

# Software Package Data Exchange (SPDX™) Specification

Version: 1.0 beta - DRAFT 20100807

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Version: DRAFT 20100806

# TABLE OF CONTENTS

<u>1.</u>	RATIONALE	4
<u>2.</u>	IDENTIFICATION INFORMATION	6
<u>3.</u>	COMMON OVERVIEW INFORMATION	9
<u>4.</u>	INDEX OF NON STANDARD LICENSE(S) DETECTED	14
<u>5.</u>	FILE SPECIFIC INFORMATION	16
<u>6.</u>	<u>DEFINITIONS</u>	19
APP	PENDIX I. STANDARD LICENSE SHORT FORMS	20
APP	PENDIX II. EXAMPLES	34
	PENDIX III. CREATIVE COMMONS ATTRIBUTION LICENSE 3.0	

## 1. Rationale

#### 1.1 Charter

To create a set of data exchange standards that enable companies and organizations to share + and component information (metadata) for software packages and related content with the aim of facilitating license and other policy compliance.

#### 1.2 Definition

The Software Package Data Exchange (SPDX™) specification is a standard format for communicating the components, licenses and copyrights associated with a software package. An SPDX file is associated with a particular software package and contains information about that package in the SPDX format.

1.3. Why is a common format for data exchange needed?

Companies and organizations (collectively "Organizations") are widely using and reusing open source and other software packages. Compliance with the associated licenses requires a set of analysis activities and due diligence that each Organization performs independently including: a manual and/or automated scan of software and identification of associated licenses followed by manual verification. Software development teams across the globe use the same open source packages, but little infrastructure exists to facilitate collaboration on the analysis or share the results of these analysis activities. As a result, many groups are performing the same work leading to duplicated efforts and redundant information being created. The SPDX working group seeks to create a data exchange format so that information about software packages and related content, may be collected and shared in a common format with the goal of saving time and improving data accuracy.

#### 1.4. What does this specification cover?

- 1.4.1. Identification Information: Meta data to associate analysis results with a specific package. This includes a unique identifier that identifies a specific instance of a package and permits correlation to the corresponding SPDX file.
- 1.4.2. Overview Information: Facts that are common properties of the entire package.
- 1.4.3. File Specific Information: Facts (e.g. copyrights, licenses) that are specific to each file included in the package.
- 1.4.4. Common Licenses: A list of common licenses likely to be encountered and a standardized naming convention for referring to these licenses within an SPDX document. This naming convention will also be the basis for extending this set of common licenses over time.
- 1.4.5. Evolution Hooks: A set of mechanisms that permit extending the specification in a structured manner under specific future versions of the specification.
- 1.5. What is not covered in the specification?

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- 1.5.1. Information that cannot be derived from an inspection (whether manual or using automated tools) of the package to be analyzed.
- 1.5.2. How the data stored in and SPDX file is used by the recipient.
- 1.5.3. Any identification of any patent(s) which may or may not relate to the package.
- 1.5.4. Legal interpretation of the licenses or any compliance actions that might need to be taken.
- 1.6. Format Requirements:
  - 1.6.1. Must be in a human readable form.
  - 1.6.2. Must be in a syntax that a software tool can read and write.
  - 1.6.3. Must be suitable to be checked for syntactic correctness independent of how it was generated (human or tool).
  - 1.6.4. The SPDX file character set must support UTF-8 encoding.
  - 1.6.5. Must permit automated specification syntax validation.
  - 1.6.6. Resource Description Framework (RDF) will be used to represent certain semantic information.

## 2. Identification Information

One instance of the Identification Information is required per package instance.

