<sup>109</sup> CDPA s21(3)(a)(b)

language or code.”<sup>110</sup> There is also the fair dealing defence of decompilation.<sup>111</sup> A lawful user of a computer programme may copy it or adapt it if that is necessary for his lawful use. This would be a difficult defence for a virtual world resident to use in the United Kingdom. The interfaces of the computer programme for the world is already known and available. It would be a matter of contract as to what use of it could be made. In the United States, the fair use defence would have more scope.

The heart of wiki environments’ appeal lies in their interactive nature. The fact that the contributor gets to engage within the environment and control the environment rather than just sit passively and watch is the difference between traditional audiovisual works and these new derivative works. The interactive nature of the audiovisual work comprising the wiki’s copyright is relevant because they are a medium which presupposes and encourages some amount of creative, transformative input from the contributor.

### **g. Transformative Works**

A final major way in which a copyright could possibly subsist is by the contributor using the wiki technology in an unanticipated expressive way in a ‘meta’ creative process. For example, the contributor uses the wiki engine, graphics, or other elements to create a new expression which is no longer a solely an entry. An example of this is *Red v Blue*.<sup>112</sup> These are a series of short films entirely created within the videogame *Halo* by recording in-game actions and their actions.<sup>113</sup> Think of it as using modified or even original chess pieces to stage a play by Shakespeare then filming it and releasing it on DVD. Another is example is the United States Marines’ use of a modded version of the game *Doom* as a way to train their soldiers.<sup>114</sup> This last type of appropriated use seems to fall most closely in line with the rationale of protected artistic expression embodied in the case of *Mattel v MCA* in which the protections of a copyrighted work are balanced against the social value of transformative fair use of that copyrighted work.<sup>115</sup>

The difficulty lies in drawing a line within the twilight overlap of the derivative market entitlements secured to copyright holders under 17 U.S.C. §106(2) (2006) and the transformative fair uses protected and fostered in the “breathing space” created by §107.<sup>116</sup> To a certain extent, this may simply reduce to a policy judgment about how far the penumbra of exploitative entitlement of a given work need extend in order “[t]o promote the Progress of Science and useful Arts,” while not “stifling the very creativity which that law is designed to foster.”<sup>117</sup> The open-ended formulation of the fair use doctrine concedes that this line will never be bright, but can still be drawn with consistency in similar factual scenarios.

## **3.2 Legal Tools - Licenses**

Open source software developers are faced with the dilemma of openly sharing their intellectual property and prevent others from claiming proprietary rights from the code they freely shared to the public? Intellectual Property rights licensing, ironically, is the route by

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<sup>110</sup> CDPA s21(4)

<sup>111</sup> CDPA s50B

<sup>112</sup> Rooster Teeth (2007) *Red v Blue* at <http://rvb.roosterteeth.com/home.php>

<sup>113</sup> These videos have been release for sale as DVD compilations, and full clips are available at <http://rvb.roosterteeth.com/home.php>.

<sup>114</sup> Robert Riddell, *Doom Goes to War: The Marines are Looking for a Few Good Games*, *Wired* (1997) at [http://www.wired.com/wired/archive/5.04/ff\\_doom\\_pr.html](http://www.wired.com/wired/archive/5.04/ff_doom_pr.html)

<sup>115</sup> 296 F.3d 894 (9<sup>th</sup> Cir. 2002)

<sup>116</sup> *Campbell v Acuff-Rose Music, Inc.*, 510 U.S. 569 (1994)

<sup>117</sup> *Id.*

which open software developers have chosen to regulate their free code in cyberspace. An open-source license is thus a set of redistribution policies that a set of developers can agree on before contributing to a common project. Open Source software licensing comes with a confusing variety of terms and condition and understanding them and the implications involved with using them can be overwhelming.

The choice of an Open Source license becomes much more difficult when there are special issues and special concerns. In most cases, anyone wanting to release software under an Open Source license must spend considerable time familiarizing themselves with the licenses. They must understand their strengths and weaknesses for the particular situation and determine whether to release under an existing Open Source license is acceptable. An important aspect of the Open Source movement and Open Source licenses is that since a developer is relying on a community of developers to work on an Open Source project, a developer will want to provide them with incentive to work by giving them an understandable and attractive license to work under. Clearly, Open Source developers are going to be more comfortable working on a standard known license than trying to figure out the nuances of a customized license agreement for a particular project.

Many types of licensing govern collaborative communities such as the Wikis. In general, they are classified as CopyLeft, Non-copylefted , Creative Commons and Public Domain.

### 3.2.1 CopyLeft and the GNU

Copyleft is a play on the word copyright to describe the application of copyright law to permit the free creation of derivative works but requiring that such works be redistributable under the same terms (i.e., the same license) as the original work. One of the most commonly used copyleft license is the GNU General Public License.

