



Open Source Used In JVDI for Windows Release 12.7

Cisco Systems, Inc.

www.cisco.com

Cisco has more than 200 offices worldwide.
Addresses, phone numbers, and fax numbers
are listed on the Cisco website at
www.cisco.com/go/offices.

Text Part Number: 78EE117C99-206127523

This document contains licenses and notices for open source software used in this product. With respect to the free/open source software listed in this document, if you have any questions or wish to receive a copy of any source code to which you may be entitled under the applicable free/open source license(s) (such as the GNU Lesser/General Public License), please contact us at external-opensource-requests@cisco.com.

In your requests please include the following reference number 78EE117C99-206127523

Contents

1.1 7-Zip 18.05

1.1.1 Available under license

1.2 boost 1.52.0

1.2.1 Notifications

1.2.2 Available under license

1.3 BOOST C++ Library 1.65.1

1.3.1 Available under license

1.4 Expat 2.2.0 :2.2.0

1.4.1 Available under license

1.5 FreeType 2.1.4

1.5.1 Available under license

1.6 glib 2.27.1

1.6.1 Available under license

1.7 grpc 1.20.1

1.7.1 Available under license

1.8 gstreamer 0.10.35.1

1.8.1 Available under license

1.9 gstreamer-plugins-bad 0.10.22.1

1.9.1 Available under license

1.10 gstreamer-plugins-base 0.10.35.1

1.10.1 Available under license

1.11 gstreamer-plugins-good 0.10.30.1

1.11.1 Available under license

1.12 icu4c 56.1

1.12.1 Available under license

1.13 jansson 2.7

- 1.13.1 Available under license
- 1.14 json-c 0.12**
 - 1.14.1 Available under license
- 1.15 json-c/test-driver 0.12**
 - 1.15.1 Available under license
- 1.16 libcURL 7.65.0**
 - 1.16.1 Available under license
- 1.17 libjpeg 9b**
- 1.18 liboil 0.3.16.1**
 - 1.18.1 Available under license
- 1.19 libSRTP 2.2.0**
 - 1.19.1 Available under license
- 1.20 libxml2 2.9.9**
 - 1.20.1 Available under license
- 1.21 OpenSSL 1.0.2r :1.0.2r**
 - 1.21.1 Notifications
 - 1.21.2 Available under license
- 1.22 opus 1.1**
 - 1.22.1 Available under license
- 1.23 protobuf-cpp 3.7.1**
 - 1.23.1 Available under license
- 1.24 sqlcipher 3.4**
 - 1.24.1 Available under license
- 1.25 sqlite 3.28.0**
 - 1.25.1 Available under license
- 1.26 tinyxml 2.6.2**
 - 1.26.1 Available under license
- 1.27 Zlib 1.2.3**
 - 1.27.1 Available under license
- 1.28 zlib 1.2.8**
 - 1.28.1 Available under license

1.1 7-Zip 18.05

1.1.1 Available under license :

```

*****  *****  *****  unRAR - free utility for RAR archives
**  **  **  **  **  **  ~~~~~
*****  *****  *****  License for use and distribution of
**  **  **  **  **  **  ~~~~~
**  **  **  **  **  **  FREE portable version

```

~~~~~

The source code of unRAR utility is freeware. This means:

1. All copyrights to RAR and the utility unRAR are exclusively owned by the author - Alexander Roshal.
2. The unRAR sources may be used in any software to handle RAR archives without limitations free of charge, but cannot be used to re-create the RAR compression algorithm, which is proprietary. Distribution of modified unRAR sources in separate form or as a part of other software is permitted, provided that it is clearly stated in the documentation and source comments that the code may not be used to develop a RAR (WinRAR) compatible archiver.
3. The unRAR utility may be freely distributed. No person or company may charge a fee for the distribution of unRAR without written permission from the copyright holder.
4. THE RAR ARCHIVER AND THE UNRAR UTILITY ARE DISTRIBUTED "AS IS". NO WARRANTY OF ANY KIND IS EXPRESSED OR IMPLIED. YOU USE AT YOUR OWN RISK. THE AUTHOR WILL NOT BE LIABLE FOR DATA LOSS, DAMAGES, LOSS OF PROFITS OR ANY OTHER KIND OF LOSS WHILE USING OR MISUSING THIS SOFTWARE.
5. Installing and using the unRAR utility signifies acceptance of these terms and conditions of the license.
6. If you don't agree with terms of the license you must remove unRAR files from your storage devices and cease to use the utility.

Thank you for your interest in RAR and unRAR.

Alexander L. Roshal  
GNU LESSER GENERAL PUBLIC LICENSE  
Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.  
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA  
Everyone is permitted to copy and distribute verbatim copies  
of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts  
as the successor of the GNU Library Public License, version 2, hence  
the version number 2.1.]

## Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot

effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE  
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.



In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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 source along with the object code.

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.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system,

rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed

through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME

THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

#### How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your

school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

That's all there is to it!

7-Zip source code

~~~~~

License for use and distribution

~~~~~

7-Zip Copyright (C) 1999-2018 Igor Pavlov.

The licenses for files are:

- 1) CPP/7zip/Compress/Rar\* files: the "GNU LGPL" with "unRAR license restriction"
- 2) CPP/7zip/Compress/LzfseDecoder.cpp: the "BSD 3-clause License"
- 3) Some files are "public domain" files, if "public domain" status is stated in source file.
- 4) the "GNU LGPL" for all other files. If there is no license information in some source file, that file is under the "GNU LGPL".

The "GNU LGPL" with "unRAR license restriction" means that you must follow both "GNU LGPL" rules and "unRAR license restriction" rules.

GNU LGPL information

-----

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

BSD 3-clause License

-----

The "BSD 3-clause License" is used for the code in LzfseDecoder.cpp that implements LZFSE data decompression.

That code was derived from the code in the "LZFSE compression library" developed by Apple Inc, that also uses the "BSD 3-clause License":

----

Copyright (c) 2015-2016, Apple Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer  
in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder(s) nor the names of any contributors may be used to endorse or promote products derived  
from this software without specific prior written permission.

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

----

unRAR license restriction

-----



The decompression engine for RAR archives was developed using source code of unRAR program.

All copyrights to original unRAR code are owned by Alexander Roshal.

The license for original unRAR code has the following restriction:

The unRAR sources cannot be used to re-create the RAR compression algorithm, which is proprietary. Distribution of modified unRAR sources in separate form or as a part of other software is permitted, provided that it is clearly stated in the documentation and source comments that the code may not be used to develop a RAR (WinRAR) compatible archiver.

--

Igor Pavlov

## 1.2 boost 1.52.0

### 1.2.1 Notifications :

This product includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

### 1.2.2 Available under license :

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

The following people hereby grant permission to replace all existing licenses on their contributions to Boost with the Boost Software

License, Version 1.0. (boostinspect:nolicense boostinspect:nocopyright)

Aleksey Gurtovoy (agurtovoy@meta-comm.com)  
Andrei Alexandrescu (andrewalex - at - hotmail.com) (See Boost list message of August 12, 2004 11:06:58 AM EST)  
Andrew Lumsdaine ()  
Anthony Williams (anthony -at- justsoftwaresolutions.co.uk)  
Beman Dawes (bdawes@acm.org)  
Brad King (brad.king -at- kitware.com) (See Boost list message of Wed, 21 Jul 2004 11:15:46 -0400)  
Brian Osman (osman -at- vvisions.com) (See CVS log)  
Bruce Barr (schmoost -at- yahoo.com) (See Boost list of Mon, 16 Aug 2004 15:06:43 -0500)  
Bruno da Silva de Oliveira (bruno - at - esss.com.br)  
Christain Engstrom (christian.engstrom -at- glindra.org) (See Boost list message of Mon, 30 Aug 2004 14:31:49 +0200)  
Cromwell D Enage (sponage -at- yahoo.com) (See Boost list message of August 12, 2004 11:49:13 AM EST)  
Dan Gohman (djg -at- cray.com) (See Boost list message of Sat, 21 Aug 2004 10:54:59 +0100)  
Dan Nuffer (dan -at- nuffer.name)  
Daniel Frey (d.frey -at- gmx.de, daniel.frey -at- aixigo.de)  
Daniel Nuffer (dan -at- nuffer.name)  
Darin Adler (darin -at- bentspoon.com) (Email to Andreas Huber, see change log)  
Daryle Walker (darylew - at - hotmail.com)  
Dave Abrahams (dave@boost-consulting.com)  
Dave Moore (dmoore -at- viefinancial.com) (See Boost list message of 18 Dec 2003 15:35:50 -0500)  
David Abrahams (dave@boost-consulting.com)  
Dietmar Kuehl (dietmar\_kuehl -at- yahoo.com) (Email to Andreas Huber, see change log)  
Douglas Gregor (gregod -at- cs.rpi.edu, dgregor -at- cs.indiana.edu, doug.gregor -at- gmail.com)  
Dr John Maddock (john - at - johnmaddock.co.uk)  
Edward D. Brey (brey -at- ductape.net) (Email to Andreas Huber, see change log)  
Eric Ford (un5o6n902 -at- sneakemail.com) (See Boost list message of Sun, 15 Aug 2004 10:29:13 +0100)  
Eric Friedman (ebf@users.sourceforge.net)  
Eric Niebler (eric@boost-consulting.com)  
Fernando Cacciola (fernando\_cacciola@ciudad.com.ar)  
Fernando Luis Cacciola Carballal (fernando\_cacciola@ciudad.com.ar)  
Francois Faure (Francois.Faure -at- imag.fr) (See CVS log)  
Gary Powell (powellg - at - amazon.com) (See Boost list message of 10 Feb 2004 14:22:46 -0800)  
Gennadiy Rozental (rogeeff -at- mail.com) (Email to Andreas Huber, see change log)  
Gottfried Ganssaue (Gottfried.Ganssaue -at- HAUFE.DE) (See Boost List message of Mon, 16 Aug 2004 10:09:19 +0200)  
Gottfried Ganßauge (Gottfried.Ganssaue -at- HAUFE.DE) (Alternative spelling of Gottfried Ganssaue)  
Greg Colvin (gregory.colvin -at- oracle.com) (See Boost list message of Sat, 14 Aug 2004 10:57:00 +0100)  
Gregory Colvin (gregory.colvin -at- oracle.com) (See Boost list message of Sat, 14 Aug 2004 10:57:00 +0100)  
Gunter Winkler (gunter.winkler -at- unbw-muenchen.de) (See Boost List message of Mon, 16 Aug 2004 10:24:17 +0200)  
Hartmut Kaiser (hartmut.kaiser -at- gmail.com)  
Herve Bronnimann (hbr -at- poly.edu)  
Hervé Brönnimann (hbr -at- poly.edu)  
Housemarque Oy (Ilari Kuittinen ilari.kuittinen -at- housemarque.fi)  
Howard Hinnant (hinnant -at- twcny.rr.com) (See Boost list message of July 25, 2004 3:44:49 PM EST)

Hubert Holin (hubert\_holin -at- users.sourceforge.net)  
Indiana University ()  
Itay Maman (imaman -at- users.sourceforge.net)  
Jaakko Järvi (jajarvi -at- osl.iu.edu)  
Jaap Suter (j.suter -at- student.utwente.nl) (See Boost list message of Thu, 16 Sep 2004 09:32:43 -0700)  
Jeff Garland (jeff - at - crystalclearsoftware.com) (see Boost list post of July 25, 2004 19:31:09 -0700)  
Jens Maurer (Jens.Maurer@gmx.net)  
Jeremy G Siek (jsiek@osl.iu.edu)  
Jeremy Siek (jsiek@osl.iu.edu)  
Joel de Guzman (joel -at- boost-consulting.com) (See Boost list message of July 25, 2004 8:32:00 PM EST)  
John Bandela (jbandela-at-ufl.edu)  
John Maddock (john - at - johnmaddock.co.uk)  
John R Bandela (jbandela-at-ufl.edu)  
Jonathan Turkanis (turkanis -at- coderage dot com)  
Juergen Hunold (hunold -at- ive.uni-hannover.de) (See Boost List Message of Fri, 13 Aug 2004 19:39:55 +0200)  
Kevlin Henney (kevin -at- curbralan.com) (See Boost list message of Wed, 15 Sep 2004 18:15:17 +0200)  
Kresimir Fresl (fresl -at- master.grad.hr) (See Boost List message of August 16, 2004 8:23:35 AM EST)  
Lars Gullik Bjønnes (larsbj -at- lyx.org) (See Boost list message of Tue, 17 Aug 2004 15:49:02 +0100)  
Lie-Quan Lee (liequan - at - slac.stanford.edu, llee - at - cs.indiana.edu)  
Maarten Keijzer (mkeijzer -at- cs.vu.nl) (See Boost list message of Wed, 18 Aug 2004 21:43:18 +0100)  
Mac Murrett (mmurrett -at- mac.com)  
Marc Wintermantel (wintermantel -at- imes.mavt.ethz.ch, wintermantel -at- even-ag.ch) (See CVS log)  
Michael Glassford (glassfordm - at - hotmail.com)  
Michael Stevens (Michael.Stevens - at - epost.de)  
Multi Media Ltd. (pdimov@mmltd.net)  
Nicolai M Josuttis (solutions -at- josuttis.com) (See Boost list message of Mon, 30 Aug 2004 10:52:00 +0100)  
Nikolay Mladenov (nickm -at- sitius.com) (See Boost list message of Tue, 17 Aug 2004 15:45:33 +0100)  
Paul Mensoides (pmenso57 -at- comcast.net) (See Boost list message of July 21, 2004 1:12:21 AM EST)  
Pavol Droba (droba -at- topmail.sk)  
Peter Dimov (pdimov@mmltd.net)  
R W Grosse-Kunsteleve (RWGrosse-Kunsteleve@lbl.gov)  
Ralf W. Grosse-Kunsteleve (RWGrosse-Kunsteleve@lbl.gov)  
Rational Discovery LLC (Greg Landrum Landrum -at- RationalDiscovery.com) (See Boost list post of Tue, 17 Aug 2004 10:35:36 +0100)  
Rene Rivera (grafik/redshift-software.com, rrivera/acm.org)  
Robert Ramey (ramey@www.rrsd.com)  
Roland Richter (roland -at- flll.jku.at) (See Boost list post of Mon, 16 Aug 2004 22:16:55 +0200)  
Roland Schwarz (roland.schwarz -at- chello.at)  
Ronald Garcia (garcia -at- cs.indiana.edu) (Email to Andreas Huber, see change log)  
Samuel Krempp (krempp -at- crans.ens-cachan.fr) (See Boost list message of Mon, 27 Sep 2004 13:18:36 +0200)  
Stefan Seefeld (seefeld -at- sympatico.ca)  
Stephen Cleary (sccleary -at- jerviswebb.com) (See Boost list message of Tue, 28 Sep 2004 13:11:46 +0100)  
Steve Cleary (Variant of Stephen Cleary)  
Sylvain Pion (Sylvain.Pion - at - sophia.inria.fr)  
The Trustees of Indiana University ()  
Thomas Witt (witt - at - ive.uni-hannover.de, witt - at - acm.org, witt - at - styleadvisor.com)  
Thorsten Jørgen Ottosen (nesotto - at - cs.auc.dk)  
Thorsten Ottosen (nesotto - at - cs.auc.dk)

Toon Knapen (toon dot knapen - at - fft.be)

Trustees of Indiana University ()

University of Notre Dame ()

Vladimir Prus (ghost@cs.msu.su)

William E. Kempf () (email to Beman Dawes, 9/14/2006 4:18 PM)

Joerg Walter (jhr.walter - at - t-online.de : email to ublas mailing list Mon, 17 Sep 2007 10:17:08 +0200)

Mathias Koch (mkoch - at - idesis.de 7 : email to boost-owner@lists.boost.org Sep 2007 13:20:09 +0200)

--- end ---

Software License, Version 1.0

Copyright 2002-2003, Trustees of Indiana University.

Copyright 2000-2001, University of Notre Dame.

All rights reserved.

Indiana University has the exclusive rights to license this product under the following license.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* All redistributions of source code must retain the above copyright notice, the list of authors in the original source code, this list of conditions and the disclaimer listed in this license;
- \* All redistributions in binary form must reproduce the above copyright notice, this list of conditions and the disclaimer listed in this license in the documentation and/or other materials provided with the distribution;
- \* Any documentation included with all redistributions must include the following acknowledgement:

"This product includes software developed at the University of Notre Dame and the Pervasive Technology Labs at Indiana University. For technical information contact Andrew Lumsdaine at the Pervasive Technology Labs at Indiana University. For administrative and license questions contact the Advanced Research and Technology Institute at 351 West 10th Street. Indianapolis, Indiana 46202, phone 317-278-4100, fax 317-274-5902."

Alternatively, this acknowledgement may appear in the software itself, and wherever such third-party acknowledgments normally appear.

- \* The name Indiana University, the University of Notre Dame or "Caramel" shall not be used to endorse or promote products derived from this software without prior written permission from Indiana University. For written permission, please contact Indiana University Advanced Research & Technology Institute.

\* Products derived from this software may not be called "Caramel", nor may Indiana University, the University of Notre Dame or "Caramel" appear in their name, without prior written permission of Indiana University Advanced Research & Technology Institute.

Indiana University provides no reassurances that the source code provided does not infringe the patent or any other intellectual property rights of any other entity. Indiana University disclaims any liability to any recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise.

LICENSEE UNDERSTANDS THAT SOFTWARE IS PROVIDED "AS IS" FOR WHICH NO WARRANTIES AS TO CAPABILITIES OR ACCURACY ARE MADE. INDIANA UNIVERSITY GIVES NO WARRANTIES AND MAKES NO REPRESENTATION THAT SOFTWARE IS FREE OF INFRINGEMENT OF THIRD PARTY PATENT, COPYRIGHT, OR OTHER PROPRIETARY RIGHTS. INDIANA UNIVERSITY MAKES NO WARRANTIES THAT SOFTWARE IS FREE FROM "BUGS", "VIRUSES", "TROJAN HORSES", "TRAP DOORS", "WORMS", OR OTHER HARMFUL CODE. LICENSEE ASSUMES THE ENTIRE RISK AS TO THE PERFORMANCE OF SOFTWARE AND/OR ASSOCIATED MATERIALS, AND TO THE PERFORMANCE AND VALIDITY OF INFORMATION GENERATED USING SOFTWARE.

## 1.3 BOOST C++ Library 1.65.1

### 1.3.1 Available under license :

This package was debianized by Vladimir Prus <ghost@cs.msu.su> on Wed, 17 July 2002, 19:27:00 +0400.

Copyright:

