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Project: **epay/epayapi**

Branch: **mainline** (4613eb53f38fe1dc1712efdf96eda86c094b1255)

Created on **2025-12-10 20:08 UTC**

Bill of components

Libraries (java)

⚠ epayapi-common -- (compile)
mitigated - Libreria di prodotto
(registry)

⚠ epayservices-ejb-api 4.11.0 (compile)
mitigated - Libreria di prodotto
(registry)

✅ antlr 2.7.7 (compile)
BSD
(registry)

✅ aopalliance:aopalliance 1.0 (compile)
PUBDOM
(registry)

✅ asm:asm 3.3.1 (compile)
BSD
BSD-3-Clause
(registry)

✅ axis 1.4 (compile)
Apache-2.0
(registry)

✅ axis:axis-jaxrpc 1.4 (compile)
Apache-2.0
(registry)

✅ axis:axis-saaj 1.2.1 (compile)
Apache-2.0
(registry)

✅ backport-util-concurrent:backport-util-concurrent 3.1 (compile)
PUBDOM
(registry)

✅ cglib:cglib 2.2.2 (compile)
Apache-2.0
(registry)

✅ com.fasterxml.jackson.core:jackson-annotations 2.9.9 (compile)
Apache-2.0
(registry)

✓ com.fasterxml.jackson.core:jackson-core 2.9.9 (compile)

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✓ com.fasterxml.jackson.core:jackson-databind 2.9.9 (compile)

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✓ com.github.librepdf:openpdf 1.3.20 (compile)

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[MPL-2.0](#)

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✓ com.h2database:h2 1.4.197 (compile)

[MPL2-or-EPL1-H2](#)

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✓ commons-beanutils:commons-beanutils 1.9.1 (compile)

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✓ commons-codec:commons-codec 1.11 (compile)

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✓ commons-collections:commons-collections 3.2.2 (compile)

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✓ commons-dbcp:commons-dbcp 1.4 (compile)

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✓ commons-digester:commons-digester 2.1 (compile)

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✓ commons-discovery:commons-discovery 0.2 (compile)

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✓ commons-httpclient:commons-httpclient 2.0.2 (compile)

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✓ commons-io:commons-io 2.5 (compile)

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✓ commons-logging:commons-logging 1.1.1 (compile)

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✓ commons-pool:commons-pool 1.5.4 (compile)

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✓ csi-apachesoap 1.4.6 (compile)

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✓ csi-core 1.4.6 (compile)

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✓ csi-ejb 1.4.6 (compile)

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✓ csi-rmi 1.4.6 (compile)

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✓ csi-stadapter 1.4.6 (compile)

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✓ ejb 2.1 (compile)

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✓ hibernate-core 4.1.3 (compile)

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✔ io.swagger:csi-java-swagger-codegen 1.0.0.001 (compile)

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✔ io.swagger:swagger-codegen-cli 2.4.0-SNAPSHOT (compile)

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✔ jaas 1.0 (compile)

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✔ javax.mail:mail -- (compile)

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✔ javax.validation:validation-api 1.0.0.GA-redhat-3 (compile)

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✔ javax.ws.rs:jsr311-api 1.1.1 (compile)

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✔ javax.xml.bind:activation 1.0.2 (compile)

[CDDL-1.1](#)

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✔ jaxp 1.1 (compile)

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✔ jms 1.0.2 (compile)

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✔ jndi 1.2.1 (compile)

[CDDL](#)

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✓ joda-time:joda-time 1.6 (compile)

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[Apache-2.0](#)

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✓ junit:junit 4.12 (compile)

[EPL-1.0](#)

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✓ net.sf.ehcache:ehcache 1.5.0 (compile)

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✓ net.sf.jasperreports.engine 6.2.1 (compile)

[LGPL-3.0+](#)

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✓ net.sf.jasperreports:jasperreports-fonts -- (compile)

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✓ net.sf.jasperreports:jasperreports-functions 6.2.1 (compile)

[LGPL-2.1-or-later](#)

(registry)

✓ net.sf.jsr107cache:jsr107cache 1.0 (compile)

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✓ oracle_thin 1.0.0 (compile)

[ORCL.OTN](#)

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✓ org.apache.commons:commons-lang3 3.2.1 (compile)

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✓ org.apache.ivy:ivy 2.0.0 (compile)

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✓ org.apache.logging.log4j:log4j-api 2.17.0 (compile)

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- ✔ org.apache.logging.log4j:log4j-core 2.17.0 (compile)
Apache-2.0
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- ✔ org.apache.poi:poi 3.17 (compile)
Apache-2.0
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- ✔ org.apache.poi:poi-ooxml 3.17 (compile)
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- ✔ org.apache.poi:poi-ooxml-schemas 3.17 (compile)
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- ✔ org.apache.poi:poi-scratchpad 3.17 (compile)
Apache-2.0
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- ✔ org.apache.xmlbeans:xmlbeans 2.6.0 (compile)
Apache-2.0
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- ✔ org.aspectj:aspectjweaver 1.7.2 (compile)
EPL-1.0
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- ✔ org.codehaus.jettison:jettison 1.3.1 (compile)
Apache-2.0
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- ✔ org.hibernate.common:hibernate-commons-annotations 4.0.1.Final-redhat-1 (compile)
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- ✔ org.hibernate.javax.persistence:hibernate-jpa-2.0-api 1.0.1.Final-redhat-1 (compile)
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- ✔ org.hibernate:hibernate-entitymanager -- (compile)
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✔ org.hibernate:hibernate-validator 4.2.0.Final-redhat-1 (compile)

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✔ org.infinispan:infinispan-core 5.2.1.Final (compile)

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✔ org.javassist:javassist 3.18.1-GA (compile)

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✔ org.jboss.logging:jboss-logging 3.1.0.GA (compile)

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✔ org.jboss.resteasy:resteasy-jaxrs 2.3.10.Final-redhat-1 (compile)

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✔ org.jboss.resteasy:resteasy-multipart-provider 2.3.10.Final-redhat-1 (compile)

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✔ org.jboss.spec.javaax.transaction:jboss-transaction-api_1.1_spec 1.0.1.Final (compile)

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✔ org.mapstruct:mapstruct 1.1.0.Final (compile)

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✔ org.mapstruct:mapstruct-jdk8 1.1.0.Final (compile)

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✔ org.mapstruct:mapstruct-processor 1.1.0.Final (compile)

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✔ org.mockito:mockito-all 1.5 (compile)

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✔ org.mockito:mockito-all 1.9.0 (compile)

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✔ org.springframework.data:spring-data-commons-core 1.4.0.RELEASE (compile)

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✔ org.springframework.data:spring-data-jpa 1.2.0.RELEASE (compile)

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✔ org.springframework:spring-aop 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-asm 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-beans 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-context 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-core 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-expression 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-jdbc 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-orm 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-test 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-tx 3.1.1.RELEASE (compile)

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✔ org.springframework:spring-web 3.1.1.RELEASE (compile)

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✔ org.zenframework.z8.dependencies.commons:dom4j-1.6.1 2.0 (compile)

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✔ org.zenframework.z8.dependencies.servlet:servlet-api-2.5 2.0 (compile)

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✔ postgresql jdbc driver 9.4 (compile)

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✔ servlet 2.4 (compile)

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✔ soap:soap 2.3.1 (compile)

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✔ titillium-super -- (compile)

[OFL-1.0](#)

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✔ titillium-web -- (compile)

[OFL-1.0](#)

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✔ util-perf 1.0.0 (compile)

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✔ weblogic server 9.2 mp2 mon jun 25 01:32:01 edt 2007 952826 9.2.2.0 (compile)

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Oracle

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✔ wsdl4j:wsdl4j 1.5.1 (compile)

CPL-1.0

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✔ xerces:xmlParserAPIs 2.6.1 (compile)

Apache-2.0

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✔ xercesImpl 2.6.2 (compile)

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✔ xml-resolver:xml-resolver 1.1 (compile)

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BSD-style licenses have been very successful, and they are now widely used for a variety of software. Among the many products released under this class of licenses are all of the major modern descendants of the original BSD UNIX, i.e., FreeBSD, OpenBSD, NetBSD and Darwin (the foundation of the Mac OS X). BSD-licensed software is also commonly included in Linux <> distributions <> (i.e., versions) and has even been incorporated into some of the Microsoft Windows operating systems.

BSD Licenses Versus the GPL

The GPL <> (GNU <> General Public License) is by far the most widely used license for free software <> (i.e., software whose source code is available at no cost for anyone to use for any purpose). The Linux kernel <> (i.e., the core of the operating system) as well as much of the other software generally included in Linux distributions have been released under the terms of the GPL.

Although far fewer programs are released under BSD-style licenses, this class of licenses is disproportionately important because of the widespread use of BSD-licensed code in both free and proprietary operating systems.

Possibly the biggest difference between the GPL and BSD licenses is the fact that the former is a copyleft license and the latter is not. Copyleft is 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.

Closely related to this is the fact that, in sharp contrast to the GPL, BSD-style licenses do not require that derivative works based on BSD-licensed software make the source code for such derivative works freely available. This allows the direct incorporation of code from open source projects (i.e., from BSD-licensed software) into closed source projects. The GPL, however, specifically states: "This General Public License does not permit incorporating your program into proprietary programs."

A third difference is that the GPL is a single, copyrighted (by the Free Software Foundation, Inc.) license with no variants. BSD-style licenses, in contrast, are commonly modified for the specific situation.

In many cases, the use of open source code can allow companies to develop products more quickly and with less expense than if they wrote them with entirely original code. The fact that derivative products of BSD-licensed software are not required to be open source can be very useful for developers who want to create commercial products from open source code but who want to keep their modifications and/or extensions secret. Interestingly, companies that initially develop closed source products based on BSD-licensed code tend to be more likely to eventually make their source code publicly available than are companies that develop products that do not incorporate code code.

