Using SPDX License List "short identifiers" in source files

SPDX

Why SPDX short identifiers in Source Files?

- Easy to use, machine-readable and language neutral
  - Just adds one line to a comment in the file.
  - Makes it easy to accurately know which license is in effect for the file.
  - Satisfies the Developer Certificate of Origin (DCO) requirement for a license reference per file.
- Concise and now standardized format
  - Developers detest needing to put 50 lines of boilerplate license text before 10 lines of code that implements a function.
  - Removes ambiguity from trying to recognize hand typed license headers
  - See: SPDX 2.1 Appendix V - "Using SPDX short identifiers in Source files"

SPDX

What is a license list "short identifier"?

Full name	Identifier	OSI Approved
3dfx Glide License	Glide	
Abstyles License	Abstyles	
Academic Free License v1.1	AFL-1.1	Y
Academic Free License v1.2	AFL-1.2	Y
Academic Free License v2.0	AFL-2.0	Y
Academic Free License v2.1	AFL-2.1	
Academic Free License v3.0	AFL-3.0	
Academy of Motion Picture Arts and Sciences BSD	AMPAS	
Adaptive Public License 1.0	APL-1.0	Y
Adobe Glyph List License	Adobe-Glyph	
Adobe Postscript AFM License	APAFML	
Adobe Systems Incorporated Source Code License Agreement	Adobe-2006	
Affero General Public License v1.0	AGPL-1.0	
Afmparse License	Afmparse	
Aladdin Free Public License	Aladdin	
Amazon Digital Services License	ADSL	
AMD's plpa_map.c License	AMDPLPA	
ANTLR Software Rights Notice	ANTLR-PD	
Apache License 1.0	Apache-1.0	
Apache License 1.1	Apache-1.1	Y
Apache License 2.0	Apache-2.0	Y
Apple MIT License	AML	
Apple Public Source License 1.0	APSL-1.0	Y

A short identifier is a standardized shortened version of the license name and/or version reference that many in the industry have aligned and adopted. It creates a short, standardized and common language to use when referring to licenses. It is based on the SPDX license list which has been widely adopted.

SPDX

3

SPDX License List: http://spdx.org/licenses

- SPDX License List is a list of (common) open source licenses that can be referred to by a "short identifier"

- Contains name, identifier, license text, reference URL's, whether OSI approved, and standard headers

- Matching guidelines to help determine if the license text matches the text (and templates for some licenses)

- Backed by an active organization which maintains the license list

SPDX

4

Representing Single License

A single license is represented by using the short identifier from [SPDX license list](), optionally with a unary "+" operator following it to indicate "or later" versions may be applicable.

Examples:

- SPDX-License-Identifier: GPL-2.0

- SPDX-License-Identifier: GPL-2.0+

- SPDX-License-Identifier: MIT

SPDX

Use SPDX License List short identifiers


```
projects / u-boot.git / blob

[u-boot.git] / post / post.c

 1  /*
 2   * (C) Copyright 2002
 3   * Wolfgang Denk, DENX Software Engineering, wd@denx.de.
 4   *
 5   * SPDX-License-Identifier:     GPL-2.0+
 6   */
 7
 8  #include <common.h>
 9  #include <stdio_dev.h>
10  #include <watchdog.h>
11  #include <div64.h>
12  #include <post.h>
13
14  #ifdef CONFIG_SYS_POST_HOTKEYS_GPIO
15  #include <asm/gpio.h>
16  #endif
17
18  #ifdef CONFIG_LOGBUFFER
19  #include <logbuff.h>
20  #endif
21
22  DECLARE_GLOBAL_DATA_PTR;
```

SPDX

pocoproject / **poco**

Branch: **develop** ▾   **poco** / Util / src / **ConfigurationMapper.cpp**

104 lines (81 sloc)   2.27 KB

```cpp
 1   //
 2   // ConfigurationMapper.cpp
 3   //
 4   // $Id: //poco/1.4/Util/src/ConfigurationMapper.cpp#1 $
 5   //
 6   // Library: Util
 7   // Package: Configuration
 8   // Module:  ConfigurationMapper
 9   //
10   // Copyright (c) 2004-2006, Applied Informatics Software Engineering GmbH.
11   // and Contributors.
12   //
13   // SPDX-License-Identifier:    BSL-1.0
14   //
15
16
17   #include "Poco/Util/ConfigurationMapper.h"
18
19
20   namespace Poco {
21   namespace Util {
```

What if more than one license applies or you have a choice of licenses?

- Use the license expression syntax
  - Operators allow various combinations, etc.

- See SPDX 2.1 specification, Appendix IV for details

SPDX

License expression syntax

AND	Conjunctive licenses (more than 1 license applies)
OR	Disjunctive licenses (choice)
WITH	Exceptions (apply an exception to the main license)
+	Or later versions of license allowed

SPDX

Representing Multiple Licenses

A set of licenses must be enclosed in parentheses, and follow these conventions:

1. When there is a choice between licenses ("disjunctive license"), they should be separated with "OR". If presented with a choice between two or more licenses, use the disjunctive binary "OR" operator to construct a new license expression.