Fields:

#### 2.1 SPDX Specification Version Number

- 2.1.1 Purpose: Provide a reference number that can be used to understand how to parse and interpret the rest of the file. It will enable both future changes to the specification and to support backward compatibility. The version number consists of a Major and Minor version indicator. The Major field will be incramented when one or more sections are created, modified or deleted. The Minor field will be incremented when either only the fields within a section are modified or standard recognized licenses are added to appendix.
- 2.1.2 **Intent:** Here, parties exchanging Identification Information in accordance with SPDX specification need to provide 100% transparency as to which SPDX specification such Identification Information is conforming to.
- 2.1.3 Cardinality: Mandatory, single instance
- 2.1.4 Tag: SPDXVersion
- 2.1.5 RDF: /RDF/SPDXDoc/SPDXVersion
- 2.1.6 **Data Format:** SPDX-M.N **where:** M is Major version number, N is minor version number.
- 2.1.7 **Example:** SPDXVersion: SPDX-1.0

## 2.2 Generation Method

- 2.2.1 **Purpose:** Identify how the meta data information in the SPDX file was generated. If it was generated manually, it should indicate who did the analysis. If the information in the file was generated with a software tool, the file should indicate an identifier and version for that tool.
- 2.2.2 **Intent:** Here, the generation method will assist the reader of the Identification Information in self determining the general reliability/accuracy of the Identification Information.
- 2.2.3 **Cardinality:** Mandatory, one or more.
- 2.2.4 Tag: "CreatedBy"
- 2.2.5 RDF: /RDF/SPDXDoc/CreatedBy

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2.2.6 **Data Format**: "Person: person name" (with optional email) or "Company: company" (depending on which is accountable) or "Tool: tool identifier - version". If multiple participants in the analysis, then they should be indicated with separate instances.

## 2.2.7 **Example**:

CreatedBy: Person: Jane Doe (jane.doe@company.com)

CreatedBy: Company: ExampleCodeInspect (<a href="mailto:contact@ECI.com">contact@ECI.com</a>)

CreatedBy: Tool: LicenseFInd-1.0

#### 2.3 Creation Time Stamp

- 2.3.1 **Purpose:** Identify when the analysis was done and the SPDX file was originally created. This is to be specified according to combined data and time in UTC format as specified in ISO 8601 standard.
- 2.3.2 **Intent:** Here, the Time Stamp can serve as a verification as to whether the analysis needs to be updated.
- 2.3.3 **Cardinality:** Mandatory, single instance.
- 2.3.4 **Tag:** "Created:"
- 2.3.5 RDF: /RDF/SPDXDoc/Created
- 2.3.6 **Data Format:** YYYY-MM-DDThh:mm:ssZ where: YYYY is year, MM is month with leading zero, DD is day with leading zero, T is delimiter for time, hh is hours with leading zero in 24 hour time, mm is minutes with leading zero, ss is seconds with leading zero, and Z is universal time indicator.
- 2.3.7 **Example:** Created: 2010-01-29T18:30:22Z

## 2.4 Reviewers

- 2.4.1 Purpose: List of the people who have reviewed the SPDX file and the date of that review. Note that there is no requirement for a particular reviewer to add their name to the file, however it may be important for participants in the software supply chain to validate whether upstream providers have reviewed the SPDX file. This can be considered as an equivalent to "signed off" or "reviewed by". Additional reviewers can be added after the original version of the SPDX file is created and can occur as an append to the original file.
- 2.4.2 **Intent:** Here, as time progresses certain reviewers will begin to gain credibility as reliable. This field intends to make such information transparent.
- 2.4.3 **Cardinality:** Optional, zero to many.
- 2.4.4 Tag: "ReviewedBy:"
- 2.4.5 **RDF**: /RDF/SPDXDoc/ReviewedBy

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- 2.4.6 **Data Format:** "Person: person name (with optional email) YYYY-MM-DDThh:mm:ssZ". Where YYYY is year, MM is month with leading zero, DD is day with leading zero, T is delimiter for time, hh is hours with leading zero in 24 hour time, mm is minutes with leading zero, ss is seconds with leading zero, and Z is universal time indicator. If multiple people participated in the analysis, then each should be represented with separate instances.
- 2.4.7 **Example:** ReviewedBy: Person: Jane Doe (jane@company.com) 2010-08-01T14:30:00Z

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## 3. Common Overview Information

One instance of the Common Overview Information is required per package being analyzed. A package can contain sub-packages, but the overview is a reference to the entire contents of the package listed.

