ELSI Guide to Licensing Project HealthDesign Work Product in the Public Interest

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The grant proposals accepted by the Robert Wood Johnson Foundation for Project HealthDesign state that the work product produced by the grantees will be made available as "open source." In intellectual property law, however, "open source" is a vague and sometimes disputed term. The purpose of this document is to sensitize grantees to their options regarding sharing their work with the public, whether as "open source" or under even more liberal terms.

Accepted grant proposals that contemplate inventing new devices and processes for creating, storing, sharing or organizing health records can become occasions for asserting intellectual property claims. (In contrast, under U.S. law, neither creating health records themselves nor keeping databases comprising compilations of health records directly raise intellectual property issues -- although maintaining and especially sharing records do raise a host of other ethical, legal, and privacy issues.) These intellectual property claims create licensing issues relating primarily to patents and copyrights, issues which are not resolved simply by saying they will be covered by "open source." The plethora of "open source" and related licensing options currently available present the creator of a product or a work with a very great range of choices as to how their work will be shared.

This ELSI guide outlines some of the major issues that all Robert Wood Johnson grantees should consider in order to maximize the public value of their work while retaining the degree of control they believe is required.

The key to sharing your work on the right terms is to choose the right license. This guide thus describes "open source" and related licensing options that are commonly used to achieve particular outcomes. **This is not legal advice. If you have specific questions about how these licenses apply to your particular circumstances, or which license is best for you, you are advised to consult a lawyer.**

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Important note: In what follows, this guide presumes that the "creator" of a work or product is a single person. In real life, however, this is often not the case: works are frequently produced in teams. These teams may have agreements among themselves that may define how rights to the end-product are assigned, and who gets to determine whether and how the creation is to be shared with the public. In order to avoid difficult disagreements, it is important for all members of the team to be in agreement as to who has these rights, or to all agree (ideally, in writing) as to how the ultimate creation will be licensed.

A further, and potentially significant, complication arises if team members are located in different academic institutions, or have materially different contractual relations with a single host institution. In considering some of the issues outlined below, every member of the team must consider whether they have entered into any agreements with third parties that might in any way encumber their contribution to the team effort.

I. A Quick Survey of the Four Types of Intellectual Property Law

Licensing your work product in way that makes it available to the public on terms that creators (and a creator's commercial partners and suppliers) are comfortable with is a surprisingly complex topic. Any creative project potentially intersects with four distinct sources of intellectual property law: patent, copyright, trademark and trade secret law. Each of these has its own issues and peculiarities.

A. Patent

A patent is a right to exclude others from producing an invention for a limited period of time. However, a valid patent is *not* a right to make, use, or sell an invention. Making, using or selling the invention may be subject to law or regulation or to other patents. What the patent gives the holder is the ability to *exclude* others from making, using or selling the invention.

In the U.S., patents are granted by the federal government in response to an application that ordinarily requires a significant amount of legal work to prepare properly. Nothing is patented by default, and indeed, if an inventor is not careful, an invention may pass into the public domain and become impossible to patent. European law generally provides that only patent applications filed before an invention has been made public can be valid. U.S. law gives a grace period in which an application for a U.S. patent can be filed -- one year from public disclosure. That one-year clock starts to run from the first of any of the following:

- any public use of the invention by the inventor,
- a sale of the invention,
- an offer to sell the invention,
- any description of the invention by the inventor in a published document -- including in an academic article.

Patent law is national (meaning that if one wishes to preserve one's rights internationally, one may need to file patents in multiple jurisdictions, a subject beyond the scope of this guide), although there are treaties that substantially harmonize international patent practices. United States law provides for three types of patent -- utility patents (which are what most people mean when they think of a patent), design patents, and plant patents. All patents give the owner of the patent the right to exclude others from making, using, or selling the claimed invention.