    - Example: "SPDX-License-Identifier: (GPL-2.0 OR MIT)"

2. Similarly when multiple licenses need to be simultaneously applied ("conjunctive license"), they should be separated with "AND". If required to simultaneously comply with two or more licenses, use the conjunctive binary "AND" operator to construct a new license expression.

    - Example: "SPDX-License-Identifier: (LGPL-2.1 AND BSD-2-CLAUSE)"

SPDX

Representing Multiple Licenses

3. In some cases, a set of license terms apply except under special circumstances, in this case, use the "WITH" operator followed by one of the recognized exception identifiers. Sometimes a set of license terms apply except under special circumstances. In this case, use the binary "WITH" operator to construct a new license expression to represent the special exception situation.

    ▪ Example: "SPDX-License-Identifier: (GPL-2.0+ WITH Bison-exception-2.2)"

SPDX

Using SPDX short identifiers with DCO

The Developer Certificate of Origin (http://developercertificate.org/) makes reference to the "*the open source license indicated in the file.*"

While the top level directory for the project may already have a LICENSE or COPYING file that indicates the license for the project, the best practices is all files submitted under the DCO should have a license referenced in the file.

This can be achieved by including the standard license header, the SPDX License Identifier or a combination of both.

 Options:

- ▪ Standard header from license
- ▪ "SPDX-License-Identifier: EPL-1.0" in a comment
- ▪ Or both

SPDX

Best Practice:

It is recommended to also make a reference that SPDX license identifiers are being used where the license(s) for the project are documented ("LICENSE", "COPYING", etc.).

It is recommended that some patch level tooling be used that checks each file has a license indicated.

SPDX

```
1   Boost Software License - Version 1.0 - August 17th, 2003
2
3   Permission is hereby granted, free of charge, to any person or organization
4   obtaining a copy of the software and accompanying documentation covered by
5   this license (the "Software") to use, reproduce, display, distribute,
6   execute, and transmit the Software, and to prepare derivative works of the
7   Software, and to permit third-parties to whom the Software is furnished to
8   do so, all subject to the following:
9
10  The copyright notices in the Software and this entire statement, including
11  the above license grant, this restriction and the following disclaimer,
12  must be included in all copies of the Software, in whole or in part, and
13  all derivative works of the Software, unless such copies or derivative
14  works are solely in the form of machine-executable object code generated by
15  a source language processor.
16
17  THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
18  IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
19  FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT
20  SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE
21  FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE,
22  ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER
23  DEALINGS IN THE SOFTWARE.
24
25  --------------------------------------------------------------------------------
26  Note:
27  Individual files contain the following tag instead of the full license text.
28
29          SPDX-License-Identifier:        BSL-1.0
30
31  This enables machine processing of license information based on the SPDX
32  License Identifiers that are here available: http://spdx.org/licenses/
```

SPDX

14
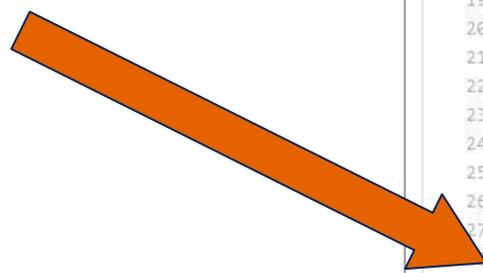
Projects with SPDX short identifiers

- u-boot
- poco
- mbed
- NPM
- Cargo
- Composer
- RubyGems
- Bower   … and more coming soon :-)

SPDX

Want more information about SPDX?

- http://spdx.org/ - for overview information on SPDX.
- http://spdx.org/licenses - for a full list of licenses with short identifiers.
- [SPDX 2.1 Appendix V](#) - using SPDX short identifiers in source files.

- Join [spdx-tech](#) mail list and ask questions to the SPDX tech team.

SPDX

Backup material

SPDX

Additional SPDX License List Info

- Human and machine readable at http://spdx.org/licenses

- Tools can programmatically access the SPDX License List, supported formats are:
  - RDFa machine readable access
  - JSON file at http://spdx.org/licenses/licenses.json

- For tools support, see the tech report "Accessing SPDX Licenses"

  - http://spdx.org/publications/tool-documentation/accessing-spdx-licenses

SPDX

Developer Certificate of Origin

Developer's Certificate of Origin 1.1

By making a contribution to this project, I certify that:

(a) The contribution was created in whole or in part by me and I have the right to submit it under the open source license indicated in the file ; or

(b) The contribution is based upon previous work that, to the best of my knowledge, is covered under an appropriate open source license and I have the right under that license to submit that work with modifications, whether created in whole or in part by me, under the same open source license (unless I am permitted to submit under a different license), as indicated in the file; or

(c) The contribution was provided directly to me by some other person who certified (a), (b) or (c) and I have not modified it.

(d) I understand and agree that this project and the contribution are public and that a record of the contribution (including all personal information I submit with it, including my sign-off) is maintained indefinitely and may be redistributed consistent with this project or the open source license(s) involved.

SPDX