The issue of which license provides greater freedom and does the most to promote the development of improved software is highly controversial. In spite of the seeming simplicity of the licenses, there are no simple answers.

One of the most controversial properties of the GPL is its viral nature. This means that once some useful modification or addition to a GPL licensed program has been released, the source code of the modified or extended program must likewise be made freely available. That is, the GPL is a mechanism that deprives developers of the freedom to make their source code secret at some future date, although the developer can still use such code in commercial products. Critics of the GPL claim that this diminishes or destroys the commercial value of software because others can produce products that incorporate the same code.

GPL advocates claim that although the GPL is contagious in theory, it is not necessarily so in practice. Rather, they assert, it merely places restrictions on the code's re-use, as do BSD-style licenses.

One thing about both the GPL and the BSD-style licenses for which there is widespread agreement is that both have problems. Neither is perfect, and perhaps no license can be perfect. There is also considerable agreement that there are benefits both to software developers and to society as a whole from the choice provided by the existence of a variety of types of free software licenses, including the GPL and BSD-style licenses.

The "Advertising Clause"

The original version of the BSD license contained the so called advertising clause, which stated that all advertising materials that mention features of or use of the software must display the acknowledgment: "This product includes software developed by the University of California, Berkeley and its contributors."

One of the problems with this clause arose from the fact that people who made changes to the source code often wanted to have their names added to the acknowledgment. This could easily result in large and cumbersome acknowledgments for products with numerous contributors and for software distributions consisting of multiple individual projects.

A second problem was legal incompatibility with the terms of the GPL. This is because the GPL prohibits the addition of restrictions beyond those that it already imposes. Thus it was necessary to segregate GPL and BSD-licensed software within projects.

Initially, the "obnoxious BSD advertising clause," as it was referred to by GPL advocates, was used only for the BSD UNIX license. That did not cause any major problems because it was only necessary to include a single sentence of acknowledgment in any advertisement.

However, the fact that other software developers did not copy the clause verbatim, but replaced the phrase "University of California" with the name of their own organization or persons involved in it, resulted in a proliferation of slightly different licenses and a consequently serious problem when many

such programs were assembled to form a larger work or an operating system. For example, if an operating system or other program required fifty slightly different acknowledgment sentences, each naming a different developer or group of developers, such advertising alone might require a full page. Not only would this be very tedious reading, but it could also be costly.

In June 1999, after two years of discussion, the Office of Technology Licensing at UCB finally proclaimed: "Effective immediately, licensees and distributors are no longer required to include the acknowledgment within advertising materials. Accordingly, the foregoing paragraph of those BSD Unix files containing it is hereby deleted in its entirety."

This was clearly very useful. However, it could not eliminate the legacy of the advertising clause, as similar clauses still exist in the licenses of many programs that followed the old BSD license; only the developers of such packages can change them.

Examples of BSD-Style Licenses

Below are three examples of BSD-style licenses: (1) the BSD license as it is used by the FreeBSD operating system, (2) a BSD license as it is used by Sudo (a free utility program for Unix-like <> operating systems) and (3) a template of a BSD-style license that can be applied to any appropriate project:

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SPDX <> identifierCDDL-1.1

CDDL-1.0

Debian FSG compatible <>Yes

FSF <> approved <>Yes (only 1.0)[1] <>

OSI <> approved <>Yes (only 1.0)[2] <>

GPL compatible <>No[1] <>

Copyleft <>Yes, file-level[1] <>

Linking from code with a different licence <>Yes[1] <>

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Terms

[edit <>]

Derived from the Mozilla Public License <> 1.1,[4] <> the CDDL tries to address some of the problems of the MPL.[5] <> Like the MPL, the CDDL is a weak copyleft <> license in-between GPL <> license and BSD <>/MIT <> permissive licenses <>, requiring only source code files under CDDL to remain under CDDL.

Unlike strong copyleft <> licenses like the GPL, mixing of CDDL licensed source code files with source code files under other licenses is permitted without relicensing. The resulting compiled software product ("binary") can be licensed and sold under a different license, as long as the source code is still available under CDDL, which should enable more commercial business cases, according to Sun.[5] <>[6] <>[7] <>

Like the MPL the CDDL includes a patent grant to the licensee from all contributors ("patent peace"). However, in section 2.1(d), the patent grant is lost if the code implementing a patented feature is modified.[8] <>

History

[edit <>]

The previous software license <> used by Sun <> for its open source <> projects was theSun Public License <> (SPL), also derived from the Mozilla Public License <>. The CDDL license is considered by Sun <> (now Oracle <>) to beSPL <> version 2.[9] <>

The CDDL was developed by a Sun Microsystems <> team (among them Solaris <> kernel engineer Andrew Tucker[10] <>[11] <> and Claire Giordano[12] <>), based on theMPL <> version 1.1. On December 1, 2004 the CDDL was submitted for approval to theOpen Source Initiative <>[12] <> and was approved as an open source license <> in mid January 2005. The second CDDL proposal, submitted in early January 2005, includes some corrections that prevent the CDDL from being in conflict with European Copyright law and to allow single developers to use the CDDL for their work.

In 2006, in the first draft of the OSI's license proliferation <> committee report, the CDDL is one of nine preferred licenses listed as popular, widely used, or with strong communities.[13] <>

While the Free Software Foundation <> (FSF) also considered the CDDL a free software <> license, they saw some incompatibilities <> with their GNU General Public License <> (GPL).[1] <>

GPL compatibility

[edit <>]

The question of whether and when both licenses are incompatible <> sparked debates in the free software domain in 2004 to 2006.[14] <>[15] <> For instance, the FSF considered the CDDL incompatible to their GPL license, without going into detail until 2016.[16] <>

CDDL is one of several Open Source Licenses <> which are incompatible with GPL <>. This characteristic was inherited from the MPL 1.1 (fixed with the MPL 2.0 according to the FSF[1] <>) and results from a complex interaction of several clauses:[14] <>[17] <> the root of the problem being GPL virality <>, similar to other cases of GPL incompatibility.[18] <> Some people argue that Sun (or the Sun engineer) as creator of the license made the CDDL intentionally GPL incompatible.[14] <> According to Danese Cooper <> one of the reasons for basing the CDDL on the Mozilla license was that the Mozilla license is GPL-incompatible <>. Cooper stated, at the 6th annual Debian conference <>, that the engineers who had written the Solaris kernel requested that the license of OpenSolaris be GPL-incompatible.[19] <>

Mozilla was selected partially because it is GPL incompatible. That was part of the design when they released OpenSolaris. ... the engineers who wrote Solaris ... had some biases about how it should be released, and you have to respect that.

Simon Phipps <> (Sun's Chief Open Source Officer at the time), who had introduced Cooper as "the one who actually wrote the CDDL",[20] <> did not immediately comment, but later in the same video, he says, referring back to the license issue, "I actually disagree with Danese to some degree",[21] <> while describing the strong preference among the engineers who wrote the code for a BSD-like license, which was in conflict with Sun's preference for somethingcopyleft <>, and that waiting for legal clearance to release some parts of the code under the then unreleased GNU GPL v3 would have taken several years, and would probably also have involved mass resignations from engineers (unhappy with either the delay, the GPL, or boththis is not clear from the video).

Later, in September 2006, Phipps rejected Cooper's assertion in even stronger terms.[22] <> Similarly, Bryan Cantrill <>, who was at Sun at that time and involved in the release of CDDL licensed software stated in 2015 that he and his colleagues expected in 2006 the fast emergence of CDDL licensed software into the Linux ecosystem and the CDDL being not an obstacle.[23] <>

cdrttools controversy

[edit <>]

The GPL compatibility question was also the source of a controversy behind a partial relicensing ofcdrttools <> to the CDDL which had been previously all GPL. In 2006, theDebian <> project declared the cdrttools legally undistributable because thebuild system <> was licensed under the CDDL.[24] <>

The author, Jrg Schilling <>, claimed that smake <> is an independent project and does not violate theGPLv3 <>.[25] <> Schilling also argued that even though the GPL requires all scripts required to build the work to be licensed freely, they do not necessarily have to be under the GPL.[26] <>[27] <>[page needed <>] Thus not causing an incompatibility thatviolates the license <>.

He also argued that in "combined works" (in contrast to "derived works <>") GPL and CDDL licensed code is compatible.[28] <>[29] <>

Red Hat <>'s attorneys have prevented cdrttools from being in Fedora <> or Red Hat Enterprise Linux <>, arguing that Schilling has an "unorthodox" view of copyright law that isn't shared by their legal counsel or the Free Software Foundation.[30] <>

ZFS in the Linux kernel

[edit <>]

In 2015, the CDDL to GPL compatibility question reemerged when Ubuntu <> announced inclusion ofOpenZFS <> by default.[31] <>

In 2016 Ubuntu announced that a legal review resulted in the conclusion that

it is legally acceptable to use ZFS as binarykernel module <> in Linux. (As opposed to building it into the kernel image itself.)[32] <>

Others followed Ubuntu's conclusion, for instance James E. J. Bottomley argued there cannot be "a convincing theory of harm" developed, making it impossible to bring the case to court.[33] <>

Eben Moglen <>, co-author of the GPLv3 <> and founder of the SFLC <>, argued that while the letter of the GPL might be violated, the spirit of both licenses is unharmed, which would be the relevant aspect in court.[34] <>

The SFLC mentioned also that a precedent exists with the Andrew File System <>'s kernel module, which is not considered a derivative work of the kernel by the kernel developers.[35] <>[36] <>

On the other hand, Bradley M. Kuhn <> and attorney Karen M. Sandler <> from the Software Freedom Conservancy <>[37] <> argued that Ubuntu would violate both licenses, as a binary ZFS module would be a derivative work of the kernel.[38] <> In April 2016, the Ubuntu <> 16.04 LTS <> release included the CDDL-licensed ZFS on Linux <>.[citation needed <>]

Adoption

[edit <>]

Example projects released under CDDL:

- * OpenSolaris <> (including DTrace <>, initially released alone, and ZFS <>)
- * illumos <> (as OpenSolaris OS/Net, continuation project) and illumos distributions <>[39] <>
- * OpenZFS <> multi platform open source volume manager and file system
- * NetBeans <> IDE and RCP
- * GlassFish <>
- * JWSDP <>
- * Project DReaM <>
- * cdrtools <>
- * OpenDJ <>

See also

[edit <>]

- * Free and open-source software portal <>
- * Dual-licensing <>
- * GNAT Modified General Public License <>
- * List of software licenses <>

References

[edit <>]

* ^ a <> b <> c <> d <> e <> f <> g <> "Various Licenses and Comments About Them - Common Development and Distribution License" <https://www.gnu.org/licenses/license-list.html#CDDL>. Free Software Foundation . Retrieved 2020-10-14.