Richard Stallman's GNU General Public License has been described as a manifesto as well as a license.<sup>118</sup> The strong language proclaims the freedom of software and the copyleft requirement that all derivative works remain free too. As such, the GPL and its family of licenses have been controversial for both Open Source and commercial developers. Those who want to make their derivative works private or subject to a standard commercial license are particularly dismayed.

In its preamble, the GPL talks about software freedom in the following way: “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 of its users.”<sup>119</sup> The fascinating technique for doing so is to place restrictions on the use of the licensed software that are different from traditional restrictions in standard commercial licenses. As the preamble says, “to protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender these rights.”<sup>120</sup> The preamble also emphasizes that software under the GPL has no warranty. Any patents must be licensed for everyone's free use or not licensed at all. The GPL covers specifically the rights to copy, distribute and modify the software.<sup>121</sup> The GPL is not an exclusive license. The copyright owner retains the right to

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<sup>118</sup> Bruce Perens, ‘The Open Source Definition’ in *Open Sources: Voices From the Open Source Revolution*, Chris DiBona et al., eds. (Sebastopol, CA: O’Reilly & Assoc., 2001)

<sup>119</sup> In simplest terms, the general public licenses are: “Designed to make sure that you have the freedom to distribute copies of free software (and charge for the 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.” GNU License, Preamble, *supra*.

<sup>120</sup> Id.

<sup>121</sup> Kennedy, *supra*.

violate his own license as well as be able to license the original program under a commercial or another type of license. This right does not apply to works of others later incorporated into the program.<sup>122</sup> To a limited extent, authors using the GPL have assigned their copyright ownership to the Free Software Foundation so that the Free Software Foundation holds all copyright interests in a program and centralizing ownership in a single entity.<sup>123</sup> As such, Open Source software is developed under a community model.

The license has two (2) versions: the GNU General Public License (GPL) and the GNU General Public License version 3.0 (GPLv3). The GNU allows everyone to make changes or extend the source code and redistribute it as long as the changes are clearly marked, and the modified work is also licensed under the GNU General Public License. The General Public License version 3.0 prohibits Tivoization, which is the practice of designing hardware to prevent modified software from running on it.

It is designed to yield results that are more uniform between countries despite variations in their copyright laws. GPLv3 also provides explicit protection to users and redistributors of a program against being sued for patent infringements by organizations connected with the program's development.<sup>124</sup>

The GPL is not suitable for researchers who want to commercialise their results because the GPL was designed to keep research results from transitioning to proprietary products. Furthermore, it prevents using proprietary implementations of the standards thus reducing the number of programs that can be built using a GPLed standard.

To conclude, the GPL follows the general provisions of the Open Source Definition. The important feature of the GPL is that it does not allow for GPL software to be mixed with non-GPL software without making the non-GPL software also subject to the terms of the GPL. The GPL does not allow for modifications to be taken private.<sup>125</sup> Under the GPL, source code must be released. More importantly, derivative works must also be released under the terms of the GPL. This has caused some pundits to refer to the “viral” aspect of the GPL, since it can “infect” other software with the “freedom” of the GPL.<sup>126</sup> If a licensee distributes modifications of a program, source code must be made available and there is to be no fee other than copying and similar charges.

### 3.2.2. Non- Copylefted Free Software

**Non- copylefted** free software comes from the author with permission to redistribute and modify, and also to add additional restrictions to it. If a program is free but not copylefted, then some copies or modified versions may not be free at all. A software company can compile the program, with or without modifications, and distribute the executable file as a proprietary software product. The most popular non-copylefted free software license is the BSD.<sup>127</sup>

The BSD license was fashioned at the University of California, Berkley during development of the BSD UNIX operating system.<sup>128</sup> The BSD license has similar features to the GPL; for

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<sup>122</sup> Id.

<sup>123</sup> Eric S. Raymond, *The Cathedral and The Bazaar*, ‘Chapter 2: On Not Reinventing the Wheel’ (Sebastopol, CA: O’Reilly & Assoc., 2001)

<sup>124</sup> <http://www.answers.com/topic/gnu-general-public-license>

<sup>125</sup> Id

<sup>126</sup> Jim Hamerly et al., ‘Freeing the Source: The Story of Mozilla’ in *Open Sources: Voices From the Open Source Revolution*, Chris DiBona et al., eds. (Sebastopol, CA: O’Reilly & Assoc., 2001)

<sup>127</sup> <http://www.gnu.org/philosophy/bsd.html>

<sup>128</sup> West, *supra*.