#### Fields:

#### 3.1 Formal Name

- 3.1.1 **Purpose:** Full name of the package as given by originator with version information if available.
- 3.1.2 **Intent:** Here, the formal name of each package is an important conventional technical identifier to be maintained for each package.
- 3.1.3 Cardinality: Mandatory single instance.
- 3.1.4 Tag: "DeclaredName:"
- 3.1.5 RDF: /RDF/SPDXDoc/Describes/Package/DeclaredName
- 3.1.6 **DataFormat:** text string of full name and version information if available.
- 3.1.7 **Example:** DeclaredName: glibc 2.11.1

## 3.2 Specific Package File Name

- 3.2.1 **Purpose:** File name of package instance.
- 3.2.2 Intent: Here, the actual filename of the compressed file (containing the package) is a significant technical element that needs to be carried with each package's Identification Information.
- 3.2.3 **Cardinality:** Mandatory single instance
- 3.2.4 **Tag:** MachineName:
- 3.2.5 **RDF**: /RDF/SPDXDoc/Describes/Package/MachineName
- 3.2.6 **Data Format:** text string of machine generated file name and version typically includes the packaging and compression methods used.
- 3.2.7 **Example:** MachineName: glibc-2.11.1.tar.gz

## 3.3 Unique Identifier

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- 3.3.1 **Purpose:** This field provides an independently reproducible mechanism that permits unique identification of a specific package that correlates to the data in this SPDX file. This identifier enables a recipient to determine if any file in the original package has been changed. The SHA1 unique identifier mechanism will be used.
- 3.3.2 **Intent:** Here, by providing an unique identifier of each package, confusion over which version/modification of a specific package the Identification Information references should be eliminated.
- 3.3.3 **Cardinality:** Mandatory single instance
- 3.3.4 **Tag:** "SHA1"
- 3.3.5 **RDF**: /RDF/SPDXDoc/Describes/Package/SHA1
- 3.3.6 **Data Format:** 160 bit value represented as 40 hexadecimal digits.
- 3.3.7 **Example:** SHA1: d6a770ba38583ed4bb4525bd96e50461655d2758

#### 3.4 Download URL

- 3.4.1 **Purpose:** This field identifies the download Universal Resource Locator (URL) for this package at the time that the SPDX file was initially created and the analysis was done. If there is no public URL, then it is explicitly marked as "unknown".
- 3.4.2 **Intent:** Here, where to download the exact package being referenced is a critical verification and tracking datum.
- 3.4.3 **Cardinality:** Mandatory single instance
- 3.4.4 **Tag:** URL:
- 3.4.5 RDF: /RDF/SPDXDoc/Describes/Package/URL/@rdf:resource
- 3.4.6 **Data Format:** uniform resource locator (when the URL is explicitly "unknown" use <a href="http://spdx.org/rdf/unknown">http://spdx.org/rdf/unknown</a>)
- 3.4.7 **Example:** URL: http://ftp.gnu.org/gnu/glibc/

## 3.5 Additional Source Information

3.5.1 **Purpose:** This is a free form text field that contains additional comments about the origin of the package. For instance, this field might include comments indicating whether the package been pulled from a source code management system or has been repackaged.

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- 3.5.2 **Intent:** Here, by providing a freeform field, reviewers can provide any additional information to describe any anomalies, or discoveries, in the determination of the origin of the package.
- 3.5.3 Cardinality: Optional single instance
- 3.5.4 Tag: "SourceInfo:"
- 3.5.5 **RDF**: /RDF/SPDXDoc/Describes/Package/SourceInfo
- 3.5.6 **Data Format:** free form text without line separator
- 3.5.7 **Example:**

SourceInfo: uses glibc-2\_11-branch from git://sourceware.org/git/glibc.git.