* ^ a <> b <> "Can code licensed under the CDDL be combined with code licensed under other open source licenses?" <https://web.archive.org/web/20091006181308/http://opensolaris.org/os/about/faq/licensing_faq/#CDDL-combo> .OpenSolaris FAQ: Common Development and Distribution License (CDDL). OpenSolaris. Archived from the original <http://www.opensolaris.org/os/about/faq/licensing_faq/#CDDL-combo> on 2009-10-06.

* ^ <> Common Development and Distribution License (CDDL) Information <https://web.archive.org/web/20090304142159/http://www.sun.com/cddl/>, archived from the original <http://www.sun.com/cddl/> on 2009-03-04, We have drafted a new open source license ...

* ^ <> CDDL_MPL_redline.pdf <https://web.archive.org/web/20060816050912/http://www.sun.com/cddl/CDDL_MPL_redline.pdf> on sun.com (archived)

* ^ a <> b <> CDDL Why Summary <https://web.archive.org/web/20050214114513/http://www.sun.com/cddl/CDDL_why_summary.html> on sun.com (archived, 2005)

* ^ <> McNealy: CDDL is 'best of both worlds' <https://www.zdnet.com/article/mcnealy-cddl-is-best-of-both-worlds/> on zdnet.com by Aaron Tan (September 14, 2005)

* ^ <> CDDL <https://tldrlegal.com/license/common-development-and-distribution-license-%28cddl-1.0%29-explained> on tldrlegal.com

* ^ <> "Common Development and Distribution License 1.0 | Open Source Initiative" <https://opensource.org/licenses/CDDL-1.0>. opensource.org. 31 October 2006. Retrieved 2020-07-18.

* ^ <> "SPL to CDDL as of NetBeans 5.0 - Why change licenses?" <https://web.archive.org/web/20070224082827/http://www.netbeans.org/about/legal/license-change.html> . NetBeans. Archived from the original <http://www.netbeans.org/about/legal/license-change.html#Why_change_licenses?>

on 2007-02-24. Retrieved 2006-12-31. The SPL was based on the Mozilla license - as CDDL is as well. [...] One way to think of the CDDL is as a cleaned-up version of the Mozilla license - anyone can reuse it as-is. It's the SPL version 2.0.

* ^ <> "Andy Tucker on the CDDL"

<<https://alanhargreaves.wordpress.com/2005/04/12/andy-tucker-on-the-cddl/>>.

Alan Hargreaves' Blog. 12 April 2005.

* ^ <> Open source licenses, IP, and CDDL

<<https://web.archive.org/web/20061111055302/http://blogs.sun.com/tucker/>> on Andrew Tuckers blog, "as one of the drafters of the CDDL I can at least comment on what the license says, and on our intentions in creating it." (Tuesday April 12, 2005)

* ^ a <> b <> "For Approval: Common Development and Distribution License (CDDL)" <<https://lwn.net/Articles/114840/>>. 1 December 2004.

* ^ <> First draft of OSI's license proliferation report

<<https://web.archive.org/web/20120205011112/http://www.crynr.com/cgi-bin/ezmlm-cgi?3%3Amss%3A11636%3A200607%3Anknhhdligldemhkfbbpd>>

. Archived from the original

<<http://crynr.com/cgi-bin/ezmlm-cgi?3:mss:11636:200607:nknhhdligldemhkfbbpd>> Archived

<<https://web.archive.org/web/20140104020911/http://crynr.com/cgi-bin/ezmlm-cgi?3:mss:11636:200607:nknhhdligldemhkfbbpd>> 2014-01-04 at theWayback Machine <> on 2012-02-05. Retrieved 2013-01-03.

* ^ a <> b <> c <> "Sun Proposes New Open-Source License"

<<https://archive.today/20150817133221/http://www.eweek.com/c/a/Linux-and-Open-Source/Sun-Proposes-New-OpenSource-License>> . Archived from the original

<<http://www.eweek.com/c/a/Linux-and-Open-Source/Sun-Proposes-New-OpenSource-License>> on August 17, 2015.

* ^ <> "The Blog of Ben Rockwood"

<<http://cuddletech.com/blog/pivot/entry.php?id=31>>.

* ^ <> "Interpreting, enforcing and changing the GNU GPL, as applied to combining Linux and ZFS" <<https://www.fsf.org/licensing/zfs-and-linux>>. Free Software Foundation. April 11, 2016. Retrieved 2017-07-27.

* ^ <> "MPL / GPL Incompatibility"

<<http://www.tomhull.com/ocston/docs/mozgpl.html>>. Retrieved 2007-12-03.

* ^ <> chandan (2006-09-18). "Copyrights, Licenses and CDDL Illustrated"

<https://web.archive.org/web/20150529114715/https://blogs.oracle.com/chandan/entry/copyrights_licenses_and_cddl_illustrated> . blogs.oracle.com. Archived from the original

<https://blogs.oracle.com/chandan/entry/copyrights_licenses_and_cddl_illustrated> on 2015-05-29. Retrieved 2015-05-29. A common misconception is about CDDL and GPL incompatibility. (Incompatibility in the sense: to combine two source files, one under GPL and another under CDDL, to create a common executable.) GPL is incompatible with most licenses like Mozilla Public License, Apache, and CDDL. GPL wants you erase those licenses and use GPL in that place, where as these licenses do not permit erasing them. Hence the incompatibility deadlock.

* ^ <> Danese Cooper (2006). OpenSolaris and CDDL discussion at Debconf 2006

<http://meetings-archive.debian.net/pub/debian-meetings/2006/debconf6/theora-small/2006-05-14/tower/OpenSolaris_Java_and_Debian-Simon_Phipps_Alvaro_Lopez_Ortega.ogg>

(Ogg Theora <>). Event occurs at 27:26. Mozilla was selected partially because it is GPL incompatible. That was part of the design when they released OpenSolaris. ... the engineers who wrote Solaris ... had some biases about how it should be released, and you have to respect that (alternate URL

<https://web.archive.org/web/20110722120048/http://caesar.acc.umu.se/pub/debian-meetings/2006/debconf6/theora-small/2006-05-14/tower/OpenSolaris_Java_and_Debian-Simon_Phipps_Alvaro_Lopez_Ortega.ogg> , see 27:27 through 28:24)

* ^ <> Simon Phipps (2006). OpenSolaris and CDDL discussion at Debconf 2006

<http://meetings-archive.debian.net/pub/debian-meetings/2006/debconf6/theora-small/2006-05-14/tower/OpenSolaris_Java_and_Debian-Simon_Phipps_Alvaro_Lopez_Ortega.ogg>

(Ogg Theora <>). Debconf <> 2006. Event occurs at 13:00. ...we have got Danese Cooper in the room, and she is the one who actually wrote the CDDL...

* ^ <> Simon Phipps (2006). OpenSolaris and CDDL discussion at Debconf 2006

<http://meetings-archive.debian.net/pub/debian-meetings/2006/debconf6/theora-small/2006-05-14/tower/OpenSolaris_Java_and_Debian-Simon_Phipps_Alvaro_Lopez_Ortega.ogg>

(Ogg Theora <>). Event occurs at 36:00. I actually disagree with Danese to some degree...

* ^ <> Phipps, Simon (2006-09-04). "Re: Danese Cooper claims CDDL made incompatible with GPL on purpose"

<<https://marc.info/?l=opensolaris-discuss&m=115740406507420>>.

OpenSolaris-Discuss List. Retrieved 2019-03-07. Nonetheless she is wrong to characterise the opinion of the Solaris engineering team in the way she does. She is speaking this way because she lost an argument inside Sun, not because her view is representative of the views of Sun or its staff in the way she claims. She, along with many actual engineers, was an advocate of using GPL for OpenSolaris but the need to release rather than wait for one of {GPL v3, Mozilla license revision, encumbrance removal} meant that this was not possible. I am still furious with her for the statement she made at DebConf, which was spiteful and an obstacle to a united FOSS movement.

* ^ <> Bryan Cantrill <> (2015-04-06). "I am the CTO of Joyent, the father of

DTrace and an OS kernel developer for 20 years. AMA!"

<https://www.reddit.com/r/IAmA/comments/31ny87/i_am_the_cto_of_joyent_the_father_of_dtrace_and/cq3bs9z?context=3>

.reddit.com <>. Retrieved 2016-03-11. Question: Was the CDDL designed to prevent Sun technologies from entering Linux? - BC: Great question, and the answer was that we didn't know -- but the expectation was that it would be ported to Linux relatively quickly. I remember vividly standing over a terminal with a bunch of people as we actually launched OpenSolaris (like, clicked carriage return on making the DTrace code live -- which was the first in the chute), and the Sun Legal guy and I were chatting. We were both wondering if DTrace was going to show up in Linux in a month or if it would take two years. But that was the range of guesses: neither of us believed that the Linux community themselves would hold up CDDL as an obstacle, and certainly if you told me that a decade later, DTrace wouldn't be in Linux because of licensing FUD <>, I wouldn't have believed you. Of course, in hindsight, it all seems so clear: NIH <> is enormously powerful, and we were fools for discounting it.