In the U.S., utility patents issued today enjoy a term of 20 years from the first U.S. filing date for the patent. Design patents have a term of 14 years; plant patents last 17 years. Whichever the relevant term of the protection, it is broader than copyright in that it prohibits not just copying but the production of even demonstrably independent parallel inventions. But patent protection is also much shorter in duration than that granted by copyright or trademark. Thus, creators often prefer to copyright things such as software, which arguably might either be copyrighted or patented.

Not everything is patentable. Determining whether something can be patented usually requires a visit to a patent lawyer. In general, however, U.S. law limits patents to "inventions" that pass all of the following tests:

1. The invention fits into one of the five "statutory classes" of patentable things:
    1. processes,
    2. machines,
    3. manufactures (that is, objects made by humans or machines),
    4. compositions of matter, and
    5. new uses of any of the above.
2. The invention must be "useful" and not merely theoretical.
3. The invention must be "novel", that is, it must be something that no one did before.
4. The invention must be "unobvious" to "a person having ordinary skill in the art to which said subject matter pertains".

Patents are public documents, so any invention patented is by definition not a trade secret, or any other kind of secret, although the means to produce it may be.

Further information on patents and their history is available at the U.S. Patent Office web site, http://www.uspto.gov/main/patents.htm.

B. **Copyright**

A copyright is the right to prevent others from making unlicensed copies of the whole or a substantial part of one's original work. A copyright extends to translations and other derivative works, but does not protect against parody or "fair use" (about which more below). In general, copyright protects the expression of facts or an idea, but not the facts or the idea itself. Also, and unlike some other countries, U.S. law does not provide for a "compilation copyright" protecting data bases collecting otherwise unprotected facts (e.g. a telephone book).

In the United States, an original work becomes protected by the copyright laws from the moment it is "fixed in a tangible medium". Thus, unlike patents, where the default is for an invention to pass into the public domain unless patented quickly, the default for a copyrighted work is to be protected even if it is not filed with the U.S. government.

A proper copyright notice is

1. the C in a circle symbol (©) or the word "copyright" or the abbreviation "Copr." and
2. the copyright date (the year the work, or part of it,[1] was first fixed in a tangible medium), and
3. the name of the copyright owner.
4. (Optionally) to fully protect moral rights in some countries the phrase "All Rights Reserved."

A copyright remains valid in many cases even if the work lacks a copyright notice.[2] Filing a copyright with the Register of Copyrights provides additional remedies for infringement, but is no longer required for basic copyright protection. Again unlike patents, a copyright application can be filed many years after the initial publication of a work, and still be eligible for a copyright registration. Again, unlike a patent, filing a copyright registration is fairly straightforward and for uncomplicated written works can be accomplished without a lawyer.

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[1]One can give a series of dates if the work was revised over a period of time, e.g. 1990, 2002, 2007. It would be unwise, however to give only the latest date if portions of the revised work were published earlier as in some cases this attempted resetting of the copyright clock has been used as a reason to invalidate the entire copyright.

[2]Under the Berne Convention, the absence of a copyright notice does not necessarily lead to the automatic loss of all copyright rights. It does not, however, follow from this that an author can place an incorrect copyright notice without any risk of harm flowing from the notice being incorrect. A defective copyright notice can in some cases harm the rights of an author.

Not every writing is copyrightable, but most are. Works not eligible for copyright include works containing no originality, and works not fixed in a tangible medium. However, the definition of what constitutes a 'tangible medium' is very broad and includes saving a document to a hard disk, DVD, CD, or a floppy disk as well as writing or printing it on paper.

In addition to open season on the ideas in a copyrighted work, it is legal to copy small portions of the actual expression under the doctrine of "fair use". The fair use doctrine originated to protect criticism, comment, news reporting, teaching, scholarship, and research, but also applies in other areas. Whether a given use is "fair use" depends very much on the circumstances. According to the U.S. copyright office, "There is no specific number of words, lines, or notes that may safely be taken without permission. Acknowledging the source of the copyrighted material does not substitute for obtaining permission." Among the factors usually considered in determining whether a reproduction is fair use are: the nature and character of the new use (commercial use being the least protected); the nature of the work (functional works get marginally less protection than poems); and the effect on the potential market for the original work.