## 3.6 Declared License(s) for a Package

- 3.6.1 **Purpose:** This field lists the licenses that have been declared by the creators of the package. The licenses are listed using a standard short form name. See Appendix I for standardized license short forms. If a Declared License is not one of the standardized license short forms, this field must contain a reference to the full license text included in this SPDX file. If no license is declared, the "NotSpecified" short form in Appendix I should be used. If it is unclear if there is a license reference or not, use "Unknown" short form from Appendix I. If more than one license is formally declared for package, then each should be listed. If the creators of the package offer the recipent a choice of licenses, then each of the choices will be declared as a "disjunctive" license.
- 3.6.2 **Intent:** This is simply the license identified in text in the actual package source code files (typically in the header of each package file.) This field may have multiple declared licenses, if multiple licenses are declared at the package level.
- 3.6.3 **Cardinality**: Mandatory, one or multiple.
- 3.6.4 **Tag:** "DeclaredLicense:" ["DeclaredLicense/DisjunctiveLicense:"]
- 3.6.5 **RDF**:

/RDF/SPDXDoc/Describes/Package/DeclaredLicense /RDF/SPDXDoc/Describes/Package/DeclaredLicense/DisjunctiveLicense

- 3.6.6 Data Format: <short form identifier in Appendix I> | "FullLicense"-N
- 3.6.7 **Example:** DeclaredLicense: LGPL-2.0

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## 3.7 Detected License(s) in Package

- 3.7.1 Purpose: This field list of all licenses found in the package by scanning the files, manually or using automated tools. The licenses should use the standard short form names. See Appendix I for standardized license short forms. If a Detected License is not one of the standardized license short forms, this field must contain a reference to the full licenses text included in this SPDX file. If no licenses are detected then the "NotSpecified" short form in Appendix I should be used. If it is unclear if there is a license reference or not, use "Unknown" short form from Appendix I.
- 3.7.2 Intent: Here, we intend to capture all licenses within the package detected by any scanning tools used by the package reviewer.
- 3.7.3 Cardinality: Mandatory, one or multiple.
- 3.7.4 Tag: "DetectedLicense:"
- 3.7.5 RDF: /RDF/SPDXDoc/Describes/Package/DetectedLicense/
- 3.7.6 Data Format: <short form identifier in Appendix I> | "FullLicense"-N
- 3.7.7 **Example:**

DetectedLicense: GPL-2.0 DetectedLicense: FullLicense-1 DetectedLicense: FullLicense-2

#### 3.8 Declared Copyright Holder of Package

- 3.8.1 Purpose: Identify the author(s) and licensor(s) of package, as well as any dates This will be a free form text field extracted from the package information present. files.
- 3.8.2 Intent: Here, by identifying the actual author(s), some ambiguities, e.g., under which license the author(s) were intending to license the package, may be resolvable by knowing who to contact for clarity.
- 3.8.3 Cardinality: Mandatory, single instance
- 3.8.4 Tag: "DeclaredCopyright:"
- 3.8.5 RDF: /RDF/SPDXDoc/Describes/Package/DeclaredCopyright
- 3.8.6 Data Format: free form text | "unknown"
- 3.8.7 **Example:** DeclaredCopyright: Copyright 2008-2010 John Smith

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## 3.9 Short Description

- 3.9.1 Purpose: This field is a short description of the package
- 3.9.2 Intent: Here, the intent is to allow a reader/reviewer of this field to quickly understand the function/use of the package, at a high level, without having to parse the source code of the actual package.
- 3.9.3 Cardinality: Optional single instance
- 3.9.4 Tag: "ShortDesc:"
- 3.9.5 RDF: /RDF/SPDXDoc/Describes/Package/ShortDesc
- 3.9.6 Data Format: free form text that can span multiple lines
- 3.9.7 **Example:** ShortDesc: gnu c library