example, attribution, a freedom to modify, and a lack of restrictions on commercial applications.<sup>129</sup> Nevertheless, the two licenses differ on one key point: only the GPL mandates that licensees share subsequent changes with the original licensor.<sup>130</sup> The BSD licenses are generally considered the least restrictive of the Open Source licenses.<sup>131</sup> Under the BSD licenses, distribution of source code is permitted, but not mandated for derivative works. As a result, programs under the BSD licenses can be combined with proprietary software. BSD licenses are much simpler as they do not resemble standard commercial software licenses drafted by lawyers. They allow for a redistribution and use of source code and object code with or without modification and allow the licensee to mix closed source software with open source software without the GNU GPL's limits on integration. The only condition being that the redistribution of source code retains required copyright and other notices and the disclaimer of warranties and limitation of liability clauses.<sup>132</sup> The original BSD license contained attribution requirements, including mandatory attribution, such as an acknowledgment of the originator of the licensed program for FreeBSD, the University of California and Apache. Some found this requirement onerous.<sup>133</sup>

Recent revisions have eliminated the most burdensome aspects of these requirements, including the problematic advertising clause.<sup>134</sup> Nonetheless, licensees must ensure compliance with the BSD license terms, particularly the requirement for appropriate copyright and permission notices. This is important when there is code from older versions of the BSD Licenses.

The BSD licenses are considered to be more "free" than the GPL. In contrast to the GPL, they permit developers to release derivative works under whatever license they prefer, including licenses without the same terms as the BSD license applicable to the original code.<sup>135</sup> In other words, the BSD licenses do not contain copyleft terms. This stance has made the BSD type of licenses more attractive to commercial developers. The BSD licenses permit licensees to do nearly anything they wish with the source code, subject to the specific requirement of the license. The BSD licenses illustrate an important aspect of the Open Source definition, namely that copyleft is not a requirement under the Open Source Definition. Copyleft restrictions are usually only found in the GPL types of licenses.<sup>136</sup>

Since the BSD license does not come with the legal complexity of the GPL licenses, it allows developers and companies to spend their time creating and promoting good code rather than worrying if that code violates licensing

### 3.2.3 Public Domain: No Rights Reserved

The term indicates that these materials are therefore "public property", and available for anyone to use for any purpose. There are no legal restrictions on its use. Copyrighted works enter the public domain only when copyright terms expire. Since copyright is automatic, if the right holder wants to disclaim his rights in his copyrighted work, he must make an unequivocal language acknowledging that he is giving up *all* rights in the work **and** allowing everyone to do whatever they want with it. However, if the software cause harm, the author

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<sup>129</sup> Id.

<sup>130</sup> Id.

<sup>131</sup> Perens, *supra.*; Raymond, *supra.*

<sup>132</sup> Raymond, *supra.*

<sup>133</sup> Id.

<sup>134</sup> See Free Software Foundation, *Various Licenses and Comments About Them*, at <http://www.gnu.org/philosophy/license-list.html>

<sup>135</sup> Kennedy, *supra.*

<sup>136</sup> Id.

can still be liable. The users of the software are free to make changes to the software and claim copyright.

### 3.2.4 Creative Commons

The Creative Commons licensing system offers a set of standardised and automated licences that authors can affix to their work in order to indicate under which conditions the work may be used.<sup>137</sup> There are 6 Creative Commons licenses available: and creators can choose a set of conditions they wish to apply to their work.

- Attribution. (*cc by*) This license authorizes others to copy, distribute, display and perform the copyrighted work - and derivative works based upon it — but only if they give credit the way the authors request.
- Attribution share alike. (*cc by-sa*) The license allows others to distribute derivative works only under a license identical to the license that governs the author's work.
- Attribution No Derivatives. (*cc by-nd*) This license allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to the author.
- Attribution Non-Commercial (*cc by-nc*). This license lets others remix, tweak, and build upon the author's work non-commercially, and although their new works must also acknowledge the author and be non-commercial, they don't have to license their derivative works on the same terms.
- Attribution Non-Commercial Share Alike (*cc by-nc-sa*). This license lets others remix, tweak, and build upon the author's work non-commercially, as long as they credit the author and license their new creations under the identical terms. Others can download and redistribute the work just like the *by-nc-nd* license, but they can also translate, make remixes, and produce new stories based on the author's work. All new work based on the author will carry the same license, so any derivatives will also be non-commercial in nature.
- Attribution Non-Commercial No Derivatives (*cc by-nc-nd*). This license is the most restrictive of our six main licenses, allowing redistribution. This license is often called the “free advertising” license because it allows others to download your works and share them with others as long as they mention you and link back to you, but they can't change them in any way or use them commercially.