* ^ <> "cdrtools - a tale of two licenses [LWN.net]"

<<https://lwn.net/Articles/195167/>>. lwn.net. Retrieved 2020-07-18.

* ^ <> "Cdrtools (Cdrecord) release information"

<<https://cdrtools.sourceforge.net/private/cdrecord.html>>.

cdrecord.sourceforge.net. Retrieved 2020-07-18.

* ^ <> "The GNU General Public License"

<<https://www.gnu.org/licenses/gpl.html>>. Retrieved 2009-10-24.

* ^ <> "Die GPL kommentiert und erklärt Online-Version"

<<https://web.archive.org/web/20150908033333/http://www.oreilly.de/german/freebooks/gplger/>> (in German). O'Reilly. Archived from the original

<<http://www.oreilly.de/german/freebooks/gplger>> on 2015-09-08. Retrieved 2010-11-17.

* ^ <> "Neuer Streit um cdrtools"

<<http://www.pro-linux.de/news/1/10155/neuer-streit-um-cdrtools.html>>. Pro-Linux (in German). Laut Aussagen von Jrg Schilling sind die Lizenzen durchaus miteinander kompatibel. Die Regeln werden oftmals falsch ausgelegt. Die Aussagen der FSF-Verantwortlichen seien oft widersprüchlich und in sich nicht schlüssig.

* ^ <> "OSSCC GPL" <<http://www.osscc.net/en/gpl.html>>.

* ^ <> "Forbidden items - Fedora Project Wiki"

<https://fedoraproject.org/wiki/Forbidden_items#cdrtools>. fedoraproject.org. Retrieved 2020-07-18.

* ^ <> Michael Larabel <> (6 October 2015). "Ubuntu Is Planning To Make The ZFS File-System A "Standard" Offering"

<https://www.phoronix.com/scan.php?page=news_item&px=Ubuntu-ZFS-Standard-Plans>. Phoronix <>.

* ^ <> Dustin Kirkland (18 February 2016). "ZFS Licensing and Linux"

<<https://insights.ubuntu.com/2016/02/18/zfs-licensing-and-linux/>>. Ubuntu Insights. Canonical.

* ^ <> Are GPLv2 and CDDL incompatible?

<<http://blog.hansenpartnership.com/are-gplv2-and-cddl-incompatible/>> on hansenpartnership.com by James E. J. Bottomley, "What the above analysis shows is that even though we presumed combination of GPLv2 and CDDL works to be a technical violation, there's no way actually to prosecute such a violation because we can't develop a convincing theory of harm resulting. Because this makes it impossible to take the case to court, effectively it must be concluded that the combination of GPLv2 and CDDL, provided you're following a GPLv2 compliance regime for all the code, is allowable." (23 February 2016)

* ^ <> Moglen, Eben <>; Choudhary, Mishi (26 February 2016). "The Linux Kernel, CDDL and Related Issues"

<<https://softwarefreedom.org/resources/2016/linux-kernel-cddl.html>>.

* ^ <> Moglen, Eben <>; Choudhary, Mishi (26 February 2016). "The Linux Kernel, CDDL and Related Issues"

<<https://softwarefreedom.org/resources/2016/linux-kernel-cddl.html>>.

Historically, there's been things like the original Andrew filesystem module: a standard filesystem that really wasn't written for Linux in the first place, and just implements a UNIX filesystem. Is that derived just because it got ported to Linux that had a reasonably similar VFS interface to what other UNIXes did? ... Personally, I think that case wasn't a derived work, and I was willing to tell the AFS guys so.

* ^ <> Copying

<<https://git.kernel.org/cgit/linux/kernel/git/torvalds/linux.git/tree/COPYING>> on git.kernel.org "NOTE! This copyright does *not* cover user programs that use kernel services <> by normal system calls <> this is merely considered normal use of the kernel, and does *not* fall under the heading of "derived work"."

* ^ <> Software Freedom Law Center Appoints Two New Attorneys to Defend and Support Free and Open Source Software

<<http://www.softwarefreedom.org/news/2005/oct/31/new-attorneys/>> (October 31, 2005)

* ^ <> GPL Violations Related to Combining ZFS and Linux

<<https://sfconservancy.org/blog/2016/feb/25/zfs-and-linux/>> on sfconservancy.org by Bradley M. Kuhn <> and Karen M. Sandler <>, "Conservancy

(as a Linux copyright holder ourselves), along with the members of our coalition in the GPL Compliance Project for Linux Developers, all agree that Canonical and others infringe Linux copyrights when they distribute zfs.ko."

* ^ <> "illumos Distributions"

<<https://wiki.illumos.org/display/illumos/Distributions>>. The illumos Family.
illumos. 20 March 2017.

External links

[edit <>]

* Common Development and Distribution License (CDDL) Information

<<https://web.archive.org/web/20090304142159/http://www.sun.com/cddl/>>, archived from the original <<http://www.sun.com/cddl/>> on 2009-03-04

* "CDDL 1.0 copy at opensource.org" <<http://opensource.org/licenses/CDDL-1.0>>

. 31 October 2006. Retrieved 9 April 2013.

* Redline diffs between MPL1.1 and CDDL

<https://web.archive.org/web/20090304142159/http://www.sun.com/cddl/CDDL_MPL_redline.pdf> (PDF), p. 9, archived from the original

<http://www.sun.com/cddl/CDDL_MPL_redline.pdf> (PDF) on 2009-03-04

* Summary description of changes

<https://web.archive.org/web/20090304142159/http://www.sun.com/cddl/CDDL_why_summary.html>

, archived from the original <http://www.sun.com/cddl/CDDL_why_summary.html> on 2009-03-04

* Detailed description of changes

<https://web.archive.org/web/20090304142159/http://www.sun.com/cddl/CDDL_why_details.html>

, archived from the original <http://www.sun.com/cddl/CDDL_why_details.html> on 2009-03-04

* FAQ on CDDL on Open Solaris Site

<https://web.archive.org/web/20071027082141/http://www.opensolaris.org/os/about/faq/licensing_faq/>

* Copyrights, Licenses and CDDL Illustrated

<https://web.archive.org/web/20150529114715/https://blogs.oracle.com/chandan/entry/copyrights_licenses_and_cddl_illustrated> on oracle.com (2006)

* The Common Development and Distribution License

<<https://lwn.net/Articles/114839/>>, Linux Weekly News <> Editorial (December 8, 2004)

* CDDL Analysis from a DFSG perspective, and Opinion Piece

<<http://soundadvice.id.au/blog/2005/02/04/#cddl>> (2005)

* v <>

* t <>

* e <>Sun Microsystems <>

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- * Write once, run anywhere <>

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If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the

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5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

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When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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Version 3, 29 June 2007

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<<https://vi.wikipedia.org/wiki/>

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* Peasants' rights <>

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* Plant genetic resources <>

* Proprietary software <>

* Related rights <>

* Sound recording copyright <>

* Supplementary protection certificate <>

* Trade dress <>

* Trade secret <>

* Trademark <>

* Utility model <>

* Patent infringement <>

Related topics

* Abandonware <>

* Artificial intelligence and copyright <>

* Brand protection <>

* Copyright abolition <>

* Copyright troll <>

* Criticism of copyright <>

* Bioprospecting <>

* Biopiracy <>

* Ideaexpression distinction <>

* Limitations and exceptions to copyright <>

* Fair dealing <>

* Fair use <>

* Paraphrasing <>

* Right to quote <>

- * Orphan work <>
- * Patent troll <>
- * Pirate Party <>
- * Public domain <>
- * Outline of intellectual property <>
- * Outline of patents <> Higher categories:

Property <> and Property law <>

- * v <>
- * t <>
- * e <>

Proprietary software is software <> that grants its creator, publisher, or other rightsholder or rightsholder partner a legal monopoly by moderncopyright <> and intellectual property law <> to exclude the recipient from freely sharing the software or modifying it, and in some cases, as is the case with some patent-encumbered and EULA <>-bound software from making use of the software on their own, thereby restricting their freedoms.[1] <>

Proprietary software is a subset <> of non-free software, a term defined in contrast to free and open-source software <>; non-commercial licenses such as CC BY-NC <> are not deemed proprietary, but are non-free. Proprietary software may either be closed-source software or source-available software <>.[1] <>[2] <>

Origin

[edit <>]

Until the late 1960s, computers especially large and expensive mainframe computers <>, machines in specially air-conditioned computer rooms were usually leased <> to customers rather than sold <>.[3] <>[4] <> Service and all software available were usually supplied by manufacturers without separate charge until 1969. Computer vendors usually provided the source code for installed software to customers.[citation needed <>] Customers who developed software often made it available to the public without charge.[5] <> Closed source means computer programs whose source code is not published except to licensees. It is available to be modified only by the organization that developed it and those licensed to use the software.

In 1969, IBM, which had antitrust <> lawsuits pending against it, led an industry change by starting to charge separately for mainframe software <>[6] <>[7] <> and services, by unbundling hardware and software.[8] <>

Bill Gates <>' "Open Letter to Hobbyists <>" in 1976 decried computer hobbyists' rampant copyright infringement <> of software, particularly Microsoft's Altair BASIC <> interpreter, and asserted that their unauthorized use hindered his ability to produce quality software. But the legal status of software copyright <>, especially for object code <>, was not clear until the 1983 appeals court ruling in Apple Computer, Inc. v. Franklin Computer Corp <>.[9] <>[10] <>[11] <>

According to Brewster Kahle <> the legal characteristic of software changed also due to the U.S. Copyright Act of 1976 <>.[12] <> The Commission on New Technological Uses of Copyrighted Works <> concluded in 1978 with the recommendations that became the Computer Software Copyright Act of 1980.[13] <>

Starting in February 1983 IBM adopted an "object-code <>-only" model for a growing list of their software and stopped shipping much of the source code,[14] <>[15] <> even to licensees.