#### 3.10 **Description**

- 3.10.1 Purpose: This field is a more detailed description of the package. It may be extracted from the packages itself.
- 3.10.2 Intent: Here, the intent is to provide technical readers/reviewers with a detailed technical explanation of the functionality, anticipated use, and anticipated implementation of the package. This field may also include a description of improvements over prior version of the package, where applicable.
- 3.10.3 Cardinality: Optional single instance
- 3.10.4 Tag: "Description:"
- **3.10.5** RDF: /RDF/SPDXDoc/Describes/Package/Description
- **3.10.6 Data Format:** free form text than can span multiple lines.
- 3.10.7 Example: Description: .....

# 4. Index of Non Standard License(s) Detected

This section is used for any detected or declared licenses that are NOT one of the standard licenses. One instance should be created for every unique license detected in package that does not match one of the standard license short forms from Appendix I. Each license instance should have the following fields.

Fields:

#### 4.1 Identifier

- 4.1.1 **Purpose:** Provide a unique identifier for the packages and files sections to refer to non standard license text detected in the package and reproduced here to aid analysis.
- 4.1.2 **Intent:** Here, we seek to identify in whole or in part portions of the package which are licensed under unfamiliar and/or uncommon licenses.
- 4.1.3 **Cardinality:** mandatory single instance
- 4.1.4 Tag: "LicenseID"
- 4.1.5 **RDF**: /RDF/SPDXDoc/Describes/License/LicenseID
- 4.1.6 **Data Format:** "FullLicense-"N where N is a unique ascending numeric value.
- 4.1.7 Example: LicenselD: FullLicense-1

## 4.2 Extracted Text

- 4.2.1 **Purpose**: Provide a copy of the actual text of the license extracted from the package that is associated with the License ID to aid in analysis.
- 4.2.2 **Intent:** Here, the actual license text included in the package serves as confirmation that the license, and version, named in the header files of the package is correct.
- 4.2.3 **Cardinality:** Mandatory single instance
- 4.2.4 Tag: "LicenseText:"
- 4.2.5 **RDF**: /RDF/SPDXDoc/Describes/License/LicenseText
- 4.2.6 **Data Format**: free form text field that may span multiple lines.
- 4.2.7 **Example:** LicenseText: .....

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# 5. File Specific Information

This section is used to list information for the files in the package. One instance should be created for each file. Each file instance should have the following fields.

Fields:

#### 5.1 Full File Name

- 5.1.1 Purpose: Identify path to file that corresponds to this information.
- 5.1.2 **Intent:** Here, any confusion over where a file needs to hierarchically be placed for proper functionality is mitigated.
- 5.1.3 **Cardinality:** Mandatory single instance
- 5.1.4 **Tag:** "Name"
- 5.1.5 RDF: /RDF/SPDXDoc/Describes/File/Name
- 5.1.6 **Data Format:** [directory/]filename.suffix
- 5.1.7 **Example:** Name: /bar/foo.c

#### 5.2 File Type

- 5.2.1 **Purpose:** This field Identifies common types of files where there may be different treatment of copyright and license information: source, binary, machine generated, etc.
- 5.2.2 **Intent:** Here, this field is basically the "best available" format field, from a developer perspective.
- 5.2.3 Cardinality: Optional single instance
- 5.2.4 **Tag:** "Type:"
- 5.2.5 **RDF**: /RDF/SPDXDoc/Describes/File/Type
- 5.2.6 **Data Format:** "source" | "binary" | "archive" | "other"
- 5.2.7 **Example:** Type: binary

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## 5.3 License(s)