```
/+\
+\ Copyright 1993-2002 Christopher Seiwald and Perforce Software, Inc.
\+/
```

This is Release 2.4 of Jam/MR, a make-like program.

License is hereby granted to use this software and distribute it freely, as long as this copyright notice is retained and modifications are clearly marked.

ALL WARRANTIES ARE HEREBY DISCLAIMED.

Some portions are also:

Copyright 2001-2006 David Abrahams.  
Copyright 2002-2006 Rene Rivera.  
Copyright 2003-2006 Vladimir Prus.

Distributed under the Boost Software License, Version 1.0.

(See accompanying file LICENSE\_1\_0.txt or [http://www.boost.org/LICENSE\\_1\\_0.txt](http://www.boost.org/LICENSE_1_0.txt))  
Software License, Version 1.0

Copyright 2002-2003, Trustees of Indiana University.  
Copyright 2000-2001, University of Notre Dame.  
All rights reserved.

Indiana University has the exclusive rights to license this product under the following license.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* All redistributions of source code must retain the above copyright notice, the list of authors in the original source code, this list of conditions and the disclaimer listed in this license;
- \* All redistributions in binary form must reproduce the above copyright notice, this list of conditions and the disclaimer listed in this license in the documentation and/or other materials provided with the distribution;
- \* Any documentation included with all redistributions must include the following acknowledgement:

"This product includes software developed at the University of Notre Dame and the Pervasive Technology Labs at Indiana University. For technical information contact Andrew Lumsdaine at the Pervasive Technology Labs at Indiana University. For administrative and license questions contact the Advanced Research and Technology Institute at 351 West 10th Street. Indianapolis, Indiana 46202, phone 317-278-4100, fax 317-274-5902."

Alternatively, this acknowledgement may appear in the software itself, and wherever such third-party acknowledgments normally appear.

- \* The name Indiana University, the University of Notre Dame or "Caramel" shall not be used to endorse or promote products derived from this software without prior written permission from Indiana University. For written permission, please contact Indiana University Advanced Research & Technology Institute.
- \* Products derived from this software may not be called "Caramel", nor may Indiana University, the University of Notre Dame or "Caramel" appear in their name, without prior written permission of Indiana University Advanced Research & Technology Institute.

Indiana University provides no reassurances that the source code provided does not infringe the patent or any other intellectual property rights of any other entity. Indiana University disclaims any liability to any recipient for claims

brought by any other entity based on infringement of intellectual property rights or otherwise.

LICENSEE UNDERSTANDS THAT SOFTWARE IS PROVIDED "AS IS" FOR WHICH NO WARRANTIES AS TO CAPABILITIES OR ACCURACY ARE MADE. INDIANA UNIVERSITY GIVES NO WARRANTIES AND MAKES NO REPRESENTATION THAT SOFTWARE IS FREE OF INFRINGEMENT OF THIRD PARTY PATENT, COPYRIGHT, OR OTHER PROPRIETARY RIGHTS. INDIANA UNIVERSITY MAKES NO WARRANTIES THAT SOFTWARE IS FREE FROM "BUGS", "VIRUSES", "TROJAN HORSES", "TRAP DOORS", "WORMS", OR OTHER HARMFUL CODE. LICENSEE ASSUMES THE ENTIRE RISK AS TO THE PERFORMANCE OF SOFTWARE AND/OR ASSOCIATED MATERIALS, AND TO THE PERFORMANCE AND VALIDITY OF INFORMATION GENERATED USING SOFTWARE.

The following people hereby grant permission to replace all existing licenses on their contributions to Boost with the Boost Software

License, Version 1.0. (boostinspect:nolicense boostinspect:nocopyright)

Aleksey Gurtovoy (agurtovoy@meta-comm.com)

Andrei Alexandrescu (andrewalex - at - hotmail.com) (See Boost list message of August 12, 2004 11:06:58 AM EST)

Andrew Lumsdaine ()

Anthony Williams (anthony -at- justsoftwaresolutions.co.uk)

Beman Dawes (bdawes@acm.org)

Brad King (brad.king -at- kitware.com) (See Boost list message of Wed, 21 Jul 2004 11:15:46 -0400)

Brian Osman (osman -at- vvisions.com) (See CVS log)

Bruce Barr (schmoost -at- yahoo.com) (See Boost list of Mon, 16 Aug 2004 15:06:43 -0500)

Bruno da Silva de Oliveira (bruno - at - esss.com.br)

Christain Engstrom (christian.engstrom -at- glindra.org) (See Boost list message of Mon, 30 Aug 2004 14:31:49 +0200)

Cromwell D Enage (sponage -at- yahoo.com) (See Boost list message of August 12, 2004 11:49:13 AM EST)

Dan Gohman (djk -at- cray.com) (See Boost list message of Sat, 21 Aug 2004 10:54:59 +0100)

Dan Nuffer (dan -at- nuffer.name)

Daniel Frey (d.frey -at- gmx.de, daniel.frey -at- aixigo.de)

Daniel Nuffer (dan -at- nuffer.name)

Darin Adler (darin -at- bentspoon.com) (Email to Andreas Huber, see change log)

Daryle Walker (darylew - at - hotmail.com)

Dave Abrahams (dave@boost-consulting.com)

Dave Moore (dmoore -at- viefinancial.com) (See Boost list message of 18 Dec 2003 15:35:50 -0500)

David Abrahams (dave@boost-consulting.com)

Dietmar Kuehl (dietmar\_kuehl -at- yahoo.com) (Email to Andreas Huber, see change log)

Douglas Gregor (gregod -at- cs.rpi.edu, dgregor -at- cs.indiana.edu, doug.gregor -at- gmail.com)

Dr John Maddock (john - at - johnmaddock.co.uk)

Edward D. Brey (brey -at- ductape.net) (Email to Andreas Huber, see change log)

Eric Ford (un5o6n902 -at- sneakemail.com) (See Boost list message of Sun, 15 Aug 2004 10:29:13 +0100)

Eric Friedman (ebf@users.sourceforge.net)

Eric Niebler (eric@boost-consulting.com)

Fernando Cacciola (fernando\_cacciola@ciudad.com.ar)

Fernando Luis Cacciola Carballal (fernando\_cacciola@ciudad.com.ar)

Francois Faure (Francois.Faure -at- imag.fr) (See CVS log)

Gary Powell (powellg - at - amazon.com) (See Boost list message of 10 Feb 2004 14:22:46 -0800)

Gennadiy Rozental (rogeeff -at- mail.com) (Email to Andreas Huber, see change log)  
Gottfried Ganssaue (Gottfried.Ganssaue -at- HAUFE.DE) (See Boost List message of Mon, 16 Aug 2004 10:09:19 +0200)  
Gottfried Ganaue (Gottfried.Ganssaue -at- HAUFE.DE) (Alternative spelling of Gottfried Ganssaue)  
Greg Colvin (gregory.colvin -at- oracle.com) (See Boost list message of Sat, 14 Aug 2004 10:57:00 +0100)  
Gregory Colvin (gregory.colvin -at- oracle.com) (See Boost list message of Sat, 14 Aug 2004 10:57:00 +0100)  
Gunter Winkler (gunter.winkler -at- unibw-muenchen.de) (See Boost List message of Mon, 16 Aug 2004 10:24:17 +0200)  
Hartmut Kaiser (hartmut.kaiser -at- gmail.com)  
Herve Bronnimann (hbr -at- poly.edu)  
Herv Brnnimann (hbr -at- poly.edu)  
Housemarque Oy (Ilari Kuittinen ilari.kuittinen -at- housemarque.fi)  
Howard Hinnant (hinnant -at- twcnv.rr.com) (See Boost list message of July 25, 2004 3:44:49 PM EST)  
Hubert Holin (hubert\_holin -at- users.sourceforge.net)  
Indiana University ()  
Itay Maman (imaman -at- users.sourceforge.net)  
Jaakko Jrv (jajarvi -at- osl.iu.edu)  
Jaap Suter (j.suter -at- student.utwente.nl) (See Boost list message of Thu, 16 Sep 2004 09:32:43 -0700)  
Jeff Garland (jeff - at - crystalclearsoftware.com) (see Boost list post of July 25, 2004 19:31:09 -0700)  
Jens Maurer (Jens.Maurer@gmx.net)  
Jeremy G Siek (jsiek@osl.iu.edu)  
Jeremy Siek (jsiek@osl.iu.edu)  
Joel de Guzman (joel -at- boost-consulting.com) (See Boost list message of July 25, 2004 8:32:00 PM EST)  
John Bandela (jbandela-at-ufl.edu)  
John Maddock (john - at - johnmaddock.co.uk)  
John R Bandela (jbandela-at-ufl.edu)  
Jonathan Turkanis (turkanis -at- coderage dot com)  
Juergen Hunold (hunold -at- ive.uni-hannover.de) (See Boost List Message of Fri, 13 Aug 2004 19:39:55 +0200)  
Kevlin Henney (kevin -at- curbralan.com) (See Boost list message of Wed, 15 Sep 2004 18:15:17 +0200)  
Kresimir Fresl (fresl -at- master.grad.hr) (See Boost List message of August 16, 2004 8:23:35 AM EST)  
Lars Gullik Bjnnes (larsbj -at- lyx.org) (See Boost list message of Tue, 17 Aug 2004 15:49:02 +0100)  
Lie-Quan Lee (liequan - at - slac.stanford.edu, llee - at - cs.indiana.edu)  
Maarten Keijzer (mkeijzer -at- cs.vu.nl) (See Boost list message of Wed, 18 Aug 2004 21:43:18 +0100)  
Mac Murrett (mmurrett -at- mac.com)  
Marc Wintermantel (wintermantel -at- imes.mavt.ethz.ch, wintermantel -at- even-ag.ch) (See CVS log)  
Michael Glassford (glassfordm - at - hotmail.com)  
Michael Stevens (Michael.Stevens - at - epost.de)  
Multi Media Ltd. (pdimov@mmltd.net)  
Nicolai M Josuttis (solutions -at- josuttis.com) (See Boost list message of Mon, 30 Aug 2004 10:52:00 +0100)  
Nikolay Mladenov (nickm -at- sitius.com) (See Boost list message of Tue, 17 Aug 2004 15:45:33 +0100)  
Paul Mensonides (pmenso57 -at- comcast.net) (See Boost list message of July 21, 2004 1:12:21 AM EST)  
Pavol Droba (droba -at- topmail.sk)  
Peter Dimov (pdimov@mmltd.net)  
R W Grosse-Kunstleve (RWGrosse-Kunstleve@lbl.gov)  
Ralf W. Grosse-Kunstleve (RWGrosse-Kunstleve@lbl.gov)  
Rational Discovery LLC (Greg Landrum Landrum -at- RationalDiscovery.com) (See Boost list post of Tue, 17 Aug 2004 10:35:36 +0100)  
Rene Rivera (grafik/redshift-software.com, rrivera/acm.org)



Robert Ramey (ramey@www.rrsd.com)  
Roland Richter (roland -at- flll.jku.at) (See Boost list post of Mon, 16 Aug 2004 22:16:55 +0200)  
Roland Schwarz (roland.schwarz -at- chello.at)  
Ronald Garcia (garcia -at- cs.indiana.edu) (Email to Andreas Huber, see change log)  
Samuel Krempp (krempp -at- crans.ens-cachan.fr) (See Boost list message of Mon, 27 Sep 2004 13:18:36 +0200)  
Stefan Seefeld (seefeld -at- sympatico.ca)  
Stephen Cleary (scleary -at- jerviswebb.com) (See Boost list message of Tue, 28 Sep 2004 13:11:46 +0100)  
Steve Cleary (Variant of Stephen Cleary)  
Sylvain Pion (Sylvain.Pion - at - sophia.inria.fr)  
The Trustees of Indiana University ()  
Thomas Witt (witt - at - ive.uni-hannover.de, witt - at - acm.org, witt - at - styleadvisor.com)  
Thorsten Jrgen Ottosen (nesotto - at - cs.auc.dk)  
Thorsten Ottosen (nesotto - at - cs.auc.dk)  
Toon Knapen (toon dot knapen - at - fft.be)  
Trustees of Indiana University ()  
University of Notre Dame ()  
Vladimir Prus (ghost@cs.msu.su)  
William E. Kempf () (email to Beman Dawes, 9/14/2006 4:18 PM)  
Joerg Walter (jhr.walter - at - t-online.de : email to ublas mailing list Mon, 17 Sep 2007 10:17:08 +0200)  
Mathias Koch (mkoch - at - idesis.de 7 : email to boost-owner@lists.boost.org Sep 2007 13:20:09 +0200)

--- end ---

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE article PUBLIC "-//Boost//DTD BoostBook XML V1.0//EN"

"http://www.boost.org/tools/boostbook/dtd/boostbook.dtd">

```

<article id="copyright_test" last-revision="DEBUG MODE Date: 2000/12/20 12:00:00 $"
xmlns:xi="http://www.w3.org/2001/XInclude">
<title>Copyright Test</title>
<articleinfo>
  <copyright>
    <year>1963</year> <year>1964</year> <year>1965</year> <holder>Jane Doe</holder>
  </copyright>
  <copyright>
    <year>2018</year> <holder>Joe Blow, John Coe</holder>
  </copyright>
  <copyright>
    <year>1977</year> <year>1985</year> <holder>Someone else</holder>
  </copyright>
</articleinfo>
</article>
[article Copyright Test
[quickbook 1.5]
[copyright 1963-1965 Jane Doe, 2018 Joe Blow, John Coe]
[copyright 1977,1985 Someone else]
]
[article Invalid copyright
[quickbook 1.5]
[copyright No year]
]

```

Maybe this should pass?

```

[article Invalid copyright years
[quickbook 1.5]
[copyright 2010-2001 Timequake man]
]
/*
*
* Copyright (c) 2003 Dr John Maddock
* Use, modification and distribution is subject to the
* Boost Software License, Version 1.0. (See accompanying file
* LICENSE_1_0.txt or copy at http://www.boost.org/LICENSE_1_0.txt)
*
*/

```

```

#include "licence_info.hpp"
#include "bcp_imp.hpp"
#include "fileview.hpp"
#include <fstream>
#include <iomanip>
#include <cstring>
#include <string>
#include <boost/lexical_cast.hpp>
#include <boost/filesystem/operations.hpp>

```

```

#include <boost/throw_exception.hpp>

//
// split_path is a small helper for outputting a path name,
// complete with a link to that path:
//
struct split_path
{
    const fs::path& root;
    const fs::path& file;
    split_path(const fs::path& r, const fs::path& f)
        : root(r), file(f){}
private:
    split_path& operator=(const split_path&);
};

std::ostream& operator << (std::ostream& os, const split_path& p)
{
    os << "<a href=\"\" << (p.root / p.file).string() << "\">" << p.file.string() << "</a>";
    return os;
}

std::string make_link_target(const std::string& s)
{
    // convert an arbitrary string into something suitable
    // for an <a> name:
    std::string result;
    for(unsigned i = 0; i < s.size(); ++i)
    {
        result.append(1, static_cast<std::string::value_type>(std::isalnum(s[i]) ? s[i] : '_'));
    }
    return result;
}

void bcp_implementation::output_license_info()
{
    std::pair<const license_info*, int> licenses = get_licenses();

    std::map<int, license_data>::const_iterator i, j;
    i = m_license_data.begin();
    j = m_license_data.end();

    std::ofstream os(m_dest_path.string().c_str());
    if(!os)
    {
        std::string msg("Error opening ");
        msg += m_dest_path.string();
    }
}

```

```

    msg += " for output.";
    std::runtime_error e(msg);
    boost::throw_exception(e);
}
os <<
    "<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">\n"
    "<html>\n"
    "<head>\n"
    "<title>Boost Licence Dependency Information";
if(m_module_list.size() == 1)
{
    os << " for " << *(m_module_list.begin());
}
os <<
    "</title>\n"
    "</head>\n"
    "<body>\n"
    "<H1>Boost Licence Dependency Information";
if(m_module_list.size() == 1)
{
    os << " for " << *(m_module_list.begin());
}
os <<
    "</H1>\n"
    "<H2>Contents</h2>\n"
    "<pre><a href=\"#input\">Input Information</a>\n";
if(!m_bsl_summary_mode)
    os << "<a href=\"#summary\">Licence Summary</a>\n";
os << "<a href=\"#details\">Licence Details</a>\n";

while(i != j)
{
    // title:
    os << " <a href=\"#\" << make_link_target(licenses.first[i->first].license_name)
        << "\"> << licenses.first[i->first].license_name << "</a>\n";
    ++i;
}

os << "<a href=\"#files\">Files with no recognised license</a>\n"
    "<a href=\"#authors\">Files with no recognised copyright holder</a>\n";
if(!m_bsl_summary_mode)
{
    os <<
        "Moving to the Boost Software License...\n"
        " <a href=\"#bsl-converted\">Files that can be automatically converted to the Boost Software License</a>\n"
        " <a href=\"#to-bsl\">Files that can be manually converted to the Boost Software License</a>\n"
        " <a href=\"#not-to-bsl\">Files that can <b>NOT</b> be moved to the Boost Software License</a>\n"
        " <a href=\"#need-bsl-authors\">Authors we need to move to the Boost Software License</a>\n"

```