In 1983, binary software became copyrightable in the United States <> as well by the Apple vs. Franklin <> law decision,[16] <> before which only source code was copyrightable.[17] <> Additionally, the growing availability of millions of computers based on the same microprocessor architecture created for the first time an unfragmented and big enough market for binary distributed software.[17] <>

Examples of proprietary operating systems include Microsoft Windows <>, Classic Mac OS <>, macOS <>, iOS <> and iPadOS <>.[18] <>

Types

[edit <>]

Free/Open Licenses <> Non-free Licenses

Public domain <> & equivalents <> Permissive license <> Copyleft <> (protective license) Noncommercial <> license Proprietary license <> Trade secret <>

Software PD, CC0 <> BSD <>, MIT <>, Apache <> GPL <>, AGPL <> JRL <>, AFPL <> proprietary software, no public license private, internal software
Other creative works PD, CC0 <> CC BY <> CC BY-SA <> CC BY-NC <> Copyright <>, no public license unpublished

Licenses

[edit <>] This section is an excerpt from Software license Proprietary software licenses <>.[edit <https://en.wikipedia.org/w/index.php?title=Software_license&action=edit>] <>A brief, written-out beta test <> software license issued by Macromedia <> in 1995. The tendency to license proprietary software, rather than sell it, dates from the time period before the existence, then the scope of software copyright protection was clear <>. These licenses have continued in use after software copyright was recognized in the courts, and are considered to grant the company extra protection compared to copyright law.[19] <> According to United States federal law <>, a company can restrict the parties to which it sells but it cannot prevent a buyer from reselling the product. Software licensing agreements usually prohibit resale, enabling the company to maximize revenue.[20]

Traditionally, software was distributed in the form of binary object code <> that could not be understood or modified by the user,[21] <> but could be downloaded and run. The user bought a perpetual license to use a particular version of the software.[22] <> Software as service <> (SaaS) vendors who have the majority market share <> in application software <> as of 2023[update] <https://en.wikipedia.org/w/index.php?title=Proprietary_software&action=edit>[23] <> rarely offer perpetual licenses.[24] <> SaaS licenses are usually temporary and charged on a pay-per-usage or subscription basis,[25] <> although other revenue models such as freemium <> are also used.[26] <> For customers, the advantages of temporary licenses include reduced upfront cost, increased flexibility, and lower overall cost compared to a perpetual license.[22] <> In some cases, the steep one-time cost demanded by sellers of traditional software were out of the reach of smaller businesses <>, but pay-per-use SaaS models makes the software affordable.[27] <>

Mixed-source software

[edit <>] Software distributions considered as proprietary may in fact incorporate a "mixed source" model including both free and non-free software in the same distribution.[28] <> Most if not all so-called proprietary UNIX <> distributions are mixed source software, bundling open-source components like BIND <>, Sendmail <>, X Window System <>, DHCP <>, and others along with a purely proprietary kernel <> and system utilities.[29] <>[30] <>

Multi-licensing

[edit <>] Main article: Multi-licensing <> Some free software packages are also simultaneously available under proprietary terms. Examples include MySQL <>, Sendmail <> and ssh. The original copyright holders for a work of free software, even copyleft free software, can use dual-licensing <> to allow themselves or others to redistribute proprietary versions. Non-copyleft free software (i.e. software distributed under a permissive free software license or released to the public domain) allows anyone to make proprietary redistributions.[31] <>[32] <> Free software that depends on proprietary software is considered "trapped" by the Free Software Foundation. This includes software written only for Microsoft Windows,[33] <> or software that could only run on Java <>, before it became free software.[34] <>

Legal basis

[edit <>] Further information: Software law <>, Software copyright <>, Software patent <>, and End-user license agreement <> Most of the software is covered by copyright <> which, along with contract law <>, patents <>, and trade secrets <>, provides legal basis for its owner to establish exclusive rights.[35] <>

A software vendor delineates the specific terms of use in an end-user license agreement <> (EULA). The user may agree to this contract in writing, interactively on screen (clickwrap <>), or by opening the box containing the software (shrink wrap licensing <>). License agreements are usually not negotiable <>.[36] <> Software patents <> grant exclusive rights to algorithms, software features, or other patentable subject matter <>, with coverage varying by jurisdiction. Vendors sometimes grant patent rights to the user in the license agreement.[37] <> The source code <> for a piece of proprietary software is routinely handled as a trade secret <>.[38] <> Software can be made available with fewer restrictions on licensing or source-code access; software that satisfies certain conditions of freedom and openness is known as "free <>" or "open-source <>".[39] <>

Limitations

[edit <>] Since license agreements do not override applicable copyright law <> or contract law <>, provisions in conflict with applicable law are not enforceable.[40] <> Some software is specifically licensed and not sold, in order to avoid limitations of copyright such as the first-sale doctrine <>.[41] <>

Exclusive rights

[edit <>]

The owner of proprietary software exercises certain exclusive rights <> over the software. The owner can restrict the use, inspection of source code, modification of source code, and redistribution.

Use of the software

[edit <>] Further information: Copy protection <>, Crippleware <>, and Price discrimination <>

Vendors typically limit the number of computers on which software can be used, and prohibit the user from installing the software on extra computers.[citation needed <>] Restricted use is sometimes enforced through a technical measure, such as product activation <>, a product key <> or serial number, a hardware key <>, or copy protection <>.

Vendors may also distribute versions that remove particular features, or versions which allow only certain fields of endeavor, such as non-commercial, educational, or non-profit use.

Use restrictions vary by license:

- * Windows Vista Starter <> is restricted to running a maximum of three concurrent applications.

- * The retail edition of Microsoft Office Home and Student 2007 <> is limited to non-commercial use on up to three devices in one household.

- * Windows XP <> can be installed on one computer, and limits the number of network file sharing connections to 10.[42] <> The Home Edition <> disables features present in Windows XP Professional.

- * Traditionally, Adobe <> licenses are limited to one user, but allow the user to install a second copy on a home computer or laptop.[43] <> This is no longer true with the switching to Creative Cloud.

- * iWork '09 <>, Apple's productivity suite, is available in a five-user family pack, for use on up to five computers in a household.[44] <>

Inspection and modification of source code

[edit <>] See also: Open-source software <> and Crippleware <>

Vendors typically distribute proprietary software in compiled <> form, usually the machine language <> understood by the computer's central processing unit <>. They typically retain the source code <>, or human-readable version of the software, often written in a higher level programming language <>.[45] <> This scheme is often referred to as closed source.[46] <>

While most proprietary software is distributed without the source code, some vendors distribute the source code or otherwise make it available to customers. For example, users who have purchased a license for the Internet forum software vBulletin <> can modify the source for their own site but cannot redistribute it. This is true for many web applications, which must be in source code form when being run by a web server. The source code is covered by a non-disclosure agreement <> or a license that allows, for example, study and modification, but not redistribution.[47] <> The text-based email client Pine <> and certain implementations of Secure Shell <> are distributed with proprietary licenses that make the source code available.[citation needed <>] Some licenses for proprietary software allow distributing changes to the source code, but only to others licensed for the product, and some[48] <> of those modifications are eventually picked up by the vendor.

Some governments fear that proprietary software may include defects <> or malicious features <> which would compromise sensitive information. In 2003 Microsoft established a Government Security Program (GSP) to allow governments to view source code and Microsoft security documentation, of which the Chinese government <> was an early participant.[49] <>[50] <> The program is part of Microsoft's broader Shared Source Initiative <> which provides source code access for some products. The Reference Source License (Ms-RSL) and Limited Public License (Ms-LPL) are proprietary software licenses where the source code is made available <>.

Governments have also been accused of adding such malware to software themselves. According to documents released by Edward Snowden <>, the NSA <> has used covert partnerships with software companies to make commercial encryption software exploitable to eavesdropping, or to insert backdoors <>.[51] <>[52] <>

Software vendors sometimes use obfuscated code <> to impede users who would reverse engineer <> the software.[53] <> This is particularly common with certain programming languages <>.[citation needed <>] For example, the bytecode <> for programs written in Java <> can be easily decompiled <> to somewhat usable code.[citation needed <>] and the source code for programs written in scripting languages <> such as PHP <> or JavaScript <> is available at run time <>.[54] <>

Redistribution

[edit <>] Further information: Shareware <> See also: Freely redistributable software <>

Proprietary software vendors can prohibit the users from sharing the software with others. Another unique license is required for another party to use the software.

In the case of proprietary software with source code available, the vendor may also prohibit customers from distributing their modifications to the source code.

Shareware <> is closed-source software whose owner encourages redistribution at no cost, but which the user sometimes must pay to use after a trial period. The fee usually allows use by a single user or computer. In some cases, software features are restricted during or after the trial period, a practice sometimes called *crippleware* <>.

Interoperability with software and hardware

[edit <>] Further information: Interoperability Software <>

Proprietary file formats and protocols

[edit <>] Further information: Proprietary format <> and Proprietary protocol <>

Proprietary software often[citation needed <>] stores some of its data in file formats that are incompatible <> with other software, and may also communicate using protocols <> which are incompatible. Such formats and protocols may be restricted as trade secrets <> or subject to patents <>.[citation needed <>]

Proprietary APIs

[edit <>]

A proprietary application programming interface <> (API) is a software library <> interface "specific to one device or, more likely to a number of devices within a particular manufacturer's product range." [55] <> The motivation for using a proprietary API can be vendor lock-in <> or because standard APIs do not support the device's functionality. [55] <>

The European Commission <>, in its March 24, 2004, decision on Microsoft's business practices, [56] <> quotes, in paragraph 463, Microsoft general manager for C++ <> development Aaron Contorer as stating in a February 21, 1997, internal Microsoft memo drafted for Bill Gates <>:

The Windows API <> is so broad, so deep, and so functional that most ISVs would be crazy not to use it. And it is so deeply embedded in the source code of many Windows apps that there is a huge switching cost to using a different operating system instead.