- 5.3.1 Purpose: This field contains the license governing the file if it is known. It will either be explicit from the file header or other information found in the file's source code or the default from the package. If no license information is found it should be denoted as "NotSpecified". If no license information can be determined, the license is denoted as "Unknown". The licenses should use the standard short form names. See Appendix I for standardized license short forms. If a Detected License is not one of the standardized license short forms, this field must contain a reference to the full licenses text included in this SPDX file in section 4. If more than one license is detected in the file, then each should be listed. If any of the detected licenses offer the recipient a choice of licenses, then each of the choices will be declared as a "disjunctive" license.
- 5.3.2 **Intent:** Here, the intent is to have a uniform method to refer to each license with specificity to eliminate any license confusion. For example, the 3 clause BSD would have a different license identifier then the 4 clause BSD.
- 5.3.3 **Cardinality:** Mandatory, one or many.
- 5.3.4 **Tag:** "License:" ["License/DisjunctiveLicense:"]

#### 5.3.5 RDF:

/RDF/SPDXDoc/Describes/File/License /RDF/SPDXDoc/Describes/File/License/DisjunctiveLicense

5.3.6 **Data Format:** <short form identifier in Appendix I> | "FullLicense"-N

5.3.7 **Example:** License: GPL-2.0 License: FullLicense-2

## 5.4 Copyright Information Detected

- 5.4.1 **Purpose:** This field identifies the copyright holders and associated dates of their copyright that are in this specific file if known. Note: Copyright holder identifier may have developer names, companies, email addresses, and may be specified in international character sets. This will be a freeform text field extracted from the package information files.
- **5.4.2 Intent:** Here, similar to identifying the actual author(s) (above), by identifying the copyright holder(s), the copyright holder(s) may be contacted if licensing issues exist with the package, or to request distribution under another license more compatible with a given implementation, for example.
- 5.4.3 **Cardinality:** Mandatory, single instance
- 5.4.4 **Tag:** "Copyright:"
- 5.4.5 RDF: /RDF/SPDXDoc/Describes/File/Copyright

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- 5.4.6 **Data Format:** free form text | "unknown"
- 5.4.7 **Example:** Copyright: Copyright 2008-2010 John Smith

#### 5.5 File Identifier

- 5.5.1 **Purpose**: Provide a unique identifier to match analysis information on specific files between packages.
- 5.5.2 **Intent:** Here, by providing an unique identifier of each file, confusion over which version/modification of a specific file the Identification Information references should be eliminated.
- 5.5.3 **Cardinality:** Optional, single instance
- 5.5.4 Tag: "SHA1"
- 5.5.5 **RDF**: /RDF/SPDXDoc/Describes/File/SHA1
- 5.5.6 **Data Format:** 160 bit value represented as 40 hexadecimal digits.
- 5.5.7 **Example:** SHA1: d6a770ba38583ed4bb4525bd96e50461655d2758

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# 6. DEFINITIONS

Reserved in case there is a need for list of definitions of terms.

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# **Appendix I. Standard License Short Forms**

The following table contains the licenses with standardized short forms that should be recognized by programs that comply to this version of the specification. The short forms have been derived from common usage identifiers, followed by the version number when known. The identifier and version should be separated by a "-".

Note: at this time, exact match, of the formal license is expected unless indicated otherwise by the template specifications in the version on the SPDX.org web site.