The Creative Commons' appeal to scholars lies in its promise to reduce transaction costs for obtaining works for educational purposes, both for reproduction for classroom access and for derivative use to develop works to enhance one's discipline.<sup>138</sup> “Once the author has chosen between the six basic licenses, her choice is translated into a license that appears in three forms. The first is called the Legal Code. The Legal Code is a lengthy contract with numerous detailed provisions setting forth the rights and obligations of the parties. This is license that

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<sup>137</sup> [http://www.ivir.nl/publications/guibault/KnowRight08\\_Paper.pdf](http://www.ivir.nl/publications/guibault/KnowRight08_Paper.pdf)

<sup>138</sup> Lynn M. Forsythe & Deborah J. Kemp, *Creative Commons: For the Common Good?* 30 U. La Verne L. Rev. 346 (2009)

can be legally enforced and meets the necessary requirements to be valid under the applicable national laws and regulations.

Normally the first thing a user will encounter when planning to use a Creative Commons work will be the 'Commons Deeds' or the 'Human-Readable License.' This is a simple one-page text summarizing the basic freedoms and obligations that the license confers on the user. This has no legal value. The last form of the license is technical. The so-called 'Digital Code' provides the necessary digital elements to affix the license to the work when the work is distributed online."<sup>139</sup>

Creative Commons professes to be about the author's rights to control the dissemination of their work. "A closer examination of the ideology of Creative Commons reveals that it is about empowering users to get free ... access to works. It thus illustrates the post-modern idea of consumerism, which is that access to commodities should be easy and unencumbered by legal barriers." Hence, it is really about **copyleft**, the rights of users to use and consume works.<sup>140</sup> Creative Commons has also attempted to provide means for a copyright owner to limit their copyright ownership to a shorter length of time, as well as a means to relinquish ownership rights entirely. Under its "Founders' Copyright"... the copyright owner enters a contract with Creative Commons to sell her copyright for one dollar. On its part, Creative Commons grants back to the owner exclusive rights to control the work for a term of fourteen or twenty-eight years, and agrees to release work into the public domain at the expiration of the term, as well as list the work in a registry.<sup>141</sup>

Originally, the Creative Commons was based on GPL licenses intended for programming code. In attempting to achieve a standardised system that fits all, it failed to cover the depth of the licensing needs of the different creative disciplines.

Creative Commons works to "port" the core Creative Commons Licenses to different copyright legislations around the world. The porting process involves both linguistically translating the licenses and legally adapting them to particular jurisdictions. To date, the Creative Commons have completed the porting process and developed licenses for 53 jurisdictions. The process of developing licenses and discussing them are still in progress for 9 jurisdictions.<sup>142</sup> The result, however, is that the legal effect of CC0 will likely differ depending on the jurisdiction, especially since issues of enforceability and differences between legal systems still have to be solved.<sup>143</sup> For example, versions 1.0, 2.0 and 2.5 of the 'unported' licence (previously known as the 'generic' licence) were based on the provisions of the U.S. Copyright Act while version 3.0 of the 'unported' licenses is instead based on the provisions of the Conventions of Berne and Rome, giving rise to the possibility that the licenses will not align perfectly to a particular jurisdiction's laws.<sup>144</sup>

Moreover, cultural and language differences will certainly appear during the adaptation and translation of the language – resulting in discrepancies in the interpretation.

In spite of the licenses have been modified several times to clarify the language of the license, some of the terms have remained ambiguous. In Attribution-NonCommercial-Share

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<sup>139</sup> Severine Dusollier, Print Symposium: *Contract Options for Individual Artists: Master's Tools v. The Master's House: Creative Commons v. Copyright*, 29 Colum. J.L. & Arts 271, 276-77 (2006). Dusollier is also the project leader for Creative Commons in Belgium. Id. at 271.

<sup>140</sup> Adrienne K. Goss, Note, *Codifying a Commons: Copyright, Copyleft, and the Creative Commons Project*, 82 Chi.-Kent L. Rev. 963, 979 (2007).

<sup>141</sup> Id. at 980. See generally Creative Commons.org, <http://creativecommons.org/> (announcing the Founders' Copyright).

<sup>142</sup> <http://creativecommons.org/international/>

<sup>143</sup> D. Peter, 'CC0 Beta/Discussion Draft 3', 29 August 2008, <http://creativecommons.org/weblog/entry/9071>

<sup>144</sup> Guibault, L. (Creative Commons: Struggling to keep it simple." IVIR. Available at [http://www.ivir.nl/publications/guibault/KnowRight08\\_Paper.pdf](http://www.ivir.nl/publications/guibault/KnowRight08_Paper.pdf)

*Alike 2.0*, one is free to copy, transmit and adapt the work provided one attributes the work in the manner specified by the author/licensor and to share alike, that is, if you alter, transform, or build upon the work, you may distribute the resulting work only under the same or similar license to this one. However, the work may not be used for commercial purpose. But what is “commercial?” The issue of the “non-commercial” license has been one of the major sticking points for many with Creative Commons. National courts may interpret the term differently.