Early versions of the iPhone SDK <> were covered by a non-disclosure agreement <>. The agreement forbade independent developers from discussing the content of the interfaces. Apple discontinued the NDA in October 2008. [57] <>

Vendor lock-in

[edit <>] Further information: Vendor lock-in <>

Any dependency on the future versions and upgrades for a proprietary software package can create vendor lock-in, entrenching a monopoly position. [58] <>

Software limited to certain hardware configurations

[edit <>]

Proprietary software may also have licensing terms that limit the usage of that software to a specific set of hardware. Apple <> has such a licensing model for macOS <>, an operating system which is limited to Apple hardware, both by licensing and various design decisions. This licensing model has been affirmed by the United States Court of Appeals for the Ninth Circuit <>. [59] <>

Abandonment by proprietors

[edit <>] Main article: Abandonware <>

Proprietary software which is no longer marketed, supported or sold by its owner is called *abandonware* <>, the digital form of orphaned works <>. If the proprietor of a software package should cease to exist, or decide to cease or limit production or support for a proprietary software package, recipients and users of the package may have no recourse if problems are found with the software. Proprietors can fail to improve and support software because of business problems. [60] <> Support for older or existing versions of a software package may be ended to force users to upgrade and pay for newer versions [61] <> (planned obsolescence <>). Sometimes another vendor or a software's community themselves can provide support <> for the software, or the users can migrate to either competing systems with longer support life cycles or to FOSS <>-based systems. [62] <>

Some proprietary software is released by their owner at end-of-life <> as

open-source orsource available <> software, often to prevent the software from becoming unsupported and unavailableabandonware <>.[63] <>[64] <>[65] <> 3D Realms <> and id Software <> are famous for the practice of releasing closed source software into theopen source <>.[further explanation needed <>] Some of those kinds are free-of-charge downloads (freeware <>), some are still commercially sold (e.g.ArX Fatalis <>).[further explanation needed <>] More examples of formerly closed-source software in theList of commercial software with available source code <> and List of commercial video games with available source code <>.

Pricing and economics

[edit <>] See also: Commercial software <>

Proprietary software is not synonymous with commercial software <>.[66] <>[67] <> although the two terms are sometimes used synonymously in articles about free software.[68] <>[69] <> Proprietary software can be distributed at no cost or for a fee, andfree software <> can be distributed at no cost or for a fee.[70] <> The difference is that whether proprietary software can be distributed, and what the fee would be, is at the proprietor's discretion. With free software, anyone who has a copy can decide whether, and how much, to charge for a copy or related services.[71] <>

Proprietary software that comes for no cost is called freeware <>.

Proponents of commercial proprietary software argue that requiring users to pay for software as a product increases funding or time available for the research and development <> of software. For example, Microsoft <> says that per-copy fees maximize the profitability of software development.[72] <>

Proprietary software generally creates greater commercial activity over free software, especially in regard to market revenues.[73] <> Proprietary software is often sold with a license that gives the end user right to use the software.

Technical support for proprietary software can often be provided only by employees of the company that created the program and such service is included with the software. However, a dedicated technical support system increases the cost of software maintenance, which has an impact on its price.[74] <>

See also

[edit <>]

- * Business software <>
- * Commercial off-the-shelf <>
- * Comparison of open-source and closed-source software <>
- * Proprietary hardware <>
- * Retail software <>
- * Enshittification <>

References

[edit <>]

- ^a <> b <> Saraswati Experts. "2.5.3" <https://books.google.com/books?id=OtIBDAAAQBAJ&pg=SA1-PA31>. COMPUTER SCIENCE WITH C++. Saraswati House Pvt Ltd. p. 1.27. ISBN <> 978-93-5199-877-8 <>. Retrieved29 June 2017.
- ^a <> Brendan Scott (March 2003). "Why Free Software's Long Run TCO must be lower" <https://books.google.com/books?id=C55YaWmDBiAC&pg=PA51>. AUUGN. 24 (1). AUUG, Inc. 1. Definitions. Retrieved 29 June 2017.
- ^a <> Ceruzzi, Paul E. (2003). A History of Modern Computing <https://archive.org/details/historyofmodernc00ceru_0/page/128>. Cambridge, MA: MIT Press <>. p. 128 <https://archive.org/details/historyofmodernc00ceru_0/page/128>. ISBN <> 0-262-53203-4 <>. Although IBM agreed to sell its machines as part of a Consent Decree effective January 1956, leasing continued to be its preferred way of doing business.
- ^a <> "The History of Equipment Leasing" <https://web.archive.org/web/20080411024345/http://www.leasegenie.com/History_of_Leasing.html>, Lease Genie, archived from the original <http://www.leasegenie.com/History_of_Leasing.html> on April 11, 2008, retrieved November 12, 2010, In the 1960s, IBM and Xerox recognized that substantial sums could be made from the financing of their equipment. The leasing of computer and office equipment that occurred then was a significant contribution to leasings [sic] growth, since many companies were exposed to equipment leasing for the first time when they leased such equipment.
- ^a <> "Overview of the GNU System" <https://www.gnu.org/gnu/gnu-history.en.html>. GNU Operating System. Free Software Foundation. 2016-06-16. Retrieved 2017-05-01.
- ^a <> Pugh, Emerson W. (2002). "Origins of Software Bundling". IEEE Annals of the History of Computing <>. 24 (1): 5758. Bibcode <>:2002IAHC...24a..57P <https://ui.adsabs.harvard.edu/abs/2002IAHC...24a..57P>. doi <>: 10.1109/85.988580 <https://doi.org/10.1109%2F85.988580>.

* ^ <> Hamilton, Thomas W. (1969). IBM's Unbundling Decision: Consequences for Users and the Industry. Programming Sciences Corporation.

* ^ <> "Chronological History of IBM: 1960s"
<https://web.archive.org/web/20160703062451/http://www-03.ibm.com/ibm/history/history/decade_1960.html>
.IBM <>. n.d. Archived from the original
<http://www-03.ibm.com/ibm/history/history/decade_1960.html> on July 3, 2016.
Retrieved May 28, 2016. Rather than offer hardware, services and software exclusively in packages, marketers 'unbundled' the components and offered them for sale individually. Unbundling gave birth to the multibillion-dollar software and services industries, of which IBM is today a world leader.

* ^ <> Gates, Bill (February 3, 1976). "An Open Letter to Hobbyists"
<https://upload.wikimedia.org/wikipedia/commons/1/14/Bill_Gates_Letter_to_Hobbyists.jpg>
. Retrieved May 28, 2016.

* ^ <> Swann, Matthew (18 November 2004). Executable Code is Not the Proper Subject of Copyright Law (Technical report). Cal Poly State University. CPSLO-CSC-04-02.

* ^ <> Pamela Samuelson (Sep 1984), "CONTU Revisited: The Case against Copyright Protection for Computer Programs in Machine-Readable Form"
<<https://web.archive.org/web/20170804014725/http://scholarship.law.berkeley.edu:80/facpubs/333/>>
, Duke Law Journal, 1984 (4): 663769, doi <>:10.2307/1372418
<<https://doi.org/10.2307%2F1372418>>, JSTOR <> 1372418
<<https://www.jstor.org/stable/1372418>>, archived from the original
<<https://scholarship.law.berkeley.edu/facpubs/333>> on Aug 4, 2017

* ^ <> Robert X. Cringely <>. Cringely's interview with Brewster Kahle
<<https://web.archive.org/web/20190118221148/https://www.youtube.com/watch?v=-1jUr0JrYEk&gl=US&hl=en>>
. YouTube. 46 minutes in. Archived from the original
<<https://www.youtube.com/watch?v=-1jUr0JrYEk>> on 2019-01-18.

* ^ <> Rep. Kastenmeier, Robert W. [D-WI-2 (1980-03-26). "H.R.6934 - 96th Congress (1979-1980): Computer Software Copyright Act of 1980"
<<https://www.congress.gov/bill/96th-congress/house-bill/6934>>. www.congress.gov
. Retrieved 2025-09-16. {{cite web <>}}: CS1 maint: numeric names: authors list (link <>)

* ^ <> Cantrill, Bryan <> (2014-09-17). Corporate Open Source Anti-patterns
<<https://ghostarchive.org/varchive/youtube/20211027/Pm8P4oCIY3g>>. YouTube.
Event occurs at 3:15. Archived from the original
<<https://www.youtube.com/watch?v=Pm8P4oCIY3g&t=3m15s>> on 2021-10-27. Retrieved 2015-12-26.

* ^ <> Gallant, John (1985-03-18). "IBM policy draws fire - Users say source code rules hamper change"
<<https://books.google.com/books?id=4Wgmey4obagC&q=1983object-only+model+IBM&pg=PA8>>
. Computerworld <>. Retrieved 2015-12-27. While IBM's policy of withholding source code for selected software products has already marked its second anniversary, users are only now beginning to cope with the impact of that decision. But whether or not the advent of object-code-only products has affected their day-to-day DP operations, some users remain angry about IBM's decision. Announced in February 1983, IBM's object-code-only policy has been applied to a growing list of Big Blue system software products

* ^ <> Hassett, Rob (Dec 18, 2012). "Impact of Apple vs. Franklin Decision"
<<http://www.internetlegal.com/impact-of-apple-vs-franklin-decision/>>. InternetLegal.com. Archived
<<https://web.archive.org/web/20230908092517/https://internetlegal.com/impact-of-apple-vs-franklin-decision/>>
from the original on Sep 8, 2023.