License Identifier	Recognized Exceptions	Full name of License
AFL-3.0		Academic Free License 3.0
AGPL-3.0		(GNU) Affero General Public License v3
APL		Adaptive Public License
ASL-2.0		Apache License, 2.0
APSL-2.0		Apple Public Source License 2.0
Artistic-2.0		Artistic license 2.0
AAL		Attribution Assurance License
BSD-4-Clause		BSD 4-clause "Original" or "Old" License
BSD-3-Clause		BSD 3-clause "New" or "Revised" License
BSD-2-Clause		BSD 2-clause "Simplified" or "FreeBSD" License
BSL-1.0		Boost Software License 1.0
CATOSL-1.1		Computer Associates Trusted Open Source License 1.1
CC-BY-1.0		Creative Commons Attribution 1.0
CC-BY-NC-1.0		Creative Commons Attribution Non Commercial 1.0
CC-BY-ND-1.0		Creative Commons Attribution No Derivatives 1.0
CC-BY-SA-1.0		Creative Commons Attribution Share Alike 1.0
CC-BY-NC-ND-1.0		Creative Commons Attribution Non Commercial No Derivatives 1.0
CC-BY-NC-SA-1.0		Creative Commons Attribution Non Commercial Share Alike 1.0
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CC-BY-NC-2.0		Creative Commons Attribution Non Commercial 2.0
CC-BY-ND-2.0		Creative Commons Attribution No Derivatives 2.0
CC-BY-SA-2.0		Creative Commons Attribution Share Alike 2.0
CC-BY-NC-ND-2.0		Creative Commons Attribution Non Commercial No Derivatives 2.0
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CC-BY-ND-2.5		Creative Commons Attribution No Derivatives 2.5
CC-BY-SA-2.5		Creative Commons Attribution Share Alike 2.5
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CC-BY-NC-SA-3.0		Creative Commons Attribution Non Commercial Share Alike 3.0
CDDL-1.0		Common Development and Distribution License 1.0
CPAL-1.0		Common Public Attribution License 1.0
EUDatagrid		EU DataGrid Software License
EPL-1.0		Eclipse Public License 1.0
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EFL-2.0		Eiffel Forum License V2.0
Entessa		Entessa Public License
EUPL-1.1		European Union Public License 1.1
Fair		Fair License
Frameworx		Frameworx License
GPL+	with (font classpath)	GNU General Public License
GPL-1.0	, , , ,	GNU General Public License version 1.0 only
GPL-2.0	with (font classpath)	GNU General Public License version 2.0
GPL-2.0+	with (font classpath)	GNU General Public License version 2.0 or later
GPL-3.0	with (font classpath)	GNU General Public License version 3.0
IPL-1.0	, , , ,	IBM Public License version 1.0
IPA		IPA Font License
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98.	<b>RPL</b> <b>98.</b> 1 98.2 98.3	2.	Formal Name: Reciprocal Public License 1.5 Official Download URL: SPDX Template Reference Copy: http://spdx.org/licenses/RPL-1.5
99.	<b>RS</b> ( <b>99.</b> 199.2	l <b>.</b> 2.	Formal Name: Ricoh Source Code Public License Official Download URL: SPDX Template Reference Copy: http://spdx.org/licenses/RSCPL
100	<b>100</b> 100 100	.2.	Formal Name: Simple Public License 2.0 Official Download URL: SPDX Template Reference Copy: http://spdx.org/licenses/Simple-2.0
101		Sleepyo	eat
	101 101 101	. <b>1.</b> .2.	Formal Name: Sleepycat License Official Download URL: SPDX Template Reference Copy: http://spdx.org/licenses/Sleepycat
102		SPL	
102	<b>102</b> 102 102	. <b>1.</b> .2.	Formal Name: Sun Public License Official Download URL: SPDX Template Reference Copy: http://spdx.org/licenses/SPL
103	_	Watcon	n-1.0
	103 103 103	. <b>1.</b> .2.	Formal Name: Sybase Open Watcom Public License 1.0 Official Download URL: SPDX Template Reference Copy: http://spdx.org/licenses/Watcom-1.0
104	<b>104</b> 104 104	.2.	Formal Name: University of Illinois/NCSA Open Source License Official Download URL: SPDX Template Reference Copy: <a href="http://spdx.org/licenses/NCSA">http://spdx.org/licenses/NCSA</a>
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106		VSI _1 ∩	

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106.1.

106.2. 106.3.

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# Appendix II. Examples

See: http://spdx.org/examples

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