```

    "<a href=\"#copyright\">Copyright Holder Information</a>\n";
}
os <<
    "<a href=\"#depend\">File Dependency Information</a>\n"
    "</pre>";

//
// input Information:
//
os << "<a name=\"input\"></a><h2>Input Information</h2>\n";
if(m_scan_mode)
    os << "<P>The following files were scanned for boost dependencies:<BR>";
else
    os << "<P>The following Boost modules were checked:<BR>";

std::list<std::string>::const_iterator si = m_module_list.begin();
std::list<std::string>::const_iterator sj = m_module_list.end();
while(si != sj)
{
    os << *si << "<BR>";
    ++si;
}
os << "</p><p>The Boost path was: <code>" << m_boost_path.string() << "</code></P>";
//
// extract the boost version number from the boost directory tree,
// not from this app (which may have been built from a previous
// version):
//
fileview version_file(m_boost_path / "boost/version.hpp");
static const boost::regex version_regex(
    "^[:,blank:]*#[:,blank:]*define[:,blank:]+BOOST_VERSION[:,blank:]+(\\d+)");
boost::cmatch what;
if(boost::regex_search(version_file.begin(), version_file.end(), what, version_regex))
{
    int version = boost::lexical_cast<int>(what.str(1));
    os << "<p>The Boost version is: " << version / 100000 << "." << version / 100 % 1000 << "." << version % 100
    << "</P>\n";
}

//
// output each license:
//
i = m_license_data.begin();
j = m_license_data.end();
if(!m_bsl_summary_mode)
{
    //
    // start with the summary:

```

```

//
os << "<a name=\"summary\"></a><h2>Licence Summary</h2>\n";
while(i != j)
{
    // title:
    os <<
        "<H3>" << licenses.first[i->first].license_name << "</H3>\n";
    // license text:
    os << "<BLOCKQUOTE>" << licenses.first[i->first].license_text << "</BLOCKQUOTE>";
    // Copyright holders:
    os << "<P>This license is used by " << i->second.authors.size()
        << " authors and " << i->second.files.size()
        << " files <a href=\"#\" << make_link_target(licenses.first[i->first].license_name) << "\">(see details)</a>";
    os << "</P></BLOCKQUOTE>\n";
    ++i;
}
}
//
// and now the details:
//
i = m_license_data.begin();
j = m_license_data.end();
int license_index = 0;
os << "<a name=\"details\"></a><h2>Licence Details</h2>\n";
while(i != j)
{
    // title:
    os <<
        "<H3><A name=\"" << make_link_target(licenses.first[i->first].license_name)
        << "\"></a>" << licenses.first[i->first].license_name << "</H3>\n";
    // license text:
    os << "<BLOCKQUOTE>" << licenses.first[i->first].license_text << "</BLOCKQUOTE>";
    if(!m_bsl_summary_mode || (license_index >= 3))
    {
        // Copyright holders:
        os << "<P>This license is used by the following " << i->second.authors.size() << " copyright
holders:</P>\n<BLOCKQUOTE><P>";
        std::set<std::string>::const_iterator x, y;
        x = i->second.authors.begin();
        y = i->second.authors.end();
        while(x != y)
        {
            os << *x << "<BR>\n";
            ++x;
        }
        os << "</P></BLOCKQUOTE>\n";
        // Files using this license:
        os << "<P>This license applies to the following " << i->second.files.size() << "

```

```

files:</P>\n<BLOCKQUOTE><P>";
    std::set<fs::path, path_less>::const_iterator m, n;
    m = i->second.files.begin();
    n = i->second.files.end();
    while(m != n)
    {
        os << split_path(m_boost_path, *m) << "<br>\n";
        ++m;
    }
    os << "</P></BLOCKQUOTE>\n";
}
else
{
    os << "<P>This license is used by " << i->second.authors.size() << " authors (list omitted for brevity).</P>\n";
    os << "<P>This license applies to " << i->second.files.size() << " files (list omitted for brevity).</P>\n";
}
++license_index;
++i;
}
//
// Output list of files not found to be under license control:
//
os << "<h2><a name=\"files\"></a>Files With No Recognisable Licence</h2>\n"
    "<P>The following " << m_unknown_licenses.size() << " files had no recognisable license
information:</P><BLOCKQUOTE><P>\n";
    std::set<fs::path, path_less>::const_iterator i2, j2;
    i2 = m_unknown_licenses.begin();
    j2 = m_unknown_licenses.end();
    while(i2 != j2)
    {
        os << split_path(m_boost_path, *i2) << "<br>\n";
        ++i2;
    }
    os << "</p></BLOCKQUOTE>";
//
// Output list of files with no found copyright holder:
//
os << "<h2><a name=\"authors\"></a>Files With No Recognisable Copyright Holder</h2>\n"
    "<P>The following " << m_unknown_authors.size() << " files had no recognisable copyright
holder:</P>\n<BLOCKQUOTE><P>";
    i2 = m_unknown_authors.begin();
    j2 = m_unknown_authors.end();
    while(i2 != j2)
    {
        os << split_path(m_boost_path, *i2) << "<br>\n";
        ++i2;
    }
    os << "</p></BLOCKQUOTE>";

```

```

if(!m_bsl_summary_mode)
{
    //
    // Output list of files that have been moved over to the Boost
    // Software License, along with enough information for human
    // verification.
    //
    os << "<h2><a name=\"bsl-converted\"></a>Files that can be automatically converted to the Boost Software
License</h2>\n"
    << "<P>The following " << m_converted_to_bsl.size() << " files can be automatically converted to the Boost
Software License, but require manual verification before they can be committed to CVS:</P>\n";
    if (!m_converted_to_bsl.empty())
    {
        typedef std::map<fs::path, std::pair<std::string, std::string>, path_less>
            ::const_iterator conv_iterator;
        conv_iterator i = m_converted_to_bsl.begin(),
            ie = m_converted_to_bsl.end();
        int file_num = 1;
        while (i != ie)
        {
            os << "<P>[" << file_num << "] File: <tt>" << split_path(m_boost_path, i->first)
                << "</tt><br>\n<table border=\"1\">\n <tr>\n <td><pre>"
                << i->second.first << "</pre></td>\n <td><pre>"
                << i->second.second << "</pre></td>\n </tr>\n</table>\n";
            ++i;
            ++file_num;
        }
    }
    //
    // Output list of files that could be moved over to the Boost Software License
    //
    os << "<h2><a name=\"to-bsl\"></a>Files that could be converted to the Boost Software License</h2>\n"
    "<P>The following " << m_can_migrate_to_bsl.size() << " files could be manually converted to the Boost
Software License, but have not yet been:</P>\n<BLOCKQUOTE><P>";
    i2 = m_can_migrate_to_bsl.begin();
    j2 = m_can_migrate_to_bsl.end();
    while(i2 != j2)
    {
        os << split_path(m_boost_path, *i2) << "<br>\n";
        ++i2;
    }
    os << "</p></BLOCKQUOTE>";
    //
    // Output list of files that can not be moved over to the Boost Software License
    //
    os << "<h2><a name=\"not-to-bsl\"></a>Files that can NOT be converted to the Boost Software
License</h2>\n"
    "<P>The following " << m_cannot_migrate_to_bsl.size() << " files cannot be converted to the Boost Software

```



```

License because we need the permission of more authors:</P>\n<BLOCKQUOTE><P>";
    i2 = m_cannot_migrate_to_bsl.begin();
    j2 = m_cannot_migrate_to_bsl.end();
    while(i2 != j2)
    {
        os << split_path(m_boost_path, *i2) << "<br>\n";
        ++i2;
    }
    os << "</p></BLOCKQUOTE>";
    //
    // Output list of authors that we need permission for to move to the BSL
    //
    os << "<h2><a name=\"need-bsl-authors\"></a>Authors we need for the BSL</h2>\n"
        "<P>Permission of the following authors is needed before we can convert to the Boost Software License. The
list of authors that have given their permission is contained in <code>more/blanket-
permission.txt</code>.</P>\n<BLOCKQUOTE><P>";
    std::copy(m_authors_for_bsl_migration.begin(), m_authors_for_bsl_migration.end(),
        std::ostream_iterator<std::string>(os, "<br>\n"));
    os << "</p></BLOCKQUOTE>";
    //
    // output a table of copyright information:
    //
    os << "<H2><a name=\"copyright\"></a>Copyright Holder Information</H2><table border=\"1\">\n";
    std::map<std::string, std::set<fs::path, path_less> >::const_iterator ad, ead;
    ad = m_author_data.begin();
    ead = m_author_data.end();
    while(ad != ead)
    {
        os << "<tr><td>" << ad->first << "</td><td>";
        std::set<fs::path, path_less>::const_iterator fi, efi;
        fi = ad->second.begin();
        efi = ad->second.end();
        while(fi != efi)
        {
            os << split_path(m_boost_path, *fi) << " ";
            ++fi;
        }
        os << "</td></tr>\n";
        ++ad;
    }
    os << "</table>\n";
}

//
// output file dependency information:
//
os << "<H2><a name=\"depend\"></a>File Dependency Information</H2><BLOCKQUOTE><pre>\n";
std::map<fs::path, fs::path, path_less>::const_iterator dep, last_dep;

```

```

std::set<fs::path, path_less>::const_iterator fi, efi;
fi = m_copy_paths.begin();
efi = m_copy_paths.end();
// if in summary mode, just figure out the "bad" files and print those only:
std::set<fs::path, path_less> bad_paths;
if(m_bsl_summary_mode)
{
    bad_paths.insert(m_unknown_licenses.begin(), m_unknown_licenses.end());
    bad_paths.insert(m_unknown_authors.begin(), m_unknown_authors.end());
    bad_paths.insert(m_can_migrate_to_bsl.begin(), m_can_migrate_to_bsl.end());
    bad_paths.insert(m_cannot_migrate_to_bsl.begin(), m_cannot_migrate_to_bsl.end());
    typedef std::map<fs::path, std::pair<std::string, std::string>, path_less>
        ::const_iterator conv_iterator;
    conv_iterator i = m_converted_to_bsl.begin(),
        ie = m_converted_to_bsl.end();
    while(i != ie)
    {
        bad_paths.insert(i->first);
        ++i;
    }
    fi = bad_paths.begin();
    efi = bad_paths.end();
    os << "<P>For brevity, only files not under the BSL are shown</P>\n";
}
while(fi != efi)
{
    os << split_path(m_boost_path, *fi);
    dep = m_dependencies.find(*fi);
    last_dep = m_dependencies.end();
    std::set<fs::path, path_less> seen_deps;
    if (dep != last_dep)
        while(true)
        {
            os << " -> ";
            if(fs::exists(m_boost_path / dep->second))
                os << split_path(m_boost_path, dep->second);
            else if(fs::exists(dep->second))
                os << split_path(fs::path(), dep->second);
            else
                os << dep->second.string();
            if(seen_deps.find(dep->second) != seen_deps.end())
            {
                os << " <I>(Circular dependency!)</I>";
                break; // circular dependency!!!
            }
            seen_deps.insert(dep->second);
            last_dep = dep;
            dep = m_dependencies.find(dep->second);
        }
}

```

```

        if((dep == m_dependencies.end()) || (0 == compare_paths(dep->second, last_dep->second)))
            break;
    }
    os << "\n";
    ++fi;
}
os << "</pre></BLOCKQUOTE>\n";

os << "</body></html>\n";

if(!os)
{
    std::string msg("Error writing to ");
    msg += m_dest_path.string();
    msg += ".";
    std::runtime_error e(msg);
    boost::throw_exception(e);
}

}
Software License, Version 1.0

```

Copyright 2002-2003, Trustees of Indiana University.

Copyright 2000-2001, University of Notre Dame.

All rights reserved.

Indiana University has the exclusive rights to license this product under the following license.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* All redistributions of source code must retain the above copyright notice, the list of authors in the original source code, this list of conditions and the disclaimer listed in this license;
- \* All redistributions in binary form must reproduce the above copyright notice, this list of conditions and the disclaimer listed in this license in the documentation and/or other materials provided with the distribution;
- \* Any documentation included with all redistributions must include the following acknowledgement:

"This product includes software developed at the University of Notre Dame and the Pervasive Technology Labs at Indiana University. For technical information contact Andrew Lumsdaine at the Pervasive Technology Labs at Indiana University. For administrative and license questions contact the Advanced Research and Technology Institute at 351 West 10th Street.

Indianapolis, Indiana 46202, phone 317-278-4100, fax 317-274-5902."

Alternatively, this acknowledgement may appear in the software itself, and wherever such third-party acknowledgments normally appear.

\* The name Indiana University, the University of Notre Dame or "Caramel" shall not be used to endorse or promote products derived from this software without prior written permission from Indiana University. For written permission, please contact Indiana University Advanced Research & Technology Institute.

\* Products derived from this software may not be called "Caramel", nor may Indiana University, the University of Notre Dame or "Caramel" appear in their name, without prior written permission of Indiana University Advanced Research & Technology Institute.

Indiana University provides no reassurances that the source code provided does not infringe the patent or any other intellectual property rights of any other entity. Indiana University disclaims any liability to any recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise.

LICENSEE UNDERSTANDS THAT SOFTWARE IS PROVIDED "AS IS" FOR WHICH NO WARRANTIES AS TO CAPABILITIES OR ACCURACY ARE MADE. INDIANA UNIVERSITY GIVES NO WARRANTIES AND MAKES NO REPRESENTATION THAT SOFTWARE IS FREE OF INFRINGEMENT OF THIRD PARTY PATENT, COPYRIGHT, OR OTHER PROPRIETARY RIGHTS. INDIANA UNIVERSITY MAKES NO WARRANTIES THAT SOFTWARE IS FREE FROM "BUGS", "VIRUSES", "TROJAN HORSES", "TRAP DOORS", "WORMS", OR OTHER HARMFUL CODE. LICENSEE ASSUMES THE ENTIRE RISK AS TO THE PERFORMANCE OF SOFTWARE AND/OR ASSOCIATED MATERIALS, AND TO THE PERFORMANCE AND VALIDITY OF INFORMATION GENERATED USING SOFTWARE.

This package was debianized by Vladimir Prus <ghost@cs.msu.su> on Wed, 17 July 2002, 19:27:00 +0400.

Copyright:

```
/+\n+\ Copyright 1993-2002 Christopher Seiwald and Perforce Software, Inc.\n\+/\
```

This is Release 2.4 of Jam/MR, a make-like program.

License is hereby granted to use this software and distribute it freely, as long as this copyright notice is retained and modifications are clearly marked.

ALL WARRANTIES ARE HEREBY DISCLAIMED.

Some portions are also:

Copyright 2001-2006 David Abrahams.

Copyright 2002-2006 Rene Rivera.

Copyright 2003-2006 Vladimir Prus.

Distributed under the Boost Software License, Version 1.0.

(See accompanying file LICENSE\_1\_0.txt or [http://www.boost.org/LICENSE\\_1\\_0.txt](http://www.boost.org/LICENSE_1_0.txt))

This is an attempt to acknowledge early contributions to the garbage collector. Later contributions should instead be mentioned in README.changes.

## HISTORY -

Early versions of this collector were developed as a part of research projects supported in part by the National Science Foundation and the Defense Advance Research Projects Agency.

The garbage collector originated as part of the run-time system for the Russell programming language implementation. The first version of the garbage collector was written primarily by Al Demers. It was then refined and mostly rewritten, primarily by Hans-J. Boehm, at Cornell U., the University of Washington, Rice University (where it was first used for C and assembly code), Xerox PARC, SGI, and HP Labs. However, significant contributions have also been made by many others.

Some other contributors:

More recent contributors are mentioned in the modification history in README.changes. My apologies for any omissions.

The SPARC specific code was originally contributed by Mark Weiser.

The Encore Multimax modifications were supplied by Kevin Kenny ([kenny@m.cs.uiuc.edu](mailto:kenny@m.cs.uiuc.edu)). The adaptation to the IBM PC/RT is largely due to Vernon Lee, on machines made available to Rice by IBM.

Much of the HP specific code and a number of good suggestions for improving the generic code are due to Walter Underwood.

Robert Brazile ([brazile@diamond.bbn.com](mailto:brazile@diamond.bbn.com)) originally supplied the ULTRIX code.

Al Dosser ([dosser@src.dec.com](mailto:dosser@src.dec.com)) and Regis Cridlig ([Regis.Cridlig@cl.cam.ac.uk](mailto:Regis.Cridlig@cl.cam.ac.uk)) subsequently provided updates and information on variation between ULTRIX systems. Parag Patel ([parag@netcom.com](mailto:parag@netcom.com)) supplied the A/UX code.

Jesper Peterson ([jep@mtiame.mtia.oz.au](mailto:jep@mtiame.mtia.oz.au)), Michel Schinz, and

Martin Tauchmann ([martintauchmann@bigfoot.com](mailto:martintauchmann@bigfoot.com)) supplied the Amiga port.

Thomas Funke ([thf@zelator.in-berlin.de\(?\)](mailto:thf@zelator.in-berlin.de(?))) and

Brian D. Carlstrom ([bdc@clark.lcs.mit.edu](mailto:bdc@clark.lcs.mit.edu)) supplied the NeXT ports.

Douglas Steel ([doug@wg.icl.co.uk](mailto:doug@wg.icl.co.uk)) provided ICL DRS6000 code.

Bill Janssen ([janssen@parc.xerox.com](mailto:janssen@parc.xerox.com)) supplied the SunOS dynamic loader specific code. Manuel Serrano ([serrano@cornas.inria.fr](mailto:serrano@cornas.inria.fr)) supplied linux and

Sony News specific code. Al Dosser provided Alpha/OSF/1 code. He and

Dave Detlefs(detlefs@src.dec.com) also provided several generic bug fixes.  
Alistair G. Crooks(agg@uts.amdahl.com) supplied the NetBSD and 386BSD ports.  
Jeffrey Hsu (hsu@soda.berkeley.edu) provided the FreeBSD port.  
Brent Benson (brent@jade.ssd.csd.harris.com) ported the collector to  
a Motorola 88K processor running CX/UX (Harris NightHawk).  
Ari Huttunen (Ari.Huttunen@hut.fi) generalized the OS/2 port to  
nonIBM development environments (a nontrivial task).  
Patrick Beard (beard@cs.ucdavis.edu) provided the initial MacOS port.  
David Chase, then at Olivetti Research, suggested several improvements.  
Scott Schwartz (schwartz@groucho.cse.psu.edu) supplied some of the  
code to save and print call stacks for leak detection on a SPARC.  
Jesse Hull and John Ellis supplied the C++ interface code.  
Zhong Shao performed much of the experimentation that led to the  
current typed allocation facility. (His dynamic type inference code hasn't  
made it into the released version of the collector, yet.)