* ^ a <> b <> Landley, Rob (2009-05-23). "May 23, 2009"
<<https://landley.net/notes-2009.html#23-05-2009>>. landley.net. Retrieved 2024-06-22. So if open source used to be the norm back in the 1960s and 70s, how did this _change_? Where did proprietary software come from, and when, and how? How did Richard Stallman's little utopia at the MIT AI lab crumble and force him out into the wilderness to try to rebuild it? Two things changed in the early 80's: the exponentially growing installed base of microcomputer hardware reached critical mass around 1980, and a legal decision altered copyright law to cover binaries in 1983. Increasing volume: The microprocessor creates millions of identical computers

* ^ <>
<https://www.geeksforgeeks.org/software-engineering/difference-between-open-source-software-and-proprietary-software/>
<<https://www.geeksforgeeks.org/software-engineering/difference-between-open-source-software-and-proprietary-software/>>

* ^ <> Terasaki 2013 <>, p. 469. sfn error: no target: CITEREFTerasaki2013 (help <>)

* ^ <> Terasaki 2013 <>, pp. 469-470. sfn error: no target: CITEREFTerasaki2013 (help <>)

* ^ <> Boyle 2003 <>, p. 45. sfn error: no target: CITEREFBoyle2003 (help <>)

* ^ a <> b <> Clohessy et al. 2020 <>, pp. 40-41. sfn error: no target: CITEREFClohessy_et_al.2020 (help <>)

* ^ <> Watt 2023 <>, p. 4. sfn error: no target: CITEREFWatt2023 (help <>)

* ^ <> Dempsey & Kelliher 2018 <>, p. 48. sfn error: no target: CITEREFDempseyKelliher2018 (help <>)

* ^ <> Dempsey & Kelliher 2018 <>, pp. 48, 57. sfn error: no target:

CITEREFDempseyKelliher2018 (help <>)

* ^ <> Dempsey & Kelliher 2018 <>, pp. 6163. sfn error: no target:

CITEREFDempseyKelliher2018 (help <>)

* ^ <> Dempsey & Kelliher 2018 <>, p. 2. sfn error: no target:

CITEREFDempseyKelliher2018 (help <>)

* ^ <> Engelfriet, Arnoud (AugustSeptember 2006). "The best of both worlds"

<<https://web.archive.org/web/20130914013626/http://www.iam-magazine.com/issues/Article.ashx?g=64d0a423-1249-4de3-929c-91b57c15f702>>

.Intellectual Asset Management (19). Gavin Stewart. Archived from the original

<<http://www.iam-magazine.com/issues/article.ashx?g=64d0a423-1249-4de3-929c-91b57c15f702>>

on 2013-09-14. Retrieved 2008-05-19.

* ^ <> Loftus, Jack (2007-02-19). "Managing mixed source software stacks"

<https://web.archive.org/web/20100603162347/http://searchenterpriselinux.techtarget.com/news/article/0,289142,sid39_gci1244277,00.html>

. LinuxWorld. Archived from the original

<http://searchenterpriselinux.techtarget.com/news/article/0,289142,sid39_gci1244277,00.html>

on 2010-06-03.

* ^ <> Tan, Aaron (2006-12-28). "Novell: We're a 'mixed-source' company"

<<http://www.zdnetasia.com/news/software/0,39044164,61977995,00.htm>>. CNET Networks, Inc.

* ^ <> Rosenberg, Donald (2000). Open Source: The Unauthorized White Papers

<<https://archive.org/details/opensourceunauth00rose/page/109>>. Foster City: IDG. p.109 <<https://archive.org/details/opensourceunauth00rose/page/109>>. ISBN <> 0-7645-4660-0 <>.

* ^ <> "Categories of Free and Non-Free Software"

<<https://www.gnu.org/philosophy/categories.html#PublicDomainSoftware>>. GNU Project.

* ^ <> Free Software Foundation <> (2009-05-05). "Frequently Asked Questions about the GNU Licenses"

<<https://www.gnu.org/licenses/gpl-faq.html#WindowsRuntimeAndGPL>>. Retrieved 2017-05-01.

* ^ <> Richard Stallman (2004-04-12). "Free But Shackled - The Java Trap"

<<https://www.gnu.org/philosophy/java-trap.html>>. Retrieved 2017-05-01.

* ^ <> Liberman, Michael (1995). "Overreaching Provisions in Software License Agreements" <<http://jolt.richmond.edu/v1i1/liberman.html>>. Richmond Journal of Law and Technology <>. 1: 4. Retrieved November 29, 2011.

* ^ <> Limitations and Exceptions to Copyright and Neighbouring Rights in the Digital Environment: An International Library Perspective (2004)

<<http://www.ifla.org/publications/limitations-and-exceptions-to-copyright-and-neighbouring-rights-in-the-digital-environm>>

. IFLA (2013-01-22). Retrieved on 2013-06-16.

* ^ <> Daniel A. Tysver (2008-11-23). "Why Protect Software Through Patents"

<<http://www.bitlaw.com/software-patent/why-patent.html>>. Bitlaw. Retrieved 2009-06-03. In connection with the software, an issued patent may prevent others from utilizing a certain algorithm (such as the GIF image compression algorithm) without permission, or may prevent others from creating software programs that perform a function in a certain way. In connection with computer software, copyright law can be used to prevent the total duplication of a software program, as well as the copying of a portion of software code.

* ^ <> Donovan, S. (1994). "Patent, copyright and trade secret protection for software".IEEE Potentials. 13 (3): 20. doi <>:10.1109/45.310923

<<https://doi.org/10.1109%2F45.310923>>. S2CID <> 19873766

<<https://api.semanticscholar.org/CorpusID:19873766>>. Essentially there are only three ways to protect computer software under the law: patent it, register a copyright for it, or keep it as a trade secret.

* ^ <> Eben Moglen (2005-02-12). "Why the FSF gets copyright assignments from contributors" <<http://www.gnu.org/licenses/why-assign.html>>. Retrieved 2017-05-01. Under US copyright law, which is the law under which most free software programs have historically been first published, [...] only the copyright holder or someone having assignment of the copyright can enforce the license.

* ^ <> White, Aoife (2012-07-03). "Oracle Can't Stop Software License Resales, EU Court Says"

<<https://www.bloomberg.com/news/2012-07-03/oracle-can-t-stop-software-license-resales-eu-court-says-1-.html>>

.Bloomberg.

* ^ <> Microsoft Corporation <> (2005-04-01). "End-User License Agreement for Microsoft Software: Microsoft Windows XP Professional Edition Service Pack 2"

<<http://www.microsoft.com/about/legal/useterms/>> (PDF). Microsoft <>. p. Page 3 . Retrieved2009-04-29.

* ^ <> Microsoft Corporation <> (2005-04-01). "End-User License Agreement for Microsoft Software: Microsoft Windows XP Professional Edition Service Pack 2"

<<http://www.microsoft.com/about/legal/useterms/>> (PDF). Microsoft <>. p. Page 1 . Retrieved2009-04-29. You may install, use, access, display and run one copy of the Software on a single computer, such as a workstation, terminal or another device ("Workstation Computer"). The Software may not be used by more than two (2) processors at any one time on any single Workstation Computer. ... You may permit a maximum of ten (10) computers or other electronic devices (each a 'Device') to connect to the Workstation Computer to utilize one or more

of the following services of the Software: File Services, Print Services, Internet Information Services, Internet Connection Sharing and telephony services.

* ^ <> Adobe Systems <>, Adobe Software License Agreement
<https://www.adobe.com/products/eulas/pdfs/gen_wwcombined_20091001_1604.pdf>
(PDF), retrieved 2010-06-09

* ^ <> Parker, Jason (January 27, 2009). "Apple iWork '09 review: Apple iWork '09" <<https://www.cnet.com/reviews/apple-iwork-09-review/>>. CNET. Retrieved May 2, 2022.

* ^ <> Heffan, Ira V. (1997). "Copyleft: Licensing Collaborative Works in the Digital Age"
<<https://web.archive.org/web/20130514171754/http://www.open-bar.org/docs/copyleft.pdf>>
(PDF). Stanford Law Review. 49 (6): 1490. doi <:10.2307/1229351
<<https://doi.org/10.2307%2F1229351>>. JSTOR <> 1229351

<<https://www.jstor.org/stable/1229351>>. Archived from the original
<<http://www.open-bar.org/docs/copyleft.pdf>> (PDF) on 2013-05-14. Retrieved
2009-07-27. Under the proprietary software model, most software developers
withhold their source code from users.

* ^ <> David A. Wheeler (2009-02-03). "Free-Libre / Open Source Software
(FLOSS) is Commercial Software"
<<http://www.dwheeler.com/essays/commercial-floss.html>>. Retrieved 2009-06-03.

* ^ <> "Distribution of IBM Licensed Programs and Licensed Program Materials
and Modified Agreement for IBM Licensed Programs"
<<http://www.landley.net/history/mirror/ibm/oco.html>>. Announcement Letters.
IBM. February 8, 1983. 283-016.

* ^ <> Greg Mushial (July 20, 1983), "Module 24: SLAC Enhancements to and
Beautifications of the IBM H-Level Assembler for Version 2.8"
<<https://www.gsf-soft.com/Documents/SLAC-MODS.html>>, SLAC VM NOTEBOOK, Stanford
Linear Accelerator Center

* ^ <> Shankland, Stephen (January 30, 2003). "Governments to see Windows
code" <<https://www.cnet.com/tech/tech-industry/governments-to-see-windows-code/>>
. CNET. Retrieved May 2, 2022.