Finally, even though the CC remains popular, it is still not simple enough for most users so that the license is often not correctly used. If the typical user does not understand the legal code that supports CC’s licenses, then he is using a legal instrument with little understanding of what that instrument does and how it affects the balance of rights between the creator and the user.<sup>145</sup>

### 3.2.5 European Public License

Existing licenses originating from the United States are based on American law. This has proven incompatible with the laws of other countries. In 2009, the European Union approved the European Union Public License. The European Union Public License (EURL) is the first European Free/Open Source Software (F/OSS) licence with emphasis placed on the universality of the license. The (EURL) contains some important distinctions that set it apart from other popular open source licenses: it is available in 22 official languages of the European Union. It can be used by anyone for software distribution. It is compatible by design with a number of OSI-approved licenses. The license was developed to conform to the copyright law of the 27 member states of the European Union unlike most existing licenses originating from the United States, which are based only on American law. To be valid in all Member States, limitations of liability or warranty had to be precise, and not formulated “to the extent allowed by the law” as in most licenses designed with the legal environment of the United States in mind. Although the EURL authorizes covered works to be re-released under the following licenses - GNU General Public License (GPL) v. 2; Open Software License (OSL) v. 2.1, v. 3.0; Common Public License v. 1.0; Eclipse Public License v. 1.0; CeCILL v. 2.0. It is incompatible *with* the GNU General Public License version 3.0 (GPL v3). The latter cannot be merged with any code under the EURL list of compatible licenses. When works are created under GPLv3, all subsequent works will be licensed under it as well. In contrast, works licensed under the EURL v1.1 can be re-licensed under any of the different licenses on their compatibility list.

The EURL is unique in its encouragement of interoperability, freedom, and lack of license lock-in upon redistribution.

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In the countries where moral rights apply, the Licensor waives his right to exercise his moral right to the extent allowed by law in order to make effective the licence of the economic rights here above listed. The Licensor also grants to the Licensee royalty-free, non exclusive usage

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<sup>145</sup> Copycense Editorial.(Aug.31,2009) Retrieved at [http://www.copycense.com/2009/08/is\\_creative\\_commons\\_good\\_for\\_copyright.html](http://www.copycense.com/2009/08/is_creative_commons_good_for_copyright.html)

rights to any patents held by the Licensor, to the extent necessary to make use of the rights granted on the Work under the Licence. The Licensor may provide the Work either in its Source Code form, or as Executable Code. The grant of the rights is subject to some restrictions and obligations imposed on the Licensee:

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- **Copyleft clause:** If the Licensee distributes and/or communicates copies of the Original Works or Derivative Works based upon the Original Work, this Distribution and/or Communication will be done under the terms of this Licence or of a later version of this Licence unless the Original Work is expressly distributed only under this version of the Licence.
- **Compatibility clause:** If the Licensee Distributes and/or Communicates Derivative Works or copies thereof based upon both the Original Work and another work licensed under a Compatible Licence, this Distribution and/or Communication can be done under the terms of this Compatible Licence.
- **Provision of Source Code:** When distributing and/or communicating copies of the Work, the Licensee will provide a machine-readable copy of the Source Code or indicate a repository where this Source will be easily and freely available for as long as the Licensee continues to distribute and/or communicate the Work.
- **Legal Protection:** The License does not grant permission to use the trade names, trademarks, service marks, or names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the copyright notice.

Finally, the EUPL contains the following Disclaimers:

#### **7. Disclaimer of Warranty**

The Work is a work in progress, which is continuously improved by numerous contributors. It is not a finished work and may therefore contain defects or “bugs” inherent to this type of software development.

For the above reason, the Work is provided under the Licence on an “as is” basis and without warranties of any kind concerning the Work, including without limitation merchantability, fitness for a particular purpose, absence of defects or errors, accuracy, non-infringement of intellectual property rights other than copyright as stated in Article 6 of this Licence.

This disclaimer of warranty is an essential part of the Licence and a condition for the grant of any rights to the Work.

#### **9. Additional agreements**

While distributing the Original Work or Derivative Works, You may choose to conclude an additional agreement to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or services consistent with this Licence. However, in accepting such obligations, You may act only on your own behalf and on your sole responsibility, not on behalf of the original Licensor or any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against such Contributor by the fact.