```
// Copyright Louis Dionne 2013-2017
```

```
// Distributed under the Boost Software License, Version 1.0.
```

```
// (See accompanying file LICENSE.md or copy at http://boost.org/LICENSE\_1\_0.txt)
```

```
#include <boost/mpl/push_back.hpp>
```

```
#include <boost/mpl/quote.hpp>
```

```
#include <boost/mpl/transform.hpp>
```

```
#include <boost/mpl/vector.hpp>
```

```
template <typename X>
```

```
struct f { using type = X; };
```

```
template <int i>
```

```
struct t { };
```

```
using vector = <%= mpl_vector((1..input_size).to_a.map { |n| "t<#{n}>" }) %>;
```

```
using result = boost::mpl::transform<vector, boost::mpl::quote1<f>>::type;
```

```
int main() { }
```

```
// Copyright Louis Dionne 2013-2017
```

```
// Distributed under the Boost Software License, Version 1.0.
```

```
// (See accompanying file LICENSE.md or copy at http://boost.org/LICENSE\_1\_0.txt)
```

```
#include <boost/mpl/push_back.hpp>
```

```
#include <boost/mpl/vector.hpp>
```

```
template <int i>
```

```
struct t { };
```

```

using vector = <%= mpl_vector((1..input_size).to_a.map { |n| "t<#{n}>" }) %>;

int main() { }
// Copyright Louis Dionne 2013-2017
// Distributed under the Boost Software License, Version 1.0.
// (See accompanying file LICENSE.md or copy at http://boost.org/LICENSE_1_0.txt)

#include <boost/mpl/fold.hpp>
#include <boost/mpl/push_back.hpp>
#include <boost/mpl/quote.hpp>
#include <boost/mpl/vector.hpp>

template <typename State, typename X>
struct f { using type = X; };

struct state { };

template <int i>
struct t { };

using vector = <%= mpl_vector((1..input_size).to_a.map { |n| "t<#{n}>" }) %>;

using result = boost::mpl::fold<vector, state, boost::mpl::quote2<f>>::type;

int main() { }
Copyright Louis Dionne 2013-2017

```

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT

SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

<!--

Copyright Louis Dionne 2013-2017

Distributed under the Boost Software License, Version 1.0.

(See accompanying file LICENSE.md or copy at [http://boost.org/LICENSE\\_1\\_0.txt](http://boost.org/LICENSE_1_0.txt))

-->

<!-- boost-no-inspect -->

<!-- HTML header for doxygen 1.8.9.1-->

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"

"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">

<head>

<meta http-equiv="Content-Type" content="text/xhtml; charset=UTF-8"/>

<meta http-equiv="X-UA-Compatible" content="IE=9"/>

<meta name="generator" content="Doxygen 1.8.11"/>

<title>Boost.Hana: Boost.MPL adapters</title>

<link href="tabs.css" rel="stylesheet" type="text/css"/>

<script type="text/javascript" src="jquery.js"></script>

<script type="text/javascript" src="dynsections.js"></script>

<link href="navtree.css" rel="stylesheet" type="text/css"/>

<script type="text/javascript" src="resize.js"></script>

<script type="text/javascript" src="navtreedata.js"></script>

<script type="text/javascript" src="navtree.js"></script>

<script type="text/javascript">

\$(document).ready(initResizable);

\$(window).load(resizeHeight);

</script>

<link href="search/search.css" rel="stylesheet" type="text/css"/>

<script type="text/javascript" src="search/searchdata.js"></script>

<script type="text/javascript" src="search/search.js"></script>

<script type="text/javascript">

\$(document).ready(function() { init\_search(); });

</script>

<script type="text/x-mathjax-config">

MathJax.Hub.Config({

  extensions: ["tex2jax.js"],

  jax: ["input/TeX", "output/HTML-CSS"],

});

// Copyright Louis Dionne 2013-2017

// Distributed under the Boost Software License, Version 1.0.

// (See accompanying file LICENSE.md or copy at [http://boost.org/LICENSE\\_1\\_0.txt](http://boost.org/LICENSE_1_0.txt))

MathJax.Hub.Config({

  "HTML-CSS": {

    linebreaks: {

      automatic: true,



```

        width: "75% container"
    }
}
});
</script><script type="text/javascript" src="https://cdn.mathjax.org/mathjax/latest/MathJax.js"></script>
<link href="doxygen.css" rel="stylesheet" type="text/css" />
<!-- Additional javascript for drawing charts. -->
<script type="text/javascript" src="highcharts.js"></script>
<script type="text/javascript" src="highcharts-data.js"></script>
<script type="text/javascript" src="highcharts-exporting.js"></script>
<script type="text/javascript" src="chart.js"></script>
<script type="text/javascript" src="hana.js"></script>
</head>
<body>
<div id="top"><!-- do not remove this div, it is closed by doxygen! -->
<div id="titlearea">
<table cellpadding="0" cellspacing="0">
<tbody>
<tr style="height: 56px;">
<td id="projectlogo"></td>
<td style="padding-left: 0.5em;">
<div id="projectname">Boost.Hana
&#160;<span id="projectnumber">1.2.0</span>
</div>
<div id="projectbrief">Your standard library for metaprogramming</div>
</td>
<td>
<div id="MSearchBox" class="MSearchBoxInactive">
<span class="left">

<input type="text" id="MSearchField" value="Search" accesskey="S"
onfocus="searchBox.OnSearchFieldFocus(true)"
onblur="searchBox.OnSearchFieldFocus(false)"
onkeyup="searchBox.OnSearchFieldChange(event)"/>
</span><span class="right">
<a id="MSearchClose" href="javascript:searchBox.CloseResultsWindow()"></a>
</span>
</div>
</td>
</tr>
</tbody>
</table>
</div>
<!-- end header part -->
<!-- Generated by Doxygen 1.8.11 -->

```

```

<script type="text/javascript">
var searchBox = new SearchBox("searchBox", "search",false,'Search');
</script>
</div><!-- top -->
<div id="side-nav" class="ui-resizable side-nav-resizable">
<div id="nav-tree">
<div id="nav-tree-contents">
<div id="nav-sync" class="sync"></div>
</div>
</div>
<div id="splitbar" style="-moz-user-select:none;"
class="ui-resizable-handle">
</div>
</div>
<script type="text/javascript">
$(document).ready(function(){initNavTree('group__group-ext-mpl.html',');});
</script>
<div id="doc-content">
<!-- window showing the filter options -->
<div id="MSearchSelectWindow"
onmouseover="return searchBox.OnSearchSelectShow()"
onmouseout="return searchBox.OnSearchSelectHide()"
onkeydown="return searchBox.OnSearchSelectKey(event)">
</div>

<!-- iframe showing the search results (closed by default) -->
<div id="MSearchResultsWindow">
<iframe src="javascript:void(0)" frameborder="0"
name="MSearchResults" id="MSearchResults">
</iframe>
</div>

<div class="header">
<div class="summary">
<a href="#nested-classes">Classes</a> </div>
<div class="headertitle">
<div class="title">Boost.MPL adapters<div class="ingroups"><a class="el" href="group__group-
ext.html">External adapters</a></div></div> </div>
</div><!--header-->
<div class="contents">
<a name="details" id="details"></a><h2 class="groupheader">Description</h2>
<p>Adapters for Boost.MPL containers. </p>
<table class="memberdecls">
<tr class="heading"><td colspan="2"><h2 class="groupheader"><a name="nested-classes"></a>
Classes</h2></td></tr>
<tr class="memitem"><td class="memItemLeft" align="right" valign="top">struct 
&#160;</td><td class="memItemRight" valign="bottom"><a class="el"
href="structboost_1_1mpl_1_1integral_c.html">boost::mpl::integral_c< T, v ></a></td></tr>

```

```

<tr class="memdesc:"><td class="mdescLeft">&#160;</td><td class="mdescRight">Adapter for IntegralConstants
from the Boost.MPL. <a href="structboost_1_1mpl_1_1integral__c.html#details">More...</a><br /></td></tr>
<tr class="separator:"><td class="memSeparator" colspan="2">&#160;</td></tr>
<tr class="memitem:"><td class="memItemLeft" align="right" valign="top">struct &#160;</td><td
class="memItemRight" valign="bottom"><a class="el" href="structboost_1_1mpl_1_1list.html">boost::mpl::list< T
></a></td></tr>
<tr class="memdesc:"><td class="mdescLeft">&#160;</td><td class="mdescRight">Adapter for Boost.MPL lists.
<a href="structboost_1_1mpl_1_1list.html#details">More...</a><br /></td></tr>
<tr class="separator:"><td class="memSeparator" colspan="2">&#160;</td></tr>
<tr class="memitem:"><td class="memItemLeft" align="right" valign="top">struct &#160;</td><td
class="memItemRight" valign="bottom"><a class="el"
href="structboost_1_1mpl_1_1vector.html">boost::mpl::vector< T ></a></td></tr>
<tr class="memdesc:"><td class="mdescLeft">&#160;</td><td class="mdescRight">Adapter for Boost.MPL
vectors. <a href="structboost_1_1mpl_1_1vector.html#details">More...</a><br /></td></tr>
<tr class="separator:"><td class="memSeparator" colspan="2">&#160;</td></tr>
</table>

```

```
</div><!-- contents -->
```

```
</div><!-- doc-content -->
```

```
<!--
```

```
Copyright Louis Dionne 2013-2017
```

```
Distributed under the Boost Software License, Version 1.0.
```

```
(See accompanying file LICENSE.md or copy at http://boost.org/LICENSE_1_0.txt)
```

```
-->
```

```
<!-- boost-no-inspect -->
```

```
<!-- HTML footer for doxygen 1.8.9.1-->
```

```
<!-- start footer part -->
```

```
<div id="nav-path" class="navpath"><!-- id is needed for treeview function! -->
```

```
<ul>
```

```
</ul>
```

```
</div>
```

```
</body>
```

```
</html>
```

```
var group__group_ext_mpl =
```

```
[
```

```
  [ "integral_c", "structboost_1_1mpl_1_1integral__c.html", null ],
```

```
  [ "list", "structboost_1_1mpl_1_1list.html", null ],
```

```
  [ "vector", "structboost_1_1mpl_1_1vector.html", null ]
```

```
];
```

```
#!/usr/bin/env python
```

```
from subprocess import check_output as run
```

```
from datetime import datetime
```

```
from itertools import groupby
```

```
from operator import itemgetter
```

```
import re
```

```
import magic
```

```
def authors(filename):
```

```
    log = run(['git', 'log', '--follow',
```

```

        '--date=short', '--format=%aN%x09% ad', filename],
        universal_newlines=True)
for line in log.splitlines():
    author, date = line.split('\t')
    if author != 'fix-copyright.py':
        yield author, datetime.strptime(date, '%Y-%m-%d')

def new_copyright(filename, previous):
    def f():
        au = list(authors(filename))
        alldates = map(itemgetter(1), au)
        aup = sorted(au + map(lambda a: (a, None), previous), key=itemgetter(0))
        for author, records in groupby(aup, itemgetter(0)):
            dates = filter(None, map(itemgetter(1), records))
            if not dates: dates = alldates
            start = min(dates)
            end = max(dates)
            fmt = '{0}' if start.year == end.year else '{0}-{1}'
            line = 'Copyright ' + fmt.format(start.year, end.year) + ' ' + author
            key = (start, author)
            yield key, line
    return map(itemgetter(1), sorted(f()))

def fix_copyright(filename):
    # Find copyright block in original file
    prefix = set()
    names = []
    lines = []
    with open(filename, 'r') as f:
        content = list(f)
    for i, line in enumerate(content[:15]):
        m = re.match(r'^(?P<prefix>W*)(\c)?\s*?copyright\s*(\c)?\s+\d{4}(\s*\s*\d{4})?\s+(?P<name>.+?)\s*$',
line, re.IGNORECASE)
        if m:
            d = m.groupdict()
            prefix.add(d['prefix'])
            lines.append(i)
            names.append(d['name'].strip())
    if len(prefix) != 1:
        print 'Not found:', filename
        return
    prefix = list(prefix)[0]

    print filename
    new = iter(new_copyright(filename, names))
    with open(filename, 'w') as f:
        for i, line in enumerate(content):
            if i in lines:

```

```

        for repl in new:
            print >>f, prefix + repl
        else:
            print >>f, line,
    pass

def all_files():
    ls = run(['git', 'ls-files'], universal_newlines=True)
    for filename in ls.splitlines():
        if magic.from_file(filename, mime=True).split('/')[0] == 'text':
            yield filename

for f in all_files():
    fix_copyright(f)
[/=====
Boost.Geometry (aka GGL, Generic Geometry Library)

Copyright (c) 2007-2013 Barend Gehrels, Amsterdam, the Netherlands.
Copyright (c) 2008-2013 Bruno Lalande, Paris, France.
Copyright (c) 2009-2013 Mateusz Loskot, London, UK.

Use, modification and distribution is subject to the Boost Software License,
Version 1.0. (See accompanying file LICENSE_1_0.txt or copy at
http://www.boost.org/LICENSE\_1\_0.txt)
=====/]

Use of this software is granted under one of the following two licenses,
to be chosen freely by the user.

1. Boost Software License - Version 1.0 - August 17th, 2003
=====

Copyright (c) 2006, 2007 Marcin Kalicinski

Permission is hereby granted, free of charge, to any person or organization
obtaining a copy of the software and accompanying documentation covered by
this license (the "Software") to use, reproduce, display, distribute,
execute, and transmit the Software, and to prepare derivative works of the
Software, and to permit third-parties to whom the Software is furnished to
do so, all subject to the following:

The copyright notices in the Software and this entire statement, including
the above license grant, this restriction and the following disclaimer,
must be included in all copies of the Software, in whole or in part, and
all derivative works of the Software, unless such copies or derivative
works are solely in the form of machine-executable object code generated by
a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

```

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## 2. The MIT License

---

Copyright (c) 2006, 2007 Marcin Kalicinski

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

---

Copyright (c) 2007-2011 Barend Gehrels, Amsterdam, the Netherlands.

Copyright (c) 2008-2011 Bruno Lalande, Paris, France.

Copyright (c) 2009-2011 Mateusz Loskot, London, UK.

Use, modification and distribution is subject to the Boost Software License, Version 1.0. (See accompanying file LICENSE\_1\_0.txt or copy at [http://www.boost.org/LICENSE\\_1\\_0.txt](http://www.boost.org/LICENSE_1_0.txt))

---

The default copyright note for C++ source files reads:

```
// Boost.Geometry (aka GGL, Generic Geometry Library)
```

```
// Copyright (c) 2007-2011 Barend Gehrels, Amsterdam, the Netherlands.
```

```
// Copyright (c) 2008-2011 Bruno Lalande, Paris, France.
```

```
// Copyright (c) 2009-2011 Mateusz Loskot, London, UK.
```

```
// Parts of Boost.Geometry are redesigned from Geodan's Geographic Library
```

```
// (geolib/GGL), copyright (c) 1995-2010 Geodan, Amsterdam, the Netherlands.
```

```
// Use, modification and distribution is subject to the Boost Software License,  
// Version 1.0. (See accompanying file LICENSE_1_0.txt or copy at  
// http://www.boost.org/LICENSE_1_0.txt)
```

Exceptions:

- 1) Major work of any author -> might change order, change date
- 2) Exclusive work of one author including design -> might take sole copyright

Examples:

- adapted geometry types e.g. array, Boost.Polygon
- implemented file-format e.g. WKB
- implemented specific strategy or algorithm e.g. intersections

- 3) Examples -> might take sole copyright
- 4) Tests -> might take sole copyright
- 5) Docs -> might take sole copyright
- 6) Utilities e.g. converters -> might take sole copyright

The copyright note for other (source) files as .py, Jamfiles, etc is similar and comments are changed accordingly.

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<!-- Copyright (c) 2001-2006 CrystalClear Software, Inc.
```

```
Subject to the Boost Software License, Version 1.0.
```

```
(See accompanying file LICENSE_1_0.txt or http://www.boost.org/LICENSE_1_0.txt)
```

```
-->
```

```
<section id="date_time.license">
```

```
<title>Boost Date-Time Library License</title>
```

```
<bridgehead renderas="sect2">Boost Date-Time Library License</bridgehead>
```

```
<!--
```

```
<ulink url="../../index.htm">
```

```
<imagedata align="left"
```

```
format="GIF"
```

```
fileref="../../boost.png"
```

```
alt="C++ Boost" />
```

```
</ulink>-->
```

```
<!--hr /-->
```

```
<para>
```

The following is the overall license for the boost date\_time library. This notice is found in all source files related to the library.

```
</para>
```

```
<para>
```

Copyright © 2002 CrystalClear Software, Inc.

```
</para>
```

```

<para>
Permission to use, copy, modify, distribute and sell this software
and its documentation for any purpose is hereby granted without
fee, provided that the above copyright notice appear in all copies
and that both that copyright notice and this permission notice
appear in supporting documentation. CrystalClear Software makes no
representations about the suitability of this software for any
purpose. It is provided "as is" without express or implied
warranty.
</para>
<!--hr / -->
<ulink url="mailto:jeff@crystalclearsoftware.com">Jeff Garland</ulink>
&#169; 2000-2002
</section>

```

```

[/
Copyright 2007 John Maddock.
Distributed under the Boost Software License, Version 1.0.
(See accompanying file LICENSE_1_0.txt or copy at
http://www.boost.org/LICENSE_1_0.txt).
]

```

[section:mpl MPL Interoperability]

All the value based traits in this library conform to MPL's requirements for an [ @../.../libs/mpl/doc/refmanual/integral-constant.html Integral Constant type].