* ^ <> Gao, Ken (February 28, 2003). "China to view Windows code"
<<https://www.cnet.com/tech/tech-industry/china-to-view-windows-code/>>. CNET.
Retrieved May 2, 2022.

* ^ <> James Ball <>, Julian Borger and Glenn Greenwald (2013-09-06). "US and
UK spy agencies defeat privacy and security on the internet"
<<https://www.theguardian.com/world/2013/sep/05/nsa-gchq-encryption-codes-security>>
. The Guardian.

* ^ <> Bruce Schneier (2013-09-06). "How to remain secure against NSA
surveillance"
<<https://www.theguardian.com/world/2013/sep/05/nsa-how-to-remain-secure-surveillance>>
. The Guardian.

* ^ <> Jacob, Matthias; Boneh, Dan; Felten, Edward <> (30 October 2003).
"Attacking an Obfuscated Cipher by Injecting Faults"
<https://archive.org/details/springer_10.1007-b11725/page/n26/mode/1up>. In
Feigenbaum, Joan <> (ed.). Digital Rights Management: ACM CCS-9 Workshop, DRM
2002, Washington, DC, USA, November 18, 2002, Revised Papers
<https://archive.org/details/springer_10.1007-b11725>. Second International
Workshop on Digital Rights Management. Lecture Notes in Computer Science. Vol.
2696. Springer Berlin Heidelberg <>. p. 17. ISBN <> 978-3-540-44993-5 <>.
Retrieved 12 January 2024 via Internet Archive <>.

* ^ <> Tony Patton (2008-11-21). "Protect your JavaScript with obfuscation"
<<https://archive.today/20140315082054/http://www.techrepublic.com/blog/software-engineer/protect-your-javascript-with-obfuscation/>>
. TechRepublic. Archived from the original
<<https://www.techrepublic.com/article/protect-your-javascript-with-obfuscation/>>
on March 15, 2014. Retrieved May 2, 2022. While the Web promotes the sharing
of such code, there are times when you or a client may not want to share their
JavaScript code. This may be due to the sensitive nature of data within the
code, proprietary calculations, or any other scenario.

* ^ a <> b <> Orenstein, David (January 10, 2000). "Application Programming
Interface"
<<https://www.computerworld.com/article/2593623/application-programming-interface.html>>
. Computerworld. Retrieved May 2, 2022.

* ^ <> "Commission Decision of 24.03.2004 relating to a proceeding under
Article 82 of the EC Treaty (Case COMP/C-3/37.792 Microsoft)"
<<https://web.archive.org/web/20081028213407/http://ec.europa.eu/comm/competition/antitrust/cases/decisions/37792/en.pdf>>
(PDF). European Commission <>. March 24, 2004. Archived from the original
<<http://ec.europa.eu/comm/competition/antitrust/cases/decisions/37792/en.pdf>>
(PDF) on October 28, 2008. Retrieved June 17, 2009.

* ^ <> Wilson, Ben (2008-10-01). "Apple Drops NDA for Released iPhone
Software"
<https://web.archive.org/web/20130308181607/http://reviews.cnet.com/8301-19512_7-10115774-233.html>
. CNET. Archived from the original
<<https://www.cnet.com/tech/mobile/apple-drops-nda-for-released-iphone-software/>>
on 2013-03-08. Retrieved 2022-05-02.

* ^ <> The Linux Information Project (2006-04-29). "Vendor Lock-in Definition"

<http://www.linfo.org/vendor_lockin.html>. Retrieved 2009-06-11. Vendor lock-in, or just lock-in, is the situation in which customers are dependent on a single manufacturer or supplier for some product [...] This dependency is typically a result of standards that are controlled by the vendor [...] It can grant the vendor some extent of monopoly power [...] The best way for an organization to avoid becoming a victim of vendor lock-in is to use products that conform to free, industry-wide standards. Free standards are those that can be used by anyone and are not controlled by a single company. In the case of computers, this can usually be accomplished by using free software rather than proprietary software (i.e., commercial software).

* ^ <> Don Reisinger (2011-09-29). "Apple wins key battle against Psystar over Mac clones"

<<https://www.cnet.com/home/smart-home/apple-wins-key-battle-against-psystar-over-mac-clones/>> . Retrieved 2022-05-02.

* ^ <> "What happens when a proprietary software company dies?"

<<https://www.linux.com/news/what-happens-when-proprietary-software-company-dies/>> . Linux. October 24, 2003. Retrieved May 2, 2022.

* ^ <> Livingston, Brian (December 15, 2006). "Microsoft Turns Up The Heat On Windows 2000 Users"

<<https://web.archive.org/web/20220503022710/https://www.crn.com/news/channel-programs/196700124/microsoft-turns-up-the-heat-on-windows-2000-users.htm>> . CRN. Archived from the original

<<https://www.crn.com/news/channel-programs/196700124/microsoft-turns-up-the-heat-on-windows-2000-users.htm>> on May 3, 2022. Retrieved May 2, 2022.

* ^ <> Cassia, Fernando (March 28, 2007). "Open Source, the only weapon against 'planned obsolescence'"

<<https://web.archive.org/web/20121122142811/http://www.theinquirer.net/inquirer/news/1001739/open-source-weapon-planned-obsolescence>> . The Inquirer <>. Archived from the original

<<http://www.theinquirer.net/inquirer/news/1001739/open-source-weapon-planned-obsolescence>> on November 22, 2012. Retrieved August 2, 2012.

* ^ <> Bell, John (October 1, 2009). "Opening the Source of Art"

<<https://web.archive.org/web/20140330084636/http://timreview.ca/article/294>>. Technology Innovation Management Review. Archived from the original

<<http://www.johnpbell.com/opening-the-source-of-art/>> on March 30, 2014. Retrieved May 2, 2022. that no further patches to the title would be forthcoming. The community was predictably upset. Instead of giving up on the game, users decided that if Activision wasn't going to fix the bugs, they would. They wanted to save the game by getting Activision to open the source so it could be kept alive beyond the point where Activision lost interest. With some help from members of the development team that were active on fan forums, they were eventually able to convince Activision to release Call to Power II's source code in October of 2003.

* ^ <> Wen, Howard (June 10, 2004). "Keeping the Myths Alive"

<<https://web.archive.org/web/20130406161344/http://www.linuxdevcenter.com/pub/a/linux/2004/06/10/mythdevelopers.html>> . Linux Dev Center. Archived from the original

<<http://linuxdevcenter.com/pub/a/linux/2004/06/10/mythdevelopers.html>> on April 6, 2013. Retrieved December 22, 2012. fans of the Myth trilogy have taken this idea a step further: they have official access to the source code for the Myth games. Organized under the name MythDevelopers, this all-volunteer group of programmers, artists, and other talented people devote their time to improving and supporting further development of the Myth game series.

* ^ <> Largent, Andy (October 8, 2003). "Homeworld Source Code Released"

<<https://web.archive.org/web/20131012012745/http://www.insidemacgames.com/news/story.php?ArticleID=8516>> . Inside Mac Games. Archived from the original

<<http://www.insidemacgames.com/news/story.php?ArticleID=8516>> on October 12, 2013. Retrieved November 24, 2012. With the release of Homeworld 2 for the PC, Relic Entertainment has decided to give back to their impressive fan community by releasing the source code to the original Homeworld.

* ^ <> Rosen, Lawrence <> (2004). Open Source Licensing

<https://archive.org/details/opensourcelicens00rose_0>. Upper Saddle River: Prentice Hall. pp.52

<https://archive.org/details/opensourcelicens00rose_0/page/52>, 255, 259. ISBN <> 978-0-13-148787-1 <>.

* ^ <> Havoc Pennington (2008-03-02). "Debian Tutorial"

<<https://web.archive.org/web/20180129072039/https://www.debian.org/doc/manuals/debian-tutorial/>> . Archived from the original <<http://www.debian.org/doc/manuals/debian-tutorial/>> on 2018-01-29. Retrieved 2009-06-04. It is important to distinguish commercial software from proprietary software. Proprietary software is non-free software, while commercial software is software sold for money.

* ^ <> Russell McOrmond (2000-01-04). "What is "Commercial Software"?"

<<https://web.archive.org/web/20121004013215/http://www.linuxtoday.com/developer/2000010400505NWSM>> . Archived from the original

<<http://www.linuxtoday.com/developer/2000010400505NWSM>> on 2012-10-04. Retrieved 2009-05-02.

* ^ <> Michael K. Johnson (1996-09-01). "Licenses and Copyright"

<<http://www.linuxjournal.com/article/1297>>. Retrieved 2009-06-16. If you

program for Linux, you do need to understand licensing, no matter if you are writing free software or commercial software.

* ^ <> Eric S. Raymond (2003-12-29). "Proprietary, Jargon File"

<<http://www.catb.org/~esr/jargon/html/P/proprietary.html>>. Retrieved 2009-06-12.

Proprietary software should be distinguished from commercial software. It is possible for the software to be commercial [...] without being proprietary. The reverse is also possible, for example in binary-only freeware.

* ^ <> "Selling Free Software" <<https://www.gnu.org/philosophy/selling.html>>.

GNU Project.

* ^ <> "The Commercial Software Model"

<<https://web.archive.org/web/20070305010226/http://www.microsoft.com/presspass/exec/craig/05-03sharedsource.msp>>

.Microsoft <>. May 2001. Archived from the original

<<http://www.microsoft.com/presspass/exec/craig/05-03sharedsource.msp>> on 2007-03-05.

* ^ <> Open Source Versus Commercial Software: Why Proprietary Software is Here to Stay <<https://www.informit.com/articles/article.aspx?p=420290>>. Sams Publishing. October 2005. Retrieved 2022-05-02.

* ^ <> "Proprietary software | Definition, History, & Facts | Britannica"

<<https://www.britannica.com/technology/proprietary-software>>. www.britannica.com . Retrieved 2025-04-24.

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