One question always raised in fair use analysis is whether the portion copied is only a small fraction of the "work". Note, however, that what constitutes a "work" may be narrower than it seems. Each poem in a collection is a separate work for fair use purposes, and a similar argument likely applies to a single module in a software library.

Further information on copyrights is available from the United States Copyright Office web page, http://lcweb.loc.gov/copyright/.

C. **Trademark**

A trademark is a word, phrase, symbol or design, or a combination of words, phrases, symbols or designs, that identifies and distinguishes the source of the goods of one party from those of others. A service mark is just like a trademark, except that it identifies and distinguishes the source of a service rather than a product. Trademarks must commonly be affixed to the actual product and/or packaging. Since service marks refer to intangibles, they must be affixed to materials that define or accompany the provision of the service. For a good or service to be eligible for federal trade or service mark protection it must be in commerce -- a somewhat broad and technical restriction which includes things sold by non-profits and even some things given away for free.

There are three sources of trademark rights in the U.S.: federal registration, state registration, and the common law. Federal registrations requires the acceptance of an application by the U.S. Patent & Trademark Office (USPTO); state registration rules vary. Common law rights are acquired by using the mark in connection with the good or service

and do not require any registration -- however the rights acquired are circumscribed and subject to curtailment if someone else successfully registers their similar trademark later.[3]

Under U.S. trademark law, the R-in-a-circle symbol (®) may only be used in connection with a mark if that mark is federally registered: one where the USPTO has granted a registration in response to a written application by the trademark owner. Damages can accrue if this symbol is used improperly. In contrast, the TM and SM symbols may be used freely without respect to whether or not there is a federal trademark registration. If you are offering goods or services, you may freely use the TM or SM symbol to denote trademarks or service marks that you use to indicate the origin of your goods or services.

Creators intending to license their works in the public interest will not ordinarily want to go to the effort and expense of registering a trademark for their products. They will usually be concerned about trademarks in only two scenarios: (1) when their finished work or product incorporates or makes use of a product or service that is itself trademarked, or (2) if someone else attempts falsely to pass off a different product or service as being produced by or associated with the creator.

Using or incorporating a trademarked product or service. There is no legal bar to producing a product or work that incorporates a legally purchased object that was produced and trademarked by another -- after all, if they didn't want you to use it, they wouldn't sell (or donate) it to you. The issues here are how one describes the use of that product. In case of any doubt one should probably consult a lawyer to discuss one's specific factual circumstances. That said, the general guidelines are relatively clear:

> (1) It is important to avoid any suggestion that the maker of the trademarked part produced or endorsed the finished product unless they have agreed in writing to allow this; and
>
> (2) If descriptions or advertisements for the finished product mention the inclusion of the trademarked component they must do so in a strictly factual and accurate way which does not by its prominence or enthusiasm in any way violate the first principle.

Preventing passing off. In the unlikely event that someone else produces an inferior or different product and attempts to pass it off as being the creator's work, the creator will need to consult a lawyer, but it is possible that common law trademark rights could be asserted against that counterfeiter.

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[3]It is possible to oppose that subsequent registration if done in a timely fashion, but that's an unenviable position to be in.

Some open source licenses, such as the Apache (v 2.0) include a trademark clause making it explicit that the grant of rights conveyed in the license does not extend to any trademark rights. The Apache license, for example, states that:

> This license does not grant permission to use the trade names, trademarks, service marks, or product 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 NOTICE file.[4]

For more information on trademarks see the U.S. Patent and Trademark Office, Basic Facts About Trademarks, http://www.uspto.gov/web/offices/tac/doc/basic/

D. **Trade Secret**

A creator seeking to make her work available to the public is unlikely to be concerned about protecting her own trade secrets. Trade secrets may become a concern, however, in the context of discussions with commercial suppliers of possible components or of possibly competitive products. All that can be said here is that creators should be careful about entering into Non-Disclosure Agreements (NDAs), should only do so on the advice of counsel, and should be aware that courts are prepared to enforce them strictly. Some states also protect trade secrets against inadvertent disclosure, and in those states the recipient of the inadvertent disclosure of a trade secret may be liable if they share it with others.