## **4.0 Enforcement of Copyright and Licenses**

On a practical note, if there is a case of infringement or a violation of a particular license, then who will have the right to enforce the copyright and the license terms? Many Open Source compilations contain the work of many copyright owners. Each of these copyright owners has applied an Open Source license to his work. The question becomes then, must all copyright owners be found and joined in the action or will an individual copyright owner be able to bring the action on behalf of all the other owners? The answer to that question is not yet clear. The Open Source licenses that require any distribution to include the names of authors and the dates of revisions will be helpful, but large, practical questions remain about who may enforce the licenses.<sup>146</sup>

The tactics of the Free Software Foundation in resolving this issue are interesting as it encourages authors to agree to assign copyright ownership to the Free Software Foundation. Then the Free Software Foundation can act itself to enforce licenses and take actions in the event of infringement without the need to track down all copyright owners. However, this is an unusual move in the Open Source community.<sup>147</sup>

*Jacobsen v Katzer* has helped to better define the legal boundaries of open source licenses by holding that the attribution and modification transparency requirements in open source licenses create enforceable economic rights in the granting of the license.<sup>148</sup>

Jacobsen had developed JMRI, the Java Model Railroad Interface project, which was governed by the Artistic License. Katzer, the owner of a proprietary vendor of model train software called KAMIND associates, incorporated the code written by Jacobsen into his software, and deleted the copyright notices included in that software in the process.<sup>149</sup>

One of the most important questions involved whether a developer of software that made its code available for free can collect damages for copyright infringement. Absent the ability to collect damages, as a practical matter if a F/OSS project cannot collect damages, there would be little to prevent commercial software vendors from incorporating FOSS software into their proprietary products in violation of FOSS license terms.

Katzer had argued that violating the distribution rules for an open source project doesn't necessarily remove the right to distribute the software. The U.S. Federal Circuit Court of Appeals ruled in favour of Jacobsen and said that "copyright holders who engage in open source licensing have the right to control the modification and distribution of copyrighted material." The case was then remanded to the District Court, which found in favour of Jacobsen on three key points:<sup>150</sup>

1. The code in question was sufficiently original to be entitled to copyright protection.
2. The removal of the copyright and authorship data contained in the pirated code was a violation of the Digital Millennium Copyright Act, thus providing a basis for suit for that action in violation of the JMRI license.

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<sup>146</sup> A good discussion of Open Source copyright issues may be found at Potter, *Opening Up to Open Source*, 6 Rich. J.L. & Tech. 24 (2000). The Software Licensing Committee of the American Bar Association's Intellectual Property Section has issued a report called An Overview of "Open Source" Software Licenses, at <http://www.abanet.org/intelprop/opensource.html>. This report covers a number of copyright ownership issues and notes the potential difficulties in auditing the code base of an Open Source project because of the multiple means of introduction of infringing code.

<sup>147</sup> See Free Software Foundation, *Various Licenses and Comments About Them*, at <http://www.gnu.org/philosophy/license-list.html>

<sup>148</sup> 535 F.3d 1373, 1381, 87 U.S.P.Q.2d (BNA) 1836, 1841 (Fed. Cir. 2008).

<sup>149</sup> Id.

<sup>150</sup> Updegrove, A. (2010) A Big Victory for F/OSS: *Jacobsen v. Katzer* is Settled at <http://www.consortiuminfo.org/standardsblog/article.php?story=201002190850472>

3. While the JMRI Project made its code available for free, there was "evidence in the record attributing a monetary value for the actual work performed by the contributors to the JMRI project," thus laying the basis for monetary damages.

The Federal Circuit noted that money was traditionally exchanged for copyrighted material, but, even without a direct monetary transfer, the rights to attribution, modification, and distribution control were equally economically valuable.<sup>151</sup> Thus, since valuable rights were being exchanged, the conditions in the license were reasonable, enforceable, and more appropriately treated as a license rather than as a contract.<sup>152</sup> This is a landmark decision for open source licensing because it provides notice that the courts will recognize that an inherent economic transaction takes place when using an open source license even without paying a fee.<sup>153</sup> As the Federal Circuit stated, “[t]he choice to exact consideration in the form of compliance with the open source requirements of disclosure and explanation of changes, rather than as a dollar-denominated fee, is entitled to no less legal recognition.”<sup>154</sup>

On February 19, 2010, Katzer reached a settlement agreement with Jacobsen. The settlement documents show that Katzer will pay Jacobsen \$100,000 over 18 months, cease using the JMRI code, and not attempt to register domains using the JMRI name. The rulings in the case establish several important FOSS license terms and remedies for the first time in the U.S.: the right to prevent a developer’s copyright and authorship acknowledgements from being removed from their code, and the right to collect damages if the terms of the license are violated.

Another important new development that may have a major effect on the Open Source Licenses is the Uniform Computer Information Transactions Act (UCITA).<sup>155</sup> UCITA is a controversial new uniform law related to “computer information”.<sup>156</sup> The definition of “computer information” in UCITA is broad enough to bring the Open Source licenses under UCITA.<sup>157</sup> If UCITA does cover the Open Source licenses and Open Source software, there are important implications. UCITA is designed to provide default provisions for software licenses in the event there are gaps or silences.<sup>158</sup> Thus, if UCITA applies to an Open Source license, it may imply terms that are contrary to the intent of the authors. For example, it may imply terms relating to duration of the license, warranties and other restrictions.<sup>159</sup> On the other hand, UCITA takes a strong stance supporting the validity of shrinkwrap licenses.<sup>160</sup> Open Source licenses are a classic model of shrinkwrap license. Hence, UCITA appears to support the notion that this type of license is enforceable; and in turn, Open Source licenses themselves are enforceable.<sup>161</sup>

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<sup>151</sup> Id.