Please note that these types no longer inherit from `mpl::true\_` or `mpl::false\_` etc, and the library will no longer implicitly include any MPL header. However there is an implicit conversion from `integral\_constant` to the corresponding MPL types, therefore tag-dispatching that uses MPL types in function overloads will still work as before.

[endsect]

```

<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=US-ASCII">
<title>MPL Interoperability</title>
<link rel="stylesheet" href=".../doc/src/boostbook.css" type="text/css">
<meta name="generator" content="DocBook XSL Stylesheets V1.79.1">
<link rel="home" href=".../index.html" title="Chapter&#160;1.&#160;Boost.TypeTraits">
<link rel="up" href=".../index.html" title="Chapter&#160;1.&#160;Boost.TypeTraits">
<link rel="prev" href="intrinsic.html" title="Support for Compiler Intrinsics">
<link rel="next" href="examples.html" title="Examples">
</head>
<body bgcolor="white" text="black" link="#0000FF" vlink="#840084" alink="#0000FF">
<table cellpadding="2" width="100%"><tr>
<td valign="top"></td>
<td align="center"><a href=".../index.html">Home</a></td>
<td align="center"><a href=".../libs/libraries.htm">Libraries</a></td>

```



```

<td align="center"><a href="http://www.boost.org/users/people.html">People</a></td>
<td align="center"><a href="http://www.boost.org/users/faq.html">FAQ</a></td>
<td align="center"><a href="http://www.boost.org/doc/html/more/index.htm">More</a></td>
</tr></table>
<hr>
<div class="spirit-nav">
<a accesskey="p" href="intrinsic.html"></a><a
accesskey="u" href="http://www.boost.org/doc/html/index.html"></a><a accesskey="h"
href="http://www.boost.org/doc/html/index.html"></a><a accesskey="n"
href="http://www.boost.org/doc/html/examples.html"></a>
</div>
<div class="section">
<div class="titlepage"><div><div><h2 class="title" style="clear: both">
<a name="boost_typetraits.mpl"></a><a class="link" href="mpl.html" title="MPL Interoperability">MPL
Interoperability</a>
</h2></div></div></div>
<p>
All the value based traits in this library conform to MPL's requirements for
an <a href="http://www.boost.org/doc/html/libs/mpl/doc/refmanual/integral-constant.html" target="_top">Integral
Constant type</a>.
</p>
<p>
Please note that these types no longer inherit from <code class="computeroutput"><span
class="identifier">mpl</span><span class="special">::</span><span class="identifier">true_</span></code> or
<code class="computeroutput"><span class="identifier">mpl</span><span class="special">::</span><span
class="identifier">false_</span></code> etc, and the library will no longer
implicitly include any MPL header. However there is an implicit conversion
from <code class="computeroutput"><span class="identifier">integral_constant</span></code> to the
corresponding MPL types, therefore tag-dispatching that uses MPL types in function
overloads will still work as before.
</p>
</div>
<table xmlns:rev="http://www.cs.rpi.edu/~gregod/boost/tools/doc/revision" width="100%"><tr>
<td align="left"></td>
<td align="right"><div class="copyright-footer">Copyright © 2000, 2011 Adobe Systems Inc, David
Abrahams,
Frederic Bron, Steve Cleary, Beman Dawes, Aleksey Gurtovoy, Howard Hinnant,
Jesse Jones, Mat Marcus, Itay Maman, John Maddock, Alexander Nasonov, Thorsten
Ottosen, Roman Perepelitsa, Robert Ramey, Jeremy Siek, Robert Stewart and Steven
Watanabe<p>
Distributed under the Boost Software License, Version 1.0. (See accompanying
file LICENSE_1_0.txt or copy at <a href="http://www.boost.org/LICENSE_1_0.txt"
target="_top">http://www.boost.org/LICENSE_1_0.txt</a>)
</p>
</div></td>
</tr></table>
<hr>
<div class="spirit-nav">

```

```
<a accesskey="p" href="intrinsic.html"></a><a
accesskey="u" href="../index.html"></a><a accesskey="h"
href="../index.html"></a><a accesskey="n"
href="examples.html"></a>
</div>
</body>
</html>
```

```
[/
Copyright 2006 - 2010 John Maddock and Paul A. Bristow.
Distributed under the Boost Software License, Version 1.0.
(See accompanying file LICENSE_1_0.txt or copy at
http://www.boost.org/LICENSE_1_0.txt).
```

```
]
////////////////////////////////////////////////////////////////
//
// (C) Copyright Ion Gaztanaga 2005-2013.
//
// Distributed under the Boost Software License, Version 1.0.
// (See accompanying file LICENSE_1_0.txt or copy at
// http://www.boost.org/LICENSE_1_0.txt)
//
// See http://www.boost.org/libs/container for documentation.
//
////////////////////////////////////////////////////////////////
```

```
#ifndef BOOST_CONTAINER_CONTAINER_DETAIL_MPL_HPP
#define BOOST_CONTAINER_CONTAINER_DETAIL_MPL_HPP
```

```
#ifndef BOOST_CONFIG_HPP
# include <boost/config.hpp>
#endif
```

```
#if defined(BOOST_HAS_PRAGMA_ONCE)
# pragma once
#endif
```

```
#include <boost/container/detail/config_begin.hpp>
#include <boost/container/detail/workaround.hpp>
#include <boost/move/detail/type_traits.hpp>
#include <boost/intrusive/detail/mpl.hpp>
```

```
#include <cstdint>
```

```
namespace boost {
namespace container {
namespace container_detail {
```

```
using boost::move_detail::integral_constant;
```

```

using boost::move_detail::true_type;
using boost::move_detail::false_type;
using boost::move_detail::enable_if_c;
using boost::move_detail::enable_if;
using boost::move_detail::enable_if_convertible;
using boost::move_detail::disable_if_c;
using boost::move_detail::disable_if;
using boost::move_detail::disable_if_convertible;
using boost::move_detail::is_convertible;
using boost::move_detail::if_c;
using boost::move_detail::if_;
using boost::move_detail::identity;
using boost::move_detail::bool_;
using boost::move_detail::true_;
using boost::move_detail::false_;
using boost::move_detail::yes_type;
using boost::move_detail::no_type;
using boost::move_detail::bool_;
using boost::move_detail::true_;
using boost::move_detail::false_;
using boost::move_detail::unvoid_ref;
using boost::move_detail::and_;
using boost::move_detail::or_;
using boost::move_detail::not_;
using boost::move_detail::enable_if_and;
using boost::move_detail::disable_if_and;
using boost::move_detail::enable_if_or;
using boost::move_detail::disable_if_or;

```

```

template <class FirstType>
struct select1st
{
    typedef FirstType type;

    template<class T>
    const type& operator()(const T& x) const
    { return x.first; }

    template<class T>
    type& operator()(T& x)
    { return const_cast<type&>(x.first); }
};

} //namespace container_detail {
} //namespace container {
} //namespace boost {

#include <boost/container/detail/config_end.hpp>

```

```

#endif //ifndef BOOST_CONTAINER_CONTAINER_DETAIL_MPL_HPP
////////////////////////////////////
//
// (C) Copyright Ion Gaztanaga 2005-2016.
//
// Distributed under the Boost Software License, Version 1.0.
// (See accompanying file LICENSE_1_0.txt or copy at
// http://www.boost.org/LICENSE_1_0.txt)
//
// See http://www.boost.org/libs/interprocess for documentation.
//
////////////////////////////////////

#ifndef BOOST_INTERPROCESS_DETAIL_MPL_HPP
#define BOOST_INTERPROCESS_DETAIL_MPL_HPP

#ifndef BOOST_CONFIG_HPP
# include <boost/config.hpp>
#endif
#
#if defined(BOOST_HAS_PRAGMA_ONCE)
# pragma once
#endif

#include <cstdint>

namespace boost {
namespace interprocess {
namespace ipcdetail {

template <class T, T val>
struct integral_constant
{
    static const T value = val;
    typedef integral_constant<T,val> type;
};

template< bool C_ >
struct bool_ : integral_constant<bool, C_>
{
    static const bool value = C_;
};

typedef bool_<true>    true_;
typedef bool_<false>  false_;

typedef true_ true_type;

```

```

typedef false_ false_type;

typedef char yes_type;
struct no_type
{
    char padding[8];
};

template <bool B, class T = void>
struct enable_if_c {
    typedef T type;
};

template <class T>
struct enable_if_c<false, T> {};

template <class Cond, class T = void>
struct enable_if : public enable_if_c<Cond::value, T> {};

template <class Cond, class T = void>
struct disable_if : public enable_if_c<!Cond::value, T> {};

template<
    bool C
    , typename T1
    , typename T2
    >
struct if_c
{
    typedef T1 type;
};

template<
    typename T1
    , typename T2
    >
struct if_c<false,T1,T2>
{
    typedef T2 type;
};

template<
    typename T1
    , typename T2
    , typename T3
    >
struct if_
{

```

```

typedef typename if_c<0 != T1::value, T2, T3>::type type;
};

template<std::size_t S>
struct ls_zeros
{
    static const std::size_t value = (S & std::size_t(1)) ? 0 : (1u + ls_zeros<(S >> 1u)>::value);
};

template<>
struct ls_zeros<0>
{
    static const std::size_t value = 0;
};

template<>
struct ls_zeros<1>
{
    static const std::size_t value = 0;
};

} //namespace ipcdetail {
} //namespace interprocess {
} //namespace boost {

#endif //ifndef BOOST_INTERPROCESS_DETAIL_MPL_HPP
////////////////////////////////////
//
// (C) Copyright Ion Gaztanaga    2006-2014
// (C) Copyright Microsoft Corporation 2014
//
// Distributed under the Boost Software License, Version 1.0.
// (See accompanying file LICENSE_1_0.txt or copy at
// http://www.boost.org/LICENSE\_1\_0.txt)
//
// See http://www.boost.org/libs/intrusive for documentation.
//
////////////////////////////////////

#ifndef BOOST_INTRUSIVE_DETAIL_MPL_HPP
#define BOOST_INTRUSIVE_DETAIL_MPL_HPP

#ifndef BOOST_CONFIG_HPP
# include <boost/config.hpp>
#endif

#if defined(BOOST_HAS_PRAGMA_ONCE)

```

```

# pragma once
#endif

#include <boost/intrusive/detail/config_begin.hpp>
#include <boost/move/detail/type_traits.hpp>
#include <cstdint>

namespace boost {
namespace intrusive {
namespace detail {

using boost::move_detail::is_same;
using boost::move_detail::add_const;
using boost::move_detail::remove_const;
using boost::move_detail::remove_cv;
using boost::move_detail::remove_reference;
using boost::move_detail::add_reference;
using boost::move_detail::remove_pointer;
using boost::move_detail::add_pointer;
using boost::move_detail::true_type;
using boost::move_detail::false_type;
using boost::move_detail::enable_if_c;
using boost::move_detail::enable_if;
using boost::move_detail::disable_if_c;
using boost::move_detail::disable_if;
using boost::move_detail::is_convertible;
using boost::move_detail::if_c;
using boost::move_detail::if_;
using boost::move_detail::is_const;
using boost::move_detail::identity;
using boost::move_detail::alignment_of;
using boost::move_detail::is_empty;
using boost::move_detail::addressof;
using boost::move_detail::integral_constant;
using boost::move_detail::enable_if_convertible;
using boost::move_detail::disable_if_convertible;
using boost::move_detail::bool_;
using boost::move_detail::true_;
using boost::move_detail::false_;
using boost::move_detail::yes_type;
using boost::move_detail::no_type;
using boost::move_detail::apply;
using boost::move_detail::eval_if_c;
using boost::move_detail::eval_if;
using boost::move_detail::unvoid_ref;
using boost::move_detail::add_const_if_c;

template<std::size_t S>

```

```

struct ls_zeros
{
    static const std::size_t value = (S & std::size_t(1)) ? 0 : (1 + ls_zeros<(S>>1u)>::value);
};

template<>
struct ls_zeros<0>
{
    static const std::size_t value = 0;
};

template<>
struct ls_zeros<1>
{
    static const std::size_t value = 0;
};

// Infrastructure for providing a default type for T::TNAME if absent.
#define BOOST_INTRUSIVE_INSTANTIATE_DEFAULT_TYPE_TMPLT(TNAME) \
    template <typename T, typename DefaultType> \
    struct boost_intrusive_default_type_ ## TNAME \
    { \
        template <typename X> \
        static char test(int, typename X::TNAME*); \
        \
        template <typename X> \
        static int test(...); \
        \
        struct DefaultWrap { typedef DefaultType TNAME; }; \
        \
        static const bool value = (1 == sizeof(test<T>(0, 0))); \
        \
        typedef typename \
            ::boost::intrusive::detail::if_c \
            <value, T, DefaultWrap>::type::TNAME type; \
    }; \
    //

#define BOOST_INTRUSIVE_OBTAIN_TYPE_WITH_DEFAULT(INSTANTIATION_NS_PREFIX, T, \
TNAME, TIMPL) \
    typename INSTANTIATION_NS_PREFIX \
    boost_intrusive_default_type_ ## TNAME< T, TIMPL >::type \
    //

#define BOOST_INTRUSIVE_INSTANTIATE_EVAL_DEFAULT_TYPE_TMPLT(TNAME)\
    template <typename T, typename DefaultType> \
    struct boost_intrusive_eval_default_type_ ## TNAME \
    { \

```



```

template <typename X>
static char test(int, typename X::TNAME*);

template <typename X>
static int test(...);

struct DefaultWrap
{ typedef typename DefaultType::type TNAME; };

static const bool value = (1 == sizeof(test<T>(0, 0)));

typedef typename
::boost::intrusive::detail::eval_if_c
< value
, ::boost::intrusive::detail::identity<T>
, ::boost::intrusive::detail::identity<DefaultWrap>
>::type::TNAME type;
};
//

#define BOOST_INTRUSIVE_OBTAIN_TYPE_WITH_EVAL_DEFAULT(INSTANTIATION_NS_PREFIX, T,
TNAME, TIMPL) \
    typename INSTANTIATION_NS_PREFIX
    boost_intrusive_eval_default_type_ ## TNAME< T, TIMPL >::type
//

#define BOOST_INTRUSIVE_INTERNAL_STATIC_BOOL_IS_TRUE(TRAITS_PREFIX,
TYPEDEF_TO_FIND) \
template <class T>\
struct TRAITS_PREFIX##_bool\
{\
    template<bool Add>\
    struct two_or_three {yes_type _[2 + Add];};\
    template <class U> static yes_type test(...);\
    template <class U> static two_or_three<U::TYPEDEF_TO_FIND> test (int);\
    static const std::size_t value = sizeof(test<T>(0));\
};\
\
template <class T>\
struct TRAITS_PREFIX##_bool_is_true\
{\
    static const bool value = TRAITS_PREFIX##_bool<T>::value > sizeof(yes_type)*2;\
};\
//

#define BOOST_INTRUSIVE_HAS_STATIC_MEMBER_FUNC_SIGNATURE(TRAITS_NAME,
FUNC_NAME) \
    template <typename U, typename Signature> \

```

```

class TRAITS_NAME \
{ \
private: \
template<Signature> struct helper;\
template<typename T> \
static ::boost::intrusive::detail::yes_type test(helper<&T::FUNC_NAME*>); \
template<typename T> static ::boost::intrusive::detail::no_type test(...); \
public: \
static const bool value = sizeof(test<U>(0)) == sizeof(::boost::intrusive::detail::yes_type); \
}; \
//

#define BOOST_INTRUSIVE_HAS_MEMBER_FUNC_CALLED(TRAITS_NAME, FUNC_NAME) \
template <typename Type> \
struct TRAITS_NAME \
{ \
struct BaseMixin \
{ \
void FUNC_NAME(); \
}; \
struct Base : public Type, public BaseMixin { Base(); }; \
template <typename T, T t> class Helper{}; \
template <typename U> \
static ::boost::intrusive::detail::no_type test(U*, Helper<void (BaseMixin::*)(), &U::FUNC_NAME*>* = 0); \
static ::boost::intrusive::detail::yes_type test(...); \
static const bool value = sizeof(::boost::intrusive::detail::yes_type) == sizeof(test((Base*)(0))); \
}; \
//

#define BOOST_INTRUSIVE_HAS_MEMBER_FUNC_CALLED_IGNORE_SIGNATURE(TRAITS_NAME, \
FUNC_NAME) \
BOOST_INTRUSIVE_HAS_MEMBER_FUNC_CALLED(TRAITS_NAME##_ignore_signature, FUNC_NAME) \
\
\
template <typename Type, class> \
struct TRAITS_NAME \
: public TRAITS_NAME##_ignore_signature<Type> \
{ }; \
//

} //namespace detail
} //namespace intrusive
} //namespace boost

#include <boost/intrusive/detail/config_end.hpp>

#endif //BOOST_INTRUSIVE_DETAIL_MPL_HPP

```

# 1.4 Expat 2.2.0 :2.2.0

## 1.4.1 Available under license :

Copyright (c) 1998-2000 Thai Open Source Software Center Ltd and Clark Cooper

Copyright (c) 2001-2016 Expat maintainers

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

# 1.5 FreeType 2.1.4

## 1.5.1 Available under license :

The FreeType 2 font engine is copyrighted work, and cannot be used legally without a software license. In order to make this project usable to a vast majority of developers, we distribute it under two dual licenses.