[4]Apache License v. 2.0, paragraph 6.

II. Issues to Consider in Licensing a Work or Product

The first thing to consider in selecting a open source or public domain license is what rights the creator has to give, for one cannot give what one does not have. The second thing to consider is what one is trying to achieve, and in particular what limitations one wishes to place on downstream users of the creation. Thirdly, some thought should be given to the nature of the creation, as different license forms may be more suitable to different types of creations.

A. What rights does the creator have to give? (What rights are reserved by others?)

In most cases an author or inventor has the right to determine the use of her work. As noted above, however, trademark law and trade secret law can impose some legal restrictions on how a product can be described, or what information can be shared. Unfortunately, there are several other important exceptions to the general rule that an author or inventor has the right to determine the use of her work. This guide only covers the most common of these exceptions.

1. Contractual limits and works for hire

The single most common impediment to a creator's desire to share the creation widely and for free is that the creator has previously agreed to give someone else rights over the creation. Any contract entered into by the creator (including a contract of employment) may shift the default to a situation where the creator does not have full rights to license or determine the fate of the work.

Indeed, the general rule in U.S. law is that works produced on office time while in the employ of another belong to the employer, especially when they are within the scope of employment. This is the "works made for hire" doctrine, based on 17 U.S.C. § 201(b), which states,

> In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author ...., and unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyrights.

For largely inexplicable and historic reasons, U.S. courts have almost inevitably interpreted the work for hire doctrine to *exclude* copyrightable works of authorship (e.g. books and articles) written by university professors. Thus, for those works, absent other agreements, the default is that the copyright remains with the actual author. This traditional exception may not extend, however, to marketable products such as software.

Unlike copyright, there is no federal law defining who holds the patent rights to employee inventions. The work for hire doctrine does not apply to patents. Common law and individual employment contracts (oral or written) largely provide the guiding rules for employee inventions in the private sector. Federal law requires that patent applications be filed in the name of the true inventor(s). Who is the actual owner of the invention is determined by circumstances and often inventors are required by their employment contracts to make assignments of patents to their employer.

Note, however, many universities have other rules regarding both copyright and patent that are incorporated into contracts or employment or are attached to the University's acceptance or administration of grant funds, and it is essential for the creator of a work to have a clear understanding of any local legal constraints defining what rights she retains. One cannot, after all, grant a right one does not have. Similarly, if an invention or work uses a part, device, software module, or other work produced by another, the creator of the larger work can neither claim nor grant rights in that other part unless those rights have been acquired in advance.

Academic work pursuant to a grant faces the additional complication that the work can be characterized simultaneously as within the scope of university employment and within the contractual conditions imposed by the grant. There could be a conflict between university copyright and patent policies which may, for example, require assignment to the University of some rights, and the grant, which may impose duties to share rights more widely. Since University policies vary quite widely, these issues may need to worked out on a case-by-case basis with university counsel. It is critical to address any such issues early -- ideally before accepting a grant, but in any case before the full value of the creation is manifest as the prospect of value has a tendency to excite university lawyers.

2. Trademark and Trade Secret

Trademark and trade secret law are discussed above in Parts I.C and I.D.

3. Patent

Even if the creation is entirely original, it may infringe an existing patent. And to the extent that the creation relies on the works of others, both patent and copyright law may impose limitations on the creator's ability to share the creation freely.

As noted above, patent law gives the owner the right to prevent others from producing the object. Thus, even if the creator independently discovered the creation without any knowledge of the existence of the patent or the device, a patent infringement lawsuit can ensue.

More commonly, a creation knowingly build on the works of others. In such cases, the creator needs to understand the extent to which patents (or copyrights) on the prior

work may hinder the dissemination of the new creation. These questions can be very fact-specific and may require targeted legal advice.