<sup>152</sup> Id.

<sup>153</sup> Id.

<sup>154</sup> Id.

<sup>155</sup> The text of the final version of UCITA and Official Comments may be found at UCITA Online, <http://www.ucitaonline.com/ucita.html>

<sup>156</sup> For an extensive discussion of UCITA and its practical implications, see Fendell & Kennedy, *UCITA is Coming!!! Part 1: Practical Analysis for Licensee's Counsel*, *Computer Law.*, July 2000, at 3; Fendell & Kennedy, *UCITA is Coming!!! Part 2: Practical Analysis for Licensors' Counsel*, *Computer Law.*, Aug. 2000, at 3

<sup>157</sup> Uniform Computer Information Transactions Act, Nat'l Conf. Of Commissioners on Uniform State Laws, § 102(a)(10), available at <http://www.law.upenn.edu/bll/ulc/ucita/ucitaFinal00.htm>

<sup>158</sup> Fendell & Kennedy, Part 1, *supra*.

<sup>159</sup> Id.

<sup>160</sup> Licenses provided without the opportunity to negotiate terms and which are not signed.

<sup>161</sup> Fendell & Kennedy, Part 2, *supra*.

## 5.0 Other Legal Issues

### 5.1 Competition Law

Open source code is generally free on the surface, but in reality, it comes with obligations which are enforceable by law. Aside from the potential liability for intellectual property infringement, the use of open software raises competition law issues.

In Italy, the Piedmont Regional Council passed a law on 'Pluralism of computer adoption and diffusion of free software and the portability of electronic documents in the public administration' on March 26, 2009 declaring that it will favour the use of free and open source software when choosing programs. Article 6, par. 2 states: " the Region, in the process of choosing computer programs to acquire, prefers free software and programs whose source code can be inspected by the licensee"

In addition, the law contains the following two (controversial provisions):<sup>162</sup>

Article 1, section 3:

“ transfer of Free Software is exempt from the provisions of Article 171-bis of Law n. 633 of April 22nd, 1941 (Protection of authors rights and other related rights), as replaced by Article 13 of Law n. 248, August 18th, 2000 .”

Article 3:

“Everybody has the right to develop, publish and use an original software compatible with the communication standards and "saving" formats of another software, even if the latter is proprietary. “

The Presidency of the Council of Ministers referred the law to the Constitutional Court. Saying that the Piedmont law violates competition and copyright law and infringes on the jurisdiction of the state.

On March the 23rd, 2010, the court ruled that that the preference for open source software does not breach the anti-competition law , saying:” *It is not understandable how the choice of a Public institution with regard to a feature, and not a product ... can be deemed as a breach of antitrust law.*” *The court pointed out that the concepts of Free software and software whose code can be inspected do not refer to a particular technology, brand or product, by they rather express a legal feature.*<sup>163</sup> This implied that free software conforms to the concept of technological neutrality.

However, the court struck down Articles 1 and Article 3 as they interfered with the Italian copyright law and the Italian Constitution.<sup>164</sup> Exempting the transfer of free software from the Protection of authors and other related rights (Art.1 of the Piedmont law) violate Article 111(1) of the Constitution because the competence to enact such law (legislative powers ) belongs to the state and not to the region. Article 3 breaches the state laws on copyright.

### 5.2 Liability for defects and harm

Poorly developed open source programs can cause damage and harm, especially in situations where therapists develop and share their own therapeutic programs which works for them, but

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<sup>162</sup> <http://opendotdotdot.blogspot.com/2010/03/italian-court-oks-preference-for-open.html>

<sup>163</sup> <http://opendotdotdot.blogspot.com/2010/03/italian-court-oks-preference-for-open.html>

<sup>164</sup> [http://www.senato.it/documenti/repository/istituzione/costituzione\\_inglese.pdf](http://www.senato.it/documenti/repository/istituzione/costituzione_inglese.pdf)

could be harmful to other clinics which adapt them. This opens a can of worms, especially when the use of the software causes physical injury and harm.

Open source licenses contain a liability disclaimer and a warranty exclusion clause. They do not contain the kinds of representations and warranties of quality or fitness for a particular purpose that commercial software vendors sometimes negotiate into agreements among themselves. For example, the BSD License contains the following clause:

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The take-it-or-leave-it licensing in which the user legally assents by clicking "I agree" or by using the software; outright denial of any form of warranty protection for users shifts to the user any and all liabilities for product failure as well as intellectual property infringement. However, the question still remains as to whether they are enforceable.