What this means is that \*you\* must choose \*one\* license among those described below, then obey all its terms and conditions when using FreeType 2 in any of your projects or products:

- The FreeType License, found in the file "FTL.TXT", which is an BSD-style open-source license \*with\* an advertising clause that forces you to explicitly cite the FreeType project in your product's documentation. All details are in the license file

- The GNU General Public License, found in "GPL.TXT", which is the traditional and "viral" GPL license, that forces you to redistribute the \_complete\_ sources of all your products that simply use FreeType 2.

Note that the contributed PCF driver comes with a license similar to that of X Window System which is compatible to the above two licenses (see file src/pcf/readme).

The FreeType Project LICENSE

-----  
2002-Apr-11

Copyright 1996-2002 by  
David Turner, Robert Wilhelm, and Werner Lemberg

## Introduction

=====

The FreeType Project is distributed in several archive packages; some of them may contain, in addition to the FreeType font engine, various tools and contributions which rely on, or relate to, the FreeType Project.

This license applies to all files found in such packages, and which do not fall under their own explicit license. The license affects thus the FreeType font engine, the test programs, documentation and makefiles, at the very least.

This license was inspired by the BSD, Artistic, and IJG (Independent JPEG Group) licenses, which all encourage inclusion and use of free software in commercial and freeware products alike. As a consequence, its main points are that:

- o We don't promise that this software works. However, we will be interested in any kind of bug reports. ('as is' distribution)
- o You can use this software for whatever you want, in parts or full form, without having to pay us. ('royalty-free' usage)
- o You may not pretend that you wrote this software. If you use it, or only parts of it, in a program, you must acknowledge somewhere in your documentation that you have used the FreeType code. ('credits')

We specifically permit and encourage the inclusion of this software, with or without modifications, in commercial products. We disclaim all warranties covering The FreeType Project and assume no liability related to The FreeType Project.

Finally, many people asked us for a preferred form for a credit/disclaimer to use in compliance with this license. We thus encourage you to use the following text:

""

Portions of this software are copyright " 1996-2002 The FreeType Project (www.freetype.org). All rights reserved.

""

## Legal Terms

=====

### 0. Definitions

-----

Throughout this license, the terms 'package', 'FreeType Project', and 'FreeType archive' refer to the set of files originally distributed by the authors (David Turner, Robert Wilhelm, and Werner Lemberg) as the 'FreeType Project', be they named as alpha, beta or final release.

'You' refers to the licensee, or person using the project, where 'using' is a generic term including compiling the project's source code as well as linking it to form a 'program' or 'executable'. This program is referred to as 'a program using the FreeType engine'.

This license applies to all files distributed in the original FreeType Project, including all source code, binaries and documentation, unless otherwise stated in the file in its original, unmodified form as distributed in the original archive. If you are unsure whether or not a particular file is covered by this license, you must contact us to verify this.

The FreeType Project is copyright (C) 1996-2000 by David Turner, Robert Wilhelm, and Werner Lemberg. All rights reserved except as specified below.

### 1. No Warranty

-----

THE FREETYPE PROJECT IS PROVIDED 'AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL ANY OF THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY DAMAGES CAUSED BY THE USE OR THE INABILITY TO USE, OF THE FREETYPE PROJECT.

## 2. Redistribution

-----

This license grants a worldwide, royalty-free, perpetual and irrevocable right and license to use, execute, perform, compile, display, copy, create derivative works of, distribute and sublicense the FreeType Project (in both source and object code forms) and derivative works thereof for any purpose; and to authorize others to exercise some or all of the rights granted herein, subject to the following conditions:

- o Redistribution of source code must retain this license file ('FTL.TXT') unaltered; any additions, deletions or changes to the original files must be clearly indicated in accompanying documentation. The copyright notices of the unaltered, original files must be preserved in all copies of source files.
  
- o Redistribution in binary form must provide a disclaimer that states that the software is based in part of the work of the FreeType Team, in the distribution documentation. We also encourage you to put an URL to the FreeType web page in your documentation, though this isn't mandatory.

These conditions apply to any software derived from or based on the FreeType Project, not just the unmodified files. If you use our work, you must acknowledge us. However, no fee need be paid to us.

## 3. Advertising

-----

Neither the FreeType authors and contributors nor you shall use the name of the other for commercial, advertising, or promotional purposes without specific prior written permission.

We suggest, but do not require, that you use one or more of the following phrases to refer to this software in your documentation or advertising materials: 'FreeType Project', 'FreeType Engine', 'FreeType library', or 'FreeType Distribution'.

As you have not signed this license, you are not required to accept it. However, as the FreeType Project is copyrighted material, only this license, or another one contracted with the authors, grants you the right to use, distribute, and modify it. Therefore, by using, distributing, or modifying the FreeType Project, you indicate that you understand and accept all the terms of this license.

#### 4. Contacts

-----

There are two mailing lists related to FreeType:

o [freetype@freetype.org](mailto:freetype@freetype.org)

Discusses general use and applications of FreeType, as well as future and wanted additions to the library and distribution. If you are looking for support, start in this list if you haven't found anything to help you in the documentation.

o [devel@freetype.org](mailto:devel@freetype.org)

Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

o <http://www.freetype.org>

Holds the current FreeType web page, which will allow you to download our latest development version and read online documentation.

You can also contact us individually at:

David Turner <[david.turner@freetype.org](mailto:david.turner@freetype.org)>  
Robert Wilhelm <[robert.wilhelm@freetype.org](mailto:robert.wilhelm@freetype.org)>  
Werner Lemberg <[werner.lemberg@freetype.org](mailto:werner.lemberg@freetype.org)>

--- end of LICENSE.TXT ---

## 1.6 glib 2.27.1

### 1.6.1 Available under license :

GNU LIBRARY GENERAL PUBLIC LICENSE  
Version 2, June 1991

Copyright (C) 1991 Free Software Foundation, Inc.

59 Temple Place, Suite 330, Boston, MA 02111-1307 USA  
Everyone is permitted to copy and distribute verbatim copies  
of this license document, but changing it is not allowed.

[This is the first released version of the library GPL. It is  
numbered 2 because it goes with version 2 of the ordinary GPL.]

#### Preamble

The licenses for most software are designed to take away your  
freedom to share and change it. By contrast, the GNU General Public  
Licenses are intended to guarantee your freedom to share and change  
free software--to make sure the software is free for all its users.

This license, the Library General Public License, applies to some  
specially designated Free Software Foundation software, and to any  
other libraries whose authors decide to use it. You can use it for  
your libraries, too.

When we speak of free software, we are referring to freedom, not  
price. Our General Public Licenses are designed to make sure that you  
have the freedom to distribute copies of free software (and charge for  
this service if you wish), that you receive source code or can get it  
if you want it, that you can change the software or use pieces of it  
in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid  
anyone to deny you these rights or to ask you to surrender the rights.  
These restrictions translate to certain responsibilities for you if  
you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis  
or for a fee, you must give the recipients all the rights that we gave  
you. You must make sure that they, too, receive or can get the source  
code. If you link a program with the library, you must provide  
complete object files to the recipients so that they can relink them  
with the library, after making changes to the library and recompiling  
it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright  
the library, and (2) offer you this license which gives you legal  
permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain  
that everyone understands that there is no warranty for this free  
library. If the library is modified by someone else and passed on, we  
want its recipients to know that what they have is not the original  
version, so that any problems introduced by others will not reflect on



the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

GNU LIBRARY GENERAL PUBLIC LICENSE  
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Library General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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 source along with the object code.

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.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the

Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus

excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.



## END OF TERMS AND CONDITIONS

### How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Library General Public License for more details.

You should have received a copy of the GNU Library General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307 USA.

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

That's all there is to it!

This package was debianized by Ben Gertzfield <che@debian.org>  
on Tue, 17 Nov 1998 00:16:10 -0800

It was downloaded from the CVS archives at cvs.gimp.org.

It may be redistributed under the terms of the GNU LGPL, Version 2 or later, found on Debian systems in the file /usr/doc/copyright/LGPL. This work may be reproduced and distributed in whole or in part, in any medium, physical or electronic, so as long as this copyright notice remains intact and unchanged on all copies. Commercial redistribution is permitted and encouraged, but you may not redistribute, in whole or in part, under terms more restrictive than those under which you received it. If you redistribute a modified or translated version of this work, you must also make the source code to the modified or translated version available in electronic form without charge. However, mere aggregation as part of a larger work shall not count as a modification for this purpose.

All code examples in this work are placed into the public domain, and may be used, modified and redistributed without restriction.

BECAUSE THIS WORK IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE WORK, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE WORK "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SHOULD THE WORK PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY REPAIR OR CORRECTION.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE WORK AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE WORK, EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.  
PCRE LICENCE

Please see the file LICENCE in the PCRE distribution for licensing details.

End

## 1.7 grpc 1.20.1

## 1.7.1 Available under license :

```
# $FreeBSD$  
# @(#)COPYRIGHT 8.2 (Berkeley) 3/21/94
```

The compilation of software known as FreeBSD is distributed under the following terms:

Copyright (c) 1992-2016 The FreeBSD Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

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

The 4.4BSD and 4.4BSD-Lite software is distributed under the following terms:

All of the documentation and software included in the 4.4BSD and 4.4BSD-Lite Releases is copyrighted by The Regents of the University of California.

Copyright 1979, 1980, 1983, 1986, 1988, 1989, 1991, 1992, 1993, 1994  
The Regents of the University of California. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

This product includes software developed by the University of California, Berkeley and its contributors.

4. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

The Institute of Electrical and Electronics Engineers and the American National Standards Committee X3, on Information Processing Systems have given us permission to reprint portions of their documentation.

In the following statement, the phrase ``this text'' refers to portions of the system documentation.

Portions of this text are reprinted and reproduced in electronic form in the second BSD Networking Software Release, from IEEE Std 1003.1-1988, IEEE Standard Portable Operating System Interface for Computer Environments (POSIX), copyright C 1988 by the Institute of Electrical and Electronics Engineers, Inc. In the event of any discrepancy between these versions and the original IEEE Standard, the original IEEE Standard is the referee document.

In the following statement, the phrase ``This material'' refers to portions of the system documentation.

This material is reproduced with permission from American National Standards Committee X3, on Information Processing Systems. Computer and Business Equipment Manufacturers Association (CBEMA), 311 First St., NW, Suite 500, Washington, DC 20001-2178. The developmental work of Programming Language C was completed by the X3J11 Technical Committee.

The views and conclusions contained in the software and documentation are those of the authors and should not be interpreted as representing official policies, either expressed or implied, of the Regents of the University of California.

NOTE: The copyright of UC Berkeley's Berkeley Software Distribution ("BSD") source has been updated. The copyright addendum may be found at <ftp://ftp.cs.berkeley.edu/pub/4bsd/README.Impt.License.Change> and is included below.

July 22, 1999

To All Licensees, Distributors of Any Version of BSD:

As you know, certain of the Berkeley Software Distribution ("BSD") source code files require that further distributions of products containing all or portions of the software, acknowledge within their advertising materials that such products contain software developed by UC Berkeley and its contributors.

Specifically, the provision reads:

```
" * 3. All advertising materials mentioning features or use of this software
* must display the following acknowledgement:
* This product includes software developed by the University of
* California, Berkeley and its contributors."
```

Effective immediately, licensees and distributors are no longer required to include the acknowledgement within advertising materials. Accordingly, the foregoing paragraph of those BSD Unix files containing it is hereby deleted in its entirety.

William Hoskins

Director, Office of Technology Licensing

University of California, Berkeley

// Copyright (c) 2009 The RE2 Authors. All rights reserved.

//

// Redistribution and use in source and binary forms, with or without  
// modification, are permitted provided that the following conditions are

// met:

//

// \* Redistributions of source code must retain the above copyright  
// notice, this list of conditions and the following disclaimer.

// \* Redistributions in binary form must reproduce the above  
// copyright notice, this list of conditions and the following disclaimer  
// in the documentation and/or other materials provided with the  
// distribution.

// \* Neither the name of Google Inc. nor the names of its  
// contributors may be used to endorse or promote products derived from  
// this software without specific prior written permission.

//

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

```
# This is the official list of people who can contribute
# (and typically have contributed) code to the RE2 repository.
# The AUTHORS file lists the copyright holders; this file
# lists people. For example, Google employees are listed here
# but not in AUTHORS, because Google holds the copyright.
#
# The submission process automatically checks to make sure
# that people submitting code are listed in this file (by email address).
#
# Names should be added to this file only after verifying that
# the individual or the individual's organization has agreed to
# the appropriate Contributor License Agreement, found here:
#
# http://code.google.com/legal/individual-cla-v1.0.html
# http://code.google.com/legal/corporate-cla-v1.0.html
#
# The agreement for individuals can be filled out on the web.
#
# When adding J Random Contributor's name to this file,
# either J's name or J's organization's name should be
# added to the AUTHORS file, depending on whether the
# individual or corporate CLA was used.
```

```
# Names should be added to this file like so:
# Name <email address>
```

```
# Please keep the list sorted.
```

```
Dominic Battr <battre@chromium.org>
Doug Kwan <dougkwan@google.com>
Dmitriy Vyukov <dvyukov@google.com>
John Millikin <jmillikin@gmail.com>
Mike Nazarewicz <mpn@google.com>
Nico Weber <thakis@chromium.org>
Pawel Hajdan <phajdan.jr@gmail.com>
Rob Pike <r@google.com>
Russ Cox <rsc@swtch.com>
```

Sanjay Ghemawat <sanjay@google.com>  
Stefano Rivera <stefano.rivera@gmail.com>  
Srinivasan Venkatachary <vsri@google.com>  
Viatcheslav Ostapenko <sl.ostapenko@samsung.com>  
Copyright (c) 2006, Google Inc.  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- \* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

Copyright (c) 2011 Petteri Aimonen <jpa at nanopb.mail.kapsi.fi>

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.

2. Altered source versions must be plainly marked as such, and

must not be misrepresented as being the original software.

3. This notice may not be removed or altered from any source distribution.

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Copyright (c) 2015 Lars Kanis

MIT License

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION



WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

# People who have agreed to one of the CLAs and can contribute patches.

# The AUTHORS file lists the copyright holders; this file

# lists people. For example, Google employees are listed here

# but not in AUTHORS, because Google holds the copyright.

#

# Names should be added to this file only after verifying that

# the individual or the individual's organization has agreed to

# the appropriate Contributor License Agreement, found here:

#

# <https://developers.google.com/open-source/cla/individual>

# <https://developers.google.com/open-source/cla/corporate>

#

# The agreement for individuals can be filled out on the web.

#

# When adding J Random Contributor's name to this file,

# either J's name or J's organization's name should be

# added to the AUTHORS file, depending on whether the

# individual or corporate CLA was used.

#

# Names should be added to this file as:

# Name <email address>

#

# Please keep the list sorted.

Arne Beer <arne@twobeer.de>

Billy Robert O'Neal III <billy.oneal@gmail.com> <bion@microsoft.com>

Chris Kennelly <ckennelly@google.com> <ckennelly@ckennelly.com>

Christopher Seymour <chris.j.seymour@hotmail.com>

David Coeurjolly <david.coeurjolly@liris.cnrs.fr>

Dominic Hamon <dma@stripsock.com>

Eugene Zhuk <eugene.zhuk@gmail.com>

Evgeny Safronov <division494@gmail.com>

Felix Homann <linuxaudio@showlabor.de>

JianXiong Zhou <zhoujianxiong2@gmail.com>

Jussi Knuutila <jussi.knuutila@gmail.com>

Kaito Udagawa <umireon@gmail.com>

Kai Wolf <kai.wolf@gmail.com>

Lei Xu <eddyxu@gmail.com>

Matt Clarkson <mattyclarkson@gmail.com>

Oleksandr Sochka <sasha.sochka@gmail.com>

Pascal Leroy <phl@google.com>

Paul Redmond <paul.redmond@gmail.com>

Pierre Phaneuf <pphaneuf@google.com>

Radoslav Yovchev <radoslav.tm@gmail.com>

Shuo Chen <chenshuo@chenshuo.com>

Yusuke Suzuki <utatane.tea@gmail.com>

Tobias Ulvgrd <tobias.ulvgard@dirac.se>

Zbigniew Skowron <zbychs@gmail.com>  
Dominik Czarnota <dominik.b.czarnota@gmail.com>  
Copyright 2014 gRPC authors.

Licensed under the Apache License, Version 2.0 (the "License");  
you may not use this file except in compliance with the License.  
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software  
distributed under the License is distributed on an "AS IS" BASIS,  
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.  
See the License for the specific language governing permissions and  
limitations under the License.

Apache License  
Version 2.0, January 2004  
<https://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,

"Licensor" shall mean the copyright owner or entity authorized by  
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all  
other entities that control, are controlled by, or are under common  
control with that entity. For the purposes of this definition,  
"control" means (i) the power, direct or indirect, to cause the  
direction or management of such entity, whether by contract or  
otherwise, or (ii) ownership of fifty percent (50%) or more of the  
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity  
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,  
including but not limited to software source code, documentation  
source, and configuration files.

"Object" form shall mean any form resulting from mechanical  
transformation or translation of a Source form, including but  
not limited to compiled object code, generated documentation,  
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You

institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- (d) If the Work includes a "NOTICE" text file as part of its include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for any such Derivative Works as a whole, provided Your use, the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

Copyright 2015-2017 gRPC authors.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.

You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

This license applies to all parts of Protocol Buffers except the following:

- Atomicops support for generic gcc, located in `src/google/protobuf/stubs/atomicops_internals_generic_gcc.h`. This file is copyrighted by Red Hat Inc.
  