In general, however, patent law allows the owner of a lawfully acquired copy of an object to incorporate it into another device and then sell or exhibit the new creation. What patent law specifically forbids is making your own copy of the patented device during the life of the patent without the permission of the patent-holder. Thus, either a copy of the device must be purchased, or this permission must be acquired. In either case, any creator seeking to spread the ideas embodied in her creation to the widest possible audience will need to consider carefully the effect of using a device patented by another. During the life of that patent, downstream users, not to mention the creators of derivative works, will either need to purchase a genuine copy of the device or some provision will need to be made to get the patent-holder to issue a grant of rights sufficiently that is broad enough to include them. (Note that trademark law may also impose some constraints on how one describes the role of the patented device in the new creation.)

4. Copyright

Copyright law works similarly to patent: under the 'first sale' doctrine one can purchase a copyrighted work and re-sell or reuse it more or less as one wishes so long as one gives the proper acknowledgments to the original author and does not claim to be the author oneself. But copyright prohibits the creator of the new compilation or improved work from running off her own copies.

Making copies extending beyond the limited realm of fair use requires permission from the rights holder, which usually means a license. Some works, however, carry permissive licenses and depending on their terms those permissions may suffice.

5. Use of Works Subject to Open Source Licenses

Increasingly frequently, academic creators find themselves reusing or modifying works subject to some form of Open Source (or free software) license. As described in more detail in Part III, there is actually a very wide variety of these licenses and these variations impose very different conditions on downstream users. Among the terms that one commonly finds arise are:

- Prohibitions or restrictions on commercial use;
- Requirement that the contribution of the original author be acknowledged;
- "Viral" requirements that any subsequent creation incorporating the original work in whole or in part impose similar license terms on all users of the new creation.

It is important to take careful note of any requirements that may appear in these licenses and to comply with them.

B. How much control does the creator want over future uses of the work or product?

Assuming that the creator holds the relevant rights to the creation, the next step is to figure out how to license those rights in the public interest. Not all permissive licenses are "open source" licenses; and indeed the term "open source" itself is somewhat vague. There is no "best" license for everyone. What license one should choose depends in great part on what one is trying to achieve.

1. Does the creator want any control at all?

The first question to ask is the simplest: does the creator need to assert any control on subsequent use of the work at all? If not, then the license choice is also the simplest: donate the work to the public and let everyone, everywhere, do with it what they will. A dedication to the public affects the legal status of the work which allows every form of use, both commercial and non-commercial, and which does not require attribution. As a legal matter, therefore, others can cut and paste the work into their own. As an ethical matter, however, this does not work a pre-emptive endorsement of academic plagiarism. While the donation may waive legal rights against copying, it does not affect scholarly norms, which remain in force and are usually enforced outside the legal system.

2. How important is it that downstream users credit the creator?

Even creators who do not seek the widest dissemination of their work, and expect neither remuneration nor control over the subsequent uses may nonetheless wish to ensure that they receive proper credit for their intellectual achievements. Many open source copyright licenses make it a condition their grant of permission to reproduce and modify the work that the subsequent user give due credit to the original author. (Patent law allows the patent-holder to require similar conditions as a condition of licensed use.) Indeed, some of the most permissive open source licenses impose almost no other requirements other than that a similar requirement be imposed on all downstream users of the code or text.

3. Is commercial use to be allowed? And on what terms?

Academics, artists and others sometimes distinguish between the rights they wish to give to commercial versus non-commercial users. When it comes to fellow academics, artists or other non-commercial users, information wants to be free; when someone else wants to charge for the creation, then information wants to be paid for.

The question of the terms to be imposed on future commercial users is perhaps the most complicated and divisive in the open source community. It is complicated because different licenses permit varying degrees of commercial use, and because products,

especially software products, often are an admixture of free, open-source, and commercial code, which can threaten to produce licensing tangles -- and wrangles.