These disclaimers are actually ineffective against statutory liabilities- when they are not in conformity with consumer protection or product liability.

Tort liability arises for negligence and other forms of product liability. Software can cause both property damage and economic loss to businesses running that software. If you're physically injured, or your property is damaged, you can sue in tort.

In order to recover for negligence, a party must prove breach of duty against the developer for failing to act with reasonable care. Open source advocates argue that open-source licenses enable the community of users to inspect the code for flaws and to trade knowledge about such flaws. As such, a user has the opportunity to determine whether the software contains adequate safeguards against safety or security risks before using a free product for important work. Therefore they cannot claim that the developer breached their duty. The question to ask is, could the user be reasonably expected to have been able to evaluate the risks of using the application? One has to consider the fact that access to the source code does not mean that the user has as much knowledge as the developer.

According to Prof. Gerald Spindler, "the GPL clauses have absolutely no legal validity. Under the license, developers and distributors of open software are not liable for any problems with their products. The GPL avoids any wording that could imply liability. Such a license is simply unenforceable under German (see "Gesetz zur Regelung des Rechts der Allgemeinen Geschäftsbedingungen) , or even European Union law for that matter."<sup>165</sup> Under European Law an exclusion of liability clause is unenforceable and any product should match the "reasonable expectations for fitness of use" that the customer has. As soon as software is downloaded and offered in Germany, German consumer protection laws apply." In regard to the installation and maintenance of free software there is no difference to commercial software. Under the terms of the contract for work and services, the company or provider that

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<sup>165</sup> <http://www.infoworld.com/t/platforms/gpl-may-be-unenforceable-under-german-law-935>

installs or maintains the free software is liable for any damage it causes through negligence or intent.”<sup>166</sup>

But in open source, the question is who will be liable for the damage caused by a defect in an Open Source program, when multiple programmers contributed to the project?

It is not clear whether open source developers owe a duty to other open source software users. On the one hand, the danger is that software authors will stop developing open software if they lose the right to disclaimers. On the other hand, they should be obliged to put products that are fit for the purpose.

Furthermore, one can also argue that the licenses are standard contracts under the EU Directive on Unfair Terms in Consumer Contracts since the license 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. Terms 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 fall are unfair terms. Under common law, the courts may find the terms unconscionable.

Unlike the American origin open software licenses, the European Public License recognizes the incompatibility of the exclusion clauses with the EU laws on consumer protection and product liability. This is clearly stated in Article 8:

Except in the cases of wilful misconduct or damages directly caused to natural persons, the Licensor will in no event be liable for any direct or indirect, material or moral, damages of any kind, arising out of the Licence or of the use of the Work, including without limitation, damages for loss of goodwill, work stoppage, computer failure or malfunction, loss of data or any commercial damage, even if the Licensor has been advised of the possibility of such damage. However, the Licensor will be liable under statutory product liability laws as far such laws apply to the Work.

It is difficult to determine with any certainty whether open source software licenses will subject developers to tort liability. Addressing this dilemma, the Europe Commission proposed in 2009 to close the gaps in EU roles by extending the principles of consumer protection rules to cover licensing agreements of products like software downloaded for virus protection, games or other licensed content. Licensing should guarantee consumers the same basic rights as when they purchase a good: the right to get a product that works with fair commercial conditions.<sup>167</sup> The proposed directive will have the likely effect of boosting consumer protection. Open source developers will be obliged to ensure the security and efficacy of their products. Consumers of open-source software would have the opportunity to get errors fixed through the community and less likely to pursue direct recourse to liability.

## 6. Conclusion: Searching for Wikitopia

It is important to note that the copyright owner releasing software under an Open Source license is not granting an exclusive license. It is perfectly permissible for a copyright owner to release source code under an Open Source license and to release a proprietary version of the software under standard commercial licenses in order to make money. The difficulty will

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<sup>166</sup> <http://oss-broschuere.berlios.de/broschuere/broschuere-en.html#N4008>

<sup>167</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/702>

centre on the ability to use source code that is developed by the Open Source community as part of the proprietary version of the program.

Perhaps the most important of the notions that arise out of Open Source, the notion of copyleft, using licenses to protect freedom and a public interest approach to intellectual property, will continue to play an important part in the development of intellectual property law. There will be a place at the table not just for the protection of intellectual property rights but for the protection of the rights of the community to use intellectual property developed for the good of the community. The development of the Open Source movement, the Open Source licenses, the European Public License, the notions of copyleft and software freedom and the proposed EU directive extending the principle of consumer protection to licensing agreement will play a very important role in the development of the Internet and our approach to intellectual property law in the future.<sup>168</sup>

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<sup>168</sup> Kennedy, *supra*.