- Atomicops support for AIX/POWER, located in `src/google/protobuf/stubs/atomicops_internals_power.h`. This file is copyrighted by Bloomberg Finance LP.

Copyright 2014, Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

Code generated by the Protocol Buffer compiler is owned by the owner

of the input file used when generating it. This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

- # People who have agreed to one of the CLAs and can contribute patches.
- # The AUTHORS file lists the copyright holders; this file
- # lists people. For example, Google employees are listed here
- # but not in AUTHORS, because Google holds the copyright.
- #
- # Names should be added to this file only after verifying that
- # the individual or the individual's organization has agreed to
- # the appropriate Contributor License Agreement, found here:
- #
- # <https://developers.google.com/open-source/cla/individual>
- # <https://developers.google.com/open-source/cla/corporate>
- #
- # The agreement for individuals can be filled out on the web.
- #
- # When adding J Random Contributor's name to this file,
- # either J's name or J's organization's name should be
- # added to the AUTHORS file, depending on whether the
- # individual or corporate CLA was used.
- #
- # Names should be added to this file as:
- # Name <email address>
- #
- # Please keep the list sorted.

Albert Pretorius <pretoalb@gmail.com>  
Arne Beer <arne@twobeer.de>  
Billy Robert O'Neal III <billy.oneal@gmail.com> <bion@microsoft.com>  
Chris Kennelly <ckennelly@google.com> <ckennelly@ckennelly.com>  
Christopher Seymour <chris.j.seymour@hotmail.com>  
David Coeurjolly <david.coeurjolly@liris.cnrs.fr>  
Dominic Hamon <dma@stripsock.com>  
Eric Fiselier <eric@efcs.ca>  
Eugene Zhuk <eugene.zhuk@gmail.com>  
Evgeny Safronov <division494@gmail.com>  
Felix Homann <linuxaudio@showlabor.de>  
Ismael Jimenez Martinez <ismael.jimenez.martinez@gmail.com>  
Jern-Kuan Leong <jernkuan@gmail.com>  
Joao Paulo Magalhaes <joaoppmagalhaes@gmail.com>  
JianXiong Zhou <zhoujianxiong2@gmail.com>  
Jussi Knuutila <jussi.knuutila@gmail.com>  
Kaito Udagawa <umireon@gmail.com>  
Kai Wolf <kai.wolf@gmail.com>  
Lei Xu <eddyxu@gmail.com>  
Matt Clarkson <mattyclarkson@gmail.com>  
Maxim Vafin <maxvafin@gmail.com>

Nick Hutchinson <nshutchinson@gmail.com>  
Oleksandr Sochka <sasha.sochka@gmail.com>  
Pascal Leroy <phl@google.com>  
Paul Redmond <paul.redmond@gmail.com>  
Pierre Phaneuf <pphaneuf@google.com>  
Radoslav Yovchev <radoslav.tm@gmail.com>  
Ray Glover <ray.glover@uk.ibm.com>  
Shuo Chen <chenshuo@chenshuo.com>  
Tom Madams <tom.ej.madams@gmail.com> <tmadams@google.com>  
Yixuan Qiu <yixuanq@gmail.com>  
Yusuke Suzuki <utatane.tea@gmail.com>  
Tobias Ulvgrd <tobias.ulvgard@dirac.se>  
Zbigniew Skowron <zbychs@gmail.com>  
Dominik Czarnota <dominik.b.czarnota@gmail.com>

Apache License  
Version 2.0, January 2004  
<http://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.



"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You

institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.  
Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.
6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

## APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");  
you may not use this file except in compliance with the License.  
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Copyright 2008, Google Inc.  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- \* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,

SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

# This file contains a list of people who've made non-trivial  
# contribution to the Google C++ Testing Framework project. People  
# who commit code to the project are encouraged to add their names  
# here. Please keep the list sorted by first names.

Ajay Joshi <jaj@google.com>  
Balzs Dn <balazs.dan@gmail.com>  
Bharat Mediratta <bharat@menalto.com>  
Chandler Carruth <chandlerc@google.com>  
Chris Prince <cprince@google.com>  
Chris Taylor <taylorc@google.com>  
Dan Egnor <egnor@google.com>  
Eric Roman <eroman@chromium.org>  
Hady Zalek <hady.zalek@gmail.com>  
Jeffrey Yasskin <jyasskin@google.com>  
Ji Sigursson <joi@google.com>  
Keir Mierle <mierle@gmail.com>  
Keith Ray <keith.ray@gmail.com>  
Kenton Varda <kenton@google.com>  
Manuel Klimek <klimek@google.com>  
Markus Heule <markus.heule@gmail.com>  
Mika Raento <mikie@iki.fi>  
Mikls Fazekas <mfazekas@szemafor.com>  
Pasi Valminen <pasi.valminen@gmail.com>  
Patrick Hanna <phanna@google.com>  
Patrick Riley <pfr@google.com>  
Peter Kaminski <piotr@google.com>  
Preston Jackson <preston.a.jackson@gmail.com>  
Rainer Klaffenboeck <rainer.klaffenboeck@dynatrace.com>  
Russ Cox <rsc@google.com>  
Russ Rufer <russ@pentad.com>  
Sean McAfee <eefacm@gmail.com>  
Sigurur sgeirsson <siggi@google.com>  
Tracy Bialik <tracy@pentad.com>  
Vadim Berman <vadimb@google.com>  
Vlad Losev <vladl@google.com>  
Zhanyong Wan <wan@google.com>

Apache License  
Version 2.0, January 2004  
<http://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of

the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
  - (c) You must retain, in the Source form of any Derivative Works

that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

- (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.
6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A



PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

## END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[ ]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [2007] Neal Norwitz  
Portions Copyright [2007] Google Inc.

Licensed under the Apache License, Version 2.0 (the "License");  
you may not use this file except in compliance with the License.  
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

# This file contains a list of people who've made non-trivial  
# contribution to the Google C++ Mocking Framework project. People  
# who commit code to the project are encouraged to add their names  
# here. Please keep the list sorted by first names.

Benoit Sigoure <tsuna@google.com>  
Bogdan Pilocu <boo@google.com>  
Chandler Carruth <chandlerc@google.com>  
Dave MacLachlan <dmaclach@gmail.com>  
David Anderson <danderson@google.com>  
Dean Sturtevant  
Gene Volovich <gv@cite.com>  
Hal Burch <gmock@hburch.com>  
Jeffrey Yasskin <jyasskin@google.com>  
Jim Keller <jimkeller@google.com>  
Joe Walnes <joe@truemesh.com>  
Jon Wray <jwray@google.com>  
Keir Mierle <mierle@gmail.com>  
Keith Ray <keith.ray@gmail.com>  
Kostya Serebryany <kcc@google.com>  
Lev Makhlis  
Manuel Klimek <klimek@google.com>  
Mario Tanev <radix@google.com>  
Mark Paskin  
Markus Heule <markus.heule@gmail.com>  
Matthew Simmons <simmonmt@acm.org>  
Mike Bland <mbland@google.com>  
Neal Norwitz <nnorwitz@gmail.com>  
Nermin Ozkiranartli <nermin@google.com>  
Owen Carlsen <ocarlsen@google.com>  
Paneendra Ba <paneendra@google.com>  
Paul Menage <menage@google.com>  
Piotr Kaminski <piotrk@google.com>  
Russ Rufer <russ@pentad.com>  
Sverre Sundsdal <sundsda@gmail.com>  
Takeshi Yoshino <tyoshino@google.com>  
Vadim Berman <vadimb@google.com>  
Vlad Losev <vladl@google.com>  
Wolfgang Klier <wklier@google.com>  
Zhanyong Wan <wan@google.com>  
Copyright (c) 2011 Petteri Aimonen <jpa at nanopb.mail.kapsi.fi>

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Copyright (C) 1995, 1996, 1997, and 1998 WIDE Project.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

Copyright (c) 2015 Lars Kanis

MIT License

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Copyright 2014 gRPC authors.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Apache License  
Version 2.0, January 2004  
<http://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common

control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
  - (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
  - (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
  - (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
  - (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or

documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.
6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill,

work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

## END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[ ]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");  
you may not use this file except in compliance with the License.  
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Apache License  
Version 2.0, January 2004  
<https://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION



## 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction,

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to

communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for any such Derivative Works as a whole, provided Your use, the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly

negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

Copyright 2015-2017 gRPC authors.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

## 1.8 gstreamer 0.10.35.1

### 1.8.1 Available under license :

GNU LIBRARY GENERAL PUBLIC LICENSE  
Version 2, June 1991

Copyright (C) 1991 Free Software Foundation, Inc.

675 Mass Ave, Cambridge, MA 02139, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

## Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Library General Public License, applies to some specially designated Free Software Foundation software, and to any other libraries whose authors decide to use it. You can use it for your libraries, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link a program with the library, you must provide complete object files to the recipients so that they can relink them with the library, after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright the library, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain that everyone understands that there is no warranty for this free library. If the library is modified by someone else and passed on, we want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free

software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

GNU LIBRARY GENERAL PUBLIC LICENSE  
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Library General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so



that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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 source along with the object code.

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.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new

versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

Appendix: How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the library's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Library General Public License for more details.

You should have received a copy of the GNU Library General Public License along with this library; if not, write to the Free Software Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

```
<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice
```

That's all there is to it!

```
<sect1 id="chapter-legal">  
<title id="title-legal">GStreamer Legal Issues</title>  
<para>
```

This part of the FAQ is based on a series of questions we asked the FSF to understand how the GPL works and how patents affects the GPL. These questions were answered by the [<ulink url="http://www.fsf.org/">](http://www.fsf.org/) FSF lawyers</ulink>, so we view them as the

final interpretation on how the GPL and LGPL interact with patents in our opinion. This consultancy was paid for by [Fluendo](http://www.fluendo.com/) in order to obtain clear and quotable answers. These answers were certified by the FSF lawyer team and verified by FSF lawyer and law professor Eben Moglen.

<qandaset defaultlabel="qanda">

<qandaentry>

<question id="legal-distribute-three">

<para>

Can someone distribute the combination of

<itemizedlist>

<listitem><para>GStreamer, the LGPL library</para></listitem>

<listitem><para>MyPlayer, a GPL playback application</para></listitem>

<listitem><para>The binary-only Sorenson decoder</para></listitem>

</itemizedlist>

together in one distribution/operating system ? If not, what needs to be changed to make this possible ?

</para>

</question>

<answer>

<para>

This would be a problem, because the GStreamer and MyPlayer licenses would forbid it. In order to link GStreamer to MyPlayer, you need to use section 3 of the LGPL to convert GStreamer to GPL. The GPL version of GStreamer forbids linking to the Sorenson decoder. Anyway, the MyPlayer GPL license forbids this.

</para>

<para>

If the authors of MyPlayer want to permit this, we have an exception for them: the controlled interface exception from the FAQ. The idea of this is that you can't get around the GPL just by including a LGPL bit in the middle.

</para>

<para>

Note: MyPlayer is a completely fictitious application at the time of writing.

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-binary-plugin">

<para>

Suppose Apple wants to write a binary-only proprietary plugin for GStreamer to decode Sorenson video, which will be shipped stand-alone, not part of a package like in the question above.

Can Apple distribute this binary-only plugin ?

</para>

</question>

<answer>

<para>

Yes, modulo certain reverse engineering requirements in section 6 of the LGPL.

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-gpl-program">

<para>

If a program released under the GPL uses a library that is LGPL, and this library can dlopen plug-ins at runtime, what are the requirements for the license of the plug-in ?

</para>

</question>

<answer>

<para>

You may not distribute the plug-in with the GPL application. Distributing the plug-in alone, with the knowledge that it will be used primarily by GPL software is a bit of an edge case. We will not advise you that it would be safe to do so, but we also will not advise you that it would be absolutely forbidden.

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-safe-countries">

<para>

Can someone in a country that does not have software patents distribute code covered by US patents under the GPL to people in, for example, Norway ? If he/she visits the US, can he/she be arrested ?

</para>

</question>

<answer>

<para>

Yes, he can.



No, there are no criminal penalties for patent infringement in the US.

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-unsafe-countries">

<para>

Can someone from the US distribute software covered by US patents under the GPL to people in Norway ? To people in the US ?

</para>

</question>

<answer>

<para>

This might infringe some patents, but the GPL would not forbid it absent some actual restriction, such as a court judgement or agreement. The US government is empowered to refuse importation of patent infringing devices, including software.

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-gpl-library-patents">

<para>

There are a lot of GPL- or LGPL-licensed libraries that handle media codecs which have patents. Take mad, an mp3 decoding library, as an example. It is licensed under the GPL. In countries where patents are valid, does this invalidate the GPL license for this project ?

</para>

</question>

<answer>

<para>

The mere existence of a patent which might read on the program does not change anything. However, if a court judgement or other agreement prevents you from distributing libmad under GPL terms, you can not distribute it at all.

</para>

<para>

The GPL and LGPL say (sections 7 and 11):

<quote>If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all.</quote>

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-gpl-court-judgment">

<para>

So let's say there is a court judgement. Does this mean that the GPL license is invalid for the project everywhere, or only in the countries where it conflicts with the applicable patents ?

</para>

</question>

<answer>

<para>

The GPL operates on a per-action, not per-program basis. That is, if you are in a country which has software patents, and a court tells you that you cannot distribute (say) libmad in source code form, then you cannot distribute libmad at all. This doesn't affect anyone else.

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-gpl-and-binary">

<para>

Patented decoding can be implemented in GStreamer either by having a binary-only plugin do the decoding, or by writing a plugin (with any applicable license) that links to a binary-only library.

Does this affect the licensing issues involved in regards to GPL/LGPL?

</para>

</question>

<answer>

<para>

No.

</para>

</answer>

</qandaentry>

<qandaentry>

<question id="legal-gpl-patent-distribution">

<para>

Is it correct that you cannot distribute the GPL mad library to decode mp3's, \*even\* in the case where you have obtained a valid license for decoding mp3 ?

</para>

</question>

<answer>

<para>

The only GPL-compatible patent licenses are those which are open to all parties possessing copies of GPL software which practices the teachings of the patent.

</para>

<para>

If you take a license which doesn't allow others to distribute original or modified versions of libmad practicing the same patent claims as the version you distribute, then you may not distribute at all.

</para>

</answer>

</qandaentry>

</qandaset>

</sect1>

/\* GStreamer

\* Copyright (C) <1999> Erik Walthinsen <omega@cse.ogi.edu>

\*

\* This library is free software; you can redistribute it and/or  
\* modify it under the terms of the GNU Library General Public  
\* License as published by the Free Software Foundation; either  
\* version 2 of the License, or (at your option) any later version.

\*

\* This library is distributed in the hope that it will be useful,  
\* but WITHOUT ANY WARRANTY; without even the implied warranty of  
\* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU  
\* Library General Public License for more details.

\*

\* You should have received a copy of the GNU Library General Public  
\* License along with this library; if not, write to the  
\* Free Software Foundation, Inc., 59 Temple Place - Suite 330,  
\* Boston, MA 02111-1307, USA.

\*/

/\* GStreamer

\* Copyright (C) 1999,2000 Erik Walthinsen <omega@cse.ogi.edu>

\*

2000 Wim Taymans <wtay@chello.be>

\*

\* gstpadtemplate.c: Templates for pad creation

\*

\* This library is free software; you can redistribute it and/or  
\* modify it under the terms of the GNU Library General Public  
\* License as published by the Free Software Foundation; either  
\* version 2 of the License, or (at your option) any later version.

\*

\* This library is distributed in the hope that it will be useful,  
\* but WITHOUT ANY WARRANTY; without even the implied warranty of  
\* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU

```

* Library General Public License for more details.
*
* You should have received a copy of the GNU Library General Public
* License along with this library; if not, write to the
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
* Boston, MA 02111-1307, USA.
*/

/**
 * SECTION:gstpadtemplate
 * @short_description: Describe the media type of a pad.
 * @see_also: #GstPad, #GstElementFactory
 *
 * Padtemplates describe the possible media types a pad or an elementfactory can
 * handle. This allows for both inspection of handled types before loading the
 * element plugin as well as identifying pads on elements that are not yet
 * created (request or sometimes pads).
 *
 * Pad and PadTemplates have #GstCaps attached to it to describe the media type
 * they are capable of dealing with. gst_pad_template_get_caps() or
 * GST_PAD_TEMPLATE_CAPS() are used to get the caps of a padtemplate. It's not
 * possible to modify the caps of a padtemplate after creation.
 *
 * PadTemplates have a #GstPadPresence property which identifies the lifetime
 * of the pad and that can be retrieved with GST_PAD_TEMPLATE_PRESENCE(). Also
 * the direction of the pad can be retrieved from the #GstPadTemplate with
 * GST_PAD_TEMPLATE_DIRECTION().
 *
 * The GST_PAD_TEMPLATE_NAME_TEMPLATE () is important for GST_PAD_REQUEST pads
 * because it has to be used as the name in the gst_element_get_request_pad()
 * call to instantiate a pad from this template.
 *
 * Padtemplates can be created with gst_pad_template_new() or with
 * gst_static_pad_template_get (), which creates a #GstPadTemplate from a
 * #GstStaticPadTemplate that can be filled with the
 * convenient GST_STATIC_PAD_TEMPLATE() macro.
 *
 * A padtemplate can be used to create a pad (see gst_pad_new_from_template()
 * or gst_pad_new_from_static_template ()) or to add to an element class
 * (see gst_element_class_add_pad_template ()).
 *
 * The following code example shows the code to create a pad from a padtemplate.
 * <example>
 * <title>Create a pad from a padtemplate</title>
 * <programlisting>
 * GstStaticPadTemplate my_template =
 * GST_STATIC_PAD_TEMPLATE (
 * "sink", // the name of the pad

```

```

* GST_PAD_SINK, // the direction of the pad
* GST_PAD_ALWAYS, // when this pad will be present
* GST_STATIC_CAPS ( // the capabilities of the padtemplate
* "audio/x-raw-int, "
* "channels = (int) [ 1, 6 ]"
* )
* );
* void
* my_method (void)
* {
* GstPad *pad;
* pad = gst_pad_new_from_static_template (&my_template, "sink");
* ...
* }
* </programlisting>
* </example>
*
* The following example shows you how to add the padtemplate to an
* element class, this is usually done in the base_init of the class:
* <informalexample>
* <programlisting>
* static void
* my_element_base_init (gpointer g_class)
* {
* GstElementClass *gstelement_class = GST_ELEMENT_CLASS (g_class);
*
* gst_element_class_add_pad_template (gstelement_class,
* gst_static_pad_template_get (&my_template));
* }
* </programlisting>
* </informalexample>
*
* Last reviewed on 2006-02-14 (0.10.3)
*/

#include "gst_private.h"

#include "gstpad.h"
#include "gstpadtemplate.h"
#include "gstenumtypes.h"
#include "gstmarshal.h"
#include "gstutils.h"
#include "gstinfo.h"
#include "gsterror.h"
#include "gstvalue.h"

#define GST_CAT_DEFAULT GST_CAT_PADS

```

```

enum
{
    PROP_NAME_TEMPLATE = 1,
    PROP_DIRECTION,
    PROP_PRESENCE,
    PROP_CAPS
};

enum
{
    TEMPL_PAD_CREATED,
    /* FILL ME */
    LAST_SIGNAL
};

static GObject *parent_class = NULL;
static guint gst_pad_template_signals[LAST_SIGNAL] = { 0 };

static void gst_pad_template_dispose (GObject * object);
static void gst_pad_template_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec);
static void gst_pad_template_get_property (GObject * object, guint prop_id,
    GValue * value, GParamSpec * pspec);

G_DEFINE_TYPE (GstPadTemplate, gst_pad_template, GST_TYPE_OBJECT);

static void
gst_pad_template_class_init (GstPadTemplateClass * klass)
{
    GObjectClass *gobject_class;
    GstObjectClass *gstobject_class;

    gobject_class = (GObjectClass *) klass;
    gstobject_class = (GstObjectClass *) klass;

    parent_class = g_type_class_peek_parent (klass);

    /**
     * GstPadTemplate::pad-created:
     * @pad_template: the object which received the signal.
     * @pad: the pad that was created.
     *
     * This signal is fired when an element creates a pad from this template.
     */
    gst_pad_template_signals[TEMPL_PAD_CREATED] =
        g_signal_new ("pad-created", G_TYPE_FROM_CLASS (klass), G_SIGNAL_RUN_LAST,
            G_STRUCT_OFFSET (GstPadTemplateClass, pad_created),
            NULL, NULL, gst_marshall_VOID__OBJECT, G_TYPE_NONE, 1, GST_TYPE_PAD);

```

```

gobject_class->dispose = gst_pad_template_dispose;

gobject_class->get_property = gst_pad_template_get_property;
gobject_class->set_property = gst_pad_template_set_property;

/**
 * GstPadTemplate:name-template
 *
 * The name template of the pad template.
 *
 * Since: 0.10.21
 */
g_object_class_install_property (gobject_class, PROP_NAME_TEMPLATE,
    g_param_spec_string ("name-template", "Name template",
        "The name template of the pad template", NULL,
        G_PARAM_READWRITE | G_PARAM_CONSTRUCT_ONLY | G_PARAM_STATIC_STRINGS));

/**
 * GstPadTemplate:direction
 *
 * The direction of the pad described by the pad template.
 *
 * Since: 0.10.21
 */
g_object_class_install_property (gobject_class, PROP_DIRECTION,
    g_param_spec_enum ("direction", "Direction",
        "The direction of the pad described by the pad template",
        GST_TYPE_PAD_DIRECTION, GST_PAD_UNKNOWN,
        G_PARAM_READWRITE | G_PARAM_CONSTRUCT_ONLY | G_PARAM_STATIC_STRINGS));

/**
 * GstPadTemplate:presence
 *
 * When the pad described by the pad template will become available.
 *
 * Since: 0.10.21
 */
g_object_class_install_property (gobject_class, PROP_PRESENCE,
    g_param_spec_enum ("presence", "Presence",
        "When the pad described by the pad template will become available",
        GST_TYPE_PAD_PRESENCE, GST_PAD_ALWAYS,
        G_PARAM_READWRITE | G_PARAM_CONSTRUCT_ONLY | G_PARAM_STATIC_STRINGS));

/**
 * GstPadTemplate:caps
 *
 * The capabilities of the pad described by the pad template.

```

```

*
* Since: 0.10.21
*/
g_object_class_install_property (gobject_class, PROP_CAPS,
    g_param_spec_boxed ("caps", "Caps",
        "The capabilities of the pad described by the pad template",
        GST_TYPE_CAPS,
        G_PARAM_READWRITE | G_PARAM_CONSTRUCT_ONLY | G_PARAM_STATIC_STRINGS));

gstobject_class->path_string_separator = "*";
}

static void
gst_pad_template_init (GstPadTemplate * templ)
{
    /* FIXME 0.11: Does anybody remember why this is here? If not, let's
    * change it for 0.11 and let gst_element_class_add_pad_template() for
    * example ref/sink the pad templates.
    */
    /* We ensure that the pad template we're creating has a sunken reference.
    * Inconsistencies in pad templates being floating or sunken has caused
    * problems in the past with leaks, etc.
    *
    * For consistency, then, we only produce them with sunken references
    * owned by the creator of the object
    */
    if (GST_OBJECT_IS_FLOATING (templ)) {
        gst_object_ref_sink (templ);
    }
}

static void
gst_pad_template_dispose (GObject * object)
{
    GstPadTemplate *templ = GST_PAD_TEMPLATE (object);

    g_free (GST_PAD_TEMPLATE_NAME_TEMPLATE (templ));
    if (GST_PAD_TEMPLATE_CAPS (templ)) {
        gst_caps_unref (GST_PAD_TEMPLATE_CAPS (templ));
    }

    G_OBJECT_CLASS (parent_class)->dispose (object);
}

/* ALWAYS padtemplates cannot have conversion specifications (like src_%d),
* since it doesn't make sense.
* SOMETIMES padtemplates can do whatever they want, they are provided by the
* element.

```



```

* REQUEST padtemplates can be reverse-parsed (the user asks for 'sink1', the
* 'sink%d' template is automatically selected), so we need to restrict their
* naming.
*/
static gboolean
name_is_valid (const gchar * name, GstPadPresence presence)
{
    const gchar *str;

    if (presence == GST_PAD_ALWAYS) {
        if (strchr (name, '%') ) {
            g_warning ("invalid name template %s: conversion specifications are not"
                " allowed for GST_PAD_ALWAYS padtemplates", name);
            return FALSE;
        }
    } else if (presence == GST_PAD_REQUEST) {
        if ((str = strchr (name, '%')) && strchr (str + 1, '%')) {
            g_warning ("invalid name template %s: only one conversion specification"
                " allowed in GST_PAD_REQUEST padtemplate", name);
            return FALSE;
        }
        if (str && (*(str + 1) != 's' && *(str + 1) != 'd' && *(str + 1) != 'u')) {
            g_warning ("invalid name template %s: conversion specification must be of"
                " type '%%d', '%%u' or '%%s' for GST_PAD_REQUEST padtemplate", name);
            return FALSE;
        }
        if (str && *(str + 2) != '\0') {
            g_warning ("invalid name template %s: conversion specification must"
                " appear at the end of the GST_PAD_REQUEST padtemplate name", name);
            return FALSE;
        }
    }

    return TRUE;
}

GType
gst_static_pad_template_get_type (void)
{
    static GType staticpadtemplate_type = 0;

    if (G_UNLIKELY (staticpadtemplate_type == 0)) {
        staticpadtemplate_type =
            g_pointer_type_register_static ("GstStaticPadTemplate");
    }
    return staticpadtemplate_type;
}

```

```

/**
 * gst_static_pad_template_get:
 * @pad_template: the static pad template
 *
 * Converts a #GstStaticPadTemplate into a #GstPadTemplate.
 *
 * Returns: (transfer full): a new #GstPadTemplate.
 */
/* FIXME0.11: rename to gst_pad_template_new_from_static_pad_template() */
GstPadTemplate *
gst_static_pad_template_get (GstStaticPadTemplate * pad_template)
{
    GstPadTemplate *new;
    GstCaps *caps;

    if (!name_is_valid (pad_template->name_template, pad_template->presence))
        return NULL;

    caps = gst_static_caps_get (&pad_template->static_caps);

    new = g_object_new (gst_pad_template_get_type (),
        "name", pad_template->name_template,
        "name-template", pad_template->name_template,
        "direction", pad_template->direction,
        "presence", pad_template->presence, "caps", caps, NULL);

    gst_caps_unref (caps);

    return new;
}

/**
 * gst_pad_template_new:
 * @name_template: the name template.
 * @direction: the #GstPadDirection of the template.
 * @presence: the #GstPadPresence of the pad.
 * @caps: (transfer full): a #GstCaps set for the template. The caps are
 * taken ownership of.
 *
 * Creates a new pad template with a name according to the given template
 * and with the given arguments. This functions takes ownership of the provided
 * caps, so be sure to not use them afterwards.
 *
 * Returns: (transfer full): a new #GstPadTemplate.
 */
GstPadTemplate *
gst_pad_template_new (const gchar * name_template,
    GstPadDirection direction, GstPadPresence presence, GstCaps * caps)

```

```

{
    GstPadTemplate *new;

    g_return_val_if_fail (name_template != NULL, NULL);
    g_return_val_if_fail (caps != NULL, NULL);
    g_return_val_if_fail (direction == GST_PAD_SRC
        || direction == GST_PAD_SINK, NULL);
    g_return_val_if_fail (presence == GST_PAD_ALWAYS
        || presence == GST_PAD_SOMETIMES || presence == GST_PAD_REQUEST, NULL);

    if (!name_is_valid (name_template, presence)) {
        gst_caps_unref (caps);
        return NULL;
    }

    new = g_object_new (gst_pad_template_get_type (),
        "name", name_template, "name-template", name_template,
        "direction", direction, "presence", presence, "caps", caps, NULL);

    gst_caps_unref (caps);

    return new;
}

/**
 * gst_static_pad_template_get_caps:
 * @templ: a #GstStaticPadTemplate to get capabilities of.
 *
 * Gets the capabilities of the static pad template.
 *
 * Returns: (transfer full): the #GstCaps of the static pad template.
 * Unref after usage. Since the core holds an additional
 * ref to the returned caps, use gst_caps_make_writable()
 * on the returned caps to modify it.
 */
GstCaps *
gst_static_pad_template_get_caps (GstStaticPadTemplate * templ)
{
    g_return_val_if_fail (templ, NULL);

    return (GstCaps *) gst_static_caps_get (&templ->static_caps);
}

/**
 * gst_pad_template_get_caps:
 * @templ: a #GstPadTemplate to get capabilities of.
 *
 * Gets the capabilities of the pad template.

```

```

*
* Returns: (transfer none): the #GstCaps of the pad template. If you need to
*   keep a reference to the caps, take a ref (see gst_caps_ref ()).
*/
GstCaps *
gst_pad_template_get_caps (GstPadTemplate * templ)
{
    g_return_val_if_fail (GST_IS_PAD_TEMPLATE (templ), NULL);

    return GST_PAD_TEMPLATE_CAPS (templ);
}

/**
 * gst_pad_template_pad_created:
 * @templ: a #GstPadTemplate that has been created
 * @pad: the #GstPad that created it
 *
 * Emit the pad-created signal for this template when created by this pad.
 */
void
gst_pad_template_pad_created (GstPadTemplate * templ, GstPad * pad)
{
    g_signal_emit (templ, gst_pad_template_signals[TEMPL_PAD_CREATED], 0, pad);
}

static void
gst_pad_template_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec)
{
    /* these properties are all construct-only */
    switch (prop_id) {
        case PROP_NAME_TEMPLATE:
            GST_PAD_TEMPLATE_NAME_TEMPLATE (object) = g_value_dup_string (value);
            break;
        case PROP_DIRECTION:
            GST_PAD_TEMPLATE_DIRECTION (object) =
                (GstPadDirection) g_value_get_enum (value);
            break;
        case PROP_PRESENCE:
            GST_PAD_TEMPLATE_PRESENCE (object) =
                (GstPadPresence) g_value_get_enum (value);
            break;
        case PROP_CAPS:
            /* allow caps == NULL for backwards compatibility (ie. g_object_new()
             * called without any of the new properties) (FIXME 0.11) */
            if (g_value_get_boxed (value) != NULL) {
                GST_PAD_TEMPLATE_CAPS (object) =
                    gst_caps_copy (g_value_get_boxed (value));
            }
    }
}

```

```

    }
    break;
default:
    G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
    break;
}
}

static void
gst_pad_template_get_property (GObject * object, guint prop_id, GValue * value,
    GParamSpec * pspec)
{
    /* these properties are all construct-only */
    switch (prop_id) {
        case PROP_NAME_TEMPLATE:
            g_value_set_string (value, GST_PAD_TEMPLATE_NAME_TEMPLATE (object));
            break;
        case PROP_DIRECTION:
            g_value_set_enum (value, GST_PAD_TEMPLATE_DIRECTION (object));
            break;
        case PROP_PRESENCE:
            g_value_set_enum (value, GST_PAD_TEMPLATE_PRESENCE (object));
            break;
        case PROP_CAPS:
            g_value_set_boxed (value, GST_PAD_TEMPLATE_CAPS (object));
            break;
        default:
            G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
            break;
    }
}

/* GStreamer
 * Copyright (C) 1999,2000 Erik Walthinsen <omega@cse.ogi.edu>
 *      2000 Wim Taymans <wim.taymans@chello.be>
 *
 * gstpadtemplate.h: Header for GstPadTemplate object
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public

```

```
* License along with this library; if not, write to the
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
* Boston, MA 02111-1307, USA.
*/
```

```
#ifndef __GST_PAD_TEMPLATE_H__
#define __GST_PAD_TEMPLATE_H__
```

```
#include <gst/gstconfig.h>
```

```
#include <gst/gstobject.h>
```

```
#include <gst/gstbuffer.h>
```

```
#include <gst/gstcaps.h>
```

```
#include <gst/gstevent.h>
```

```
#include <gst/gstquery.h>
```

```
#include <gst/gsttask.h>
```

```
G_BEGIN_DECLS
```

```
/* FIXME: this awful circular dependency need to be resolved properly (see pad.h) */
```

```
/*typedef struct _GstPadTemplate GstPadTemplate; */
```

```
typedef struct _GstPadTemplateClass GstPadTemplateClass;
```

```
typedef struct _GstStaticPadTemplate GstStaticPadTemplate;
```

```
#define GST_TYPE_STATIC_PAD_TEMPLATE (gst_static_pad_template_get_type ())
```

```
#define GST_TYPE_PAD_TEMPLATE (gst_pad_template_get_type ())
```

```
#define GST_PAD_TEMPLATE(obj) (G_TYPE_CHECK_INSTANCE_CAST ((obj),  
GST_TYPE_PAD_TEMPLATE,GstPadTemplate))
```

```
#define GST_PAD_TEMPLATE_CLASS(klass) (G_TYPE_CHECK_CLASS_CAST ((klass),  
GST_TYPE_PAD_TEMPLATE,GstPadTemplateClass))
```

```
#define GST_IS_PAD_TEMPLATE(obj) (G_TYPE_CHECK_INSTANCE_TYPE ((obj),  
GST_TYPE_PAD_TEMPLATE))
```

```
#define GST_IS_PAD_TEMPLATE_CLASS(klass) (G_TYPE_CHECK_CLASS_TYPE ((klass),  
GST_TYPE_PAD_TEMPLATE))
```

```
/**
```

```
 * GstPadPresence:
```

```
 * @GST_PAD_ALWAYS: the pad is always available
```

```
 * @GST_PAD_SOMETIMES: the pad will become available depending on the media stream
```

```
 * @GST_PAD_REQUEST: the pad is only available on request with
```

```
 * gst_element_get_request_pad().
```

```
 *
```

```
 * Indicates when this pad will become available.
```

```
 */
```

```
typedef enum {
```

```
    GST_PAD_ALWAYS,
```

```

GST_PAD_SOMETIMES,
GST_PAD_REQUEST
} GstPadPresence;

/**
 * GST_PAD_TEMPLATE_NAME_TEMPLATE:
 * @templ: the template to query
 *
 * Get the nametemplate of the padtemplate.
 */
#define GST_PAD_TEMPLATE_NAME_TEMPLATE(templ) (((GstPadTemplate *) (templ))->name_template)

/**
 * GST_PAD_TEMPLATE_DIRECTION:
 * @templ: the template to query
 *
 * Get the #GstPadDirection of the padtemplate.
 */
#define GST_PAD_TEMPLATE_DIRECTION(templ) (((GstPadTemplate *) (templ))->direction)

/**
 * GST_PAD_TEMPLATE_PRESENCE:
 * @templ: the template to query
 *
 * Get the #GstPadPresence of the padtemplate.
 */
#define GST_PAD_TEMPLATE_PRESENCE(templ) (((GstPadTemplate *) (templ))->presence)

/**
 * GST_PAD_TEMPLATE_CAPS:
 * @templ: the template to query
 *
 * Get a handle to the padtemplate #GstCaps
 */
#define GST_PAD_TEMPLATE_CAPS(templ) (((GstPadTemplate *) (templ))->caps)

/**
 * GstPadTemplateFlags:
 * @GST_PAD_TEMPLATE_FIXED: the padtemplate has no variable properties
 * @GST_PAD_TEMPLATE_FLAG_LAST: first flag that can be used by subclasses.
 