4. Does the license need to be 'viral'?

The most innovative feature of free and open source licensing in general is the 'viral' nature of some licenses. Many of these licenses attempt not only to ensure that the original work is available to others for their study and use, but also to impose similar conditions on all subsequent works based on the original. These 'viral' (or "share-alike") licenses condition the grant of rights on a requirement that any person who produces a derivative work, or any work that in some way uses or incorporates the original creation, must both make the new work available according to a similarly open license and also impose the same set of openness obligations on all subsequent creators of tertiary works relying on or incorporating the secondary one.

C. **What is the nature of the work or product?**

The first thing to consider in selecting a specific license is the nature of the thing being licensed. Some licenses speak solely to copyright issues, some to patent and some to both. In the most general terms, anything that when in its finished or functional form looks like a writing rather than like an object is likely to be eligible for copyright protection. This includes software, whether the software is a free-standing program, or one that is embedded in a device. Anything that looks like an object is more likely to be eligible for patent protection.

Away from these ideal types, however, lie many complicated cases that are not resolved by intuition, and which may require legal assistance to sort out. For example, the mere presence of software in an invention does not automatically render it unpatentable. Inventors often obtain patents in inventions composed largely or nearly entirely of software. Then again, there are also many cases where devices that were primarily software based were held unpatentable.

Or, to take another common example, some classes of ideas -- notably business methods broadly defined -- are eligible for patent protection. For example, a new method of doing surgery may be eligible for patent protection which, if granted and upheld against challenges, would require others to get a license before replicating the technique during the life of the patent. An article or book describing the method can be copryighted, protecting the expression for a much longer period, but imposing no conditions on the use of the knowledge imparted. And if the inventor of the new technique gives it a nickname and popularizes it under that name, the name can be protected under trademark law regardless of whether the creator also has patent or copyright claims.

Armed with some sense about the nature of the work, the creator can then consider specific licensing options.

III. A Survey of Common Licensing Options

This section describes a variety of licenses, beginning with the most permissive and moving towards the most restrictive. Note, however, that a "more restrictive" license in this context means a license that requires creators of derivative works to share them too (i.e. limits their ability to make closed-source commercial use) while a "less restrictive" license is one that allows downstream creators to make proprietary products incorporating the creation. From the point of view of end-users of the derivative works, the "most restrictive" initial license may in fact be the most permissive as the initial license is forcing downstream creator to give her end-users more rights than she might otherwise choose.

A. **Dedicating (Donating) your work to the public domain**

As noted above, dedicating or donating the work to the public domain is by far the simplest legal option. The consequence of this option, however, is that it *irrevocably* leaves the creator without the right to exclude others from using the creation in any manner that they may wish.

Donation of a copyrightable work can be accomplished using the Creative Commons "Copyright-Only Dedication (based on United States law) or Public Domain Certification" found at http://creativecommons.org/licenses/publicdomain/ and reprinted below in the Appendix. In principle, a single public announcement of the donation is legally sufficient (and also irrevocable). In practice, as with any other license, one usually attaches the dedication to the start or finish of every copy of the written work.

Patentable creations do not in principle require any action to pass into the public domain since that the public domain is their default status absent timely filing of a patent. Nevertheless, given the great caution of patent attorneys and the understandable reluctance of future users to risk patent suits, it is useful to make an explicit statement that no patent rights are being claimed.

B. **BSD License**

BSD licenses are a family of permissive copyright licenses. They allow proprietary commercial use, and for the software released under the license to be incorporated into proprietary commercial products, including closed-source products.

The BSD licenses have few restrictions compared to other free software licenses such as the GNU GPL or even the default restrictions provided by copyright, putting it relatively closer to the public domain. BSD licenses are sometimes called "copycenter licenses," as a comparison to standard copyright and copyleft free software: "Take it down to the copy center and make as many copies as you want."

The current version of the license, the full text of which appears in the Appendix, is short and simple: The license permits *all* forms of copying, provided that the copier meets three conditions:

- The license creates an ongoing obligation as regards acknowledging the creator's original copyright over the original contribution, but is not viral as regards other code mixed with it. ("Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer." and "Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.")
- In addition to the requirement that the creator's copyright be acknowledged, the BSD license contains a *non*-attribution clause stating that the creator's name should *not* be used to endorse follow-on products ("Neither the name of the <ORGANIZATION> nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.")[5]
- It contains a disclaimer of warranties.

Pre-1999 versions of the BSD license contained a requirement that the creator be acknowledged in all adverting of works incorporating the code.

In short, the BSD license is not viral, and imposes few conditions on subsequent users other than that they retain the copyright notice and disclaimers. The BSD license refers only to copyright.

C. **Apache License, v 2.0**

The Apace (v2) license is a popular open source license. In addition to a copyright license the Apache License includes a royalty-free patent grant to the extent the creation is protected by patents and that the patent license is needed to use the work. The Apache license also features an explicit statement that no rights are being granted in regards to trade or service marks. The patent grant is limited by a retaliation clause saying that anyone who raises patent claims against the work is thereby subject to termination of any patent rights granted under the license.

The Apache License permits licensees to create derivative works on permissive terms similar to the BSD license -- the ensuing creation can be incorporated into just

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[5]The BSD license originates at Berkeley, and the unusual non-attribution clause in the current version was included to prevent the University's name from being associated with any defective or sub-standard software that might be produced by persons who used the licensed code.

anything, even commercial, proprietary software. Subsequent works can't reduce the rights in the work covered by the license, but they can avoid subjecting the new part of the work to a similarly open regime.

D. **GNU Public License Family**

1. GNU General Public License (GPL)

The GNU General Public License (GPL) is widely reputed to be the most commonly used of the free or open source software licenses. The current version of the GPL license, version 2, was released in 1991. While primarily concerned with copyright, the GPL does require that any patent required to use the software must be licensed for everyone's free use or not licensed at all.[6] (The FSF is currently discussing a third version of the GPL which among other changes is planned to contain a change in the patent grant.[7])

The authors of the GPL license, the Free Software Foundation (FSF), defines the goal of the GPL as being protecting "the users' freedom to run, copy, distribute, study, change and improve the software." And the FSF defines "four kinds of freedom, for the users of the software:

- "The freedom to run the program, for any purpose (freedom 0).
- "The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
- "The freedom to redistribute copies so you can help your neighbor (freedom 2).
- "The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this."[8]

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[6]"If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program." GPL at para. 7.

[7]For further information see http://gplv3.fsf.org/

[8]http://www.gnu.org/

The GPL sets out to achieve these objectives by means of a viral license which ensures that all subsequent licensees, including the creators of derivative works, will be required to make their source code freely available. Note, however, that the code licensed under the GPL can be incorporated into a commercial product -- so long as the source code for the resulting product is available to every purchasor. As the FSF puts it, software licensed under the GPL is "free as in speech, not as in beer.":

> when redistributing the program, you cannot add restrictions to deny other people the central freedoms. This rule does not conflict with the central freedoms; rather it protects them.
>
> You may have paid money to get copies of free software, or you may have obtained copies at no charge. But regardless of how you got your copies, you always have the freedom to copy and change the software, even to sell copies.
>
> Free software does not mean non-commercial. A free program must be available for commercial use, commercial development, and commercial distribution. Commercial development of free software is no longer unusual...[9]

In short the GPL version 2 requires attribution, provides one somewhat draconian solution to patent issues, focuses strongly on making source code available, and is viral as regards all these terms, and restricts the ability of downstream creators from imposing more restrictive terms on derivative works if they re-use material subject to the GPL. Subject to these constraints -- constraints which some firms such as Microsoft have described as overly restrictive -- the GPL imposes no limits on the commercial use of the works licensed under it.

2. GNU Lesser General Public License

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[9] http://www.gnu.org/philosophy/free-sw.html

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[11]http://www.fsf.org/blogs/rms/entry-20050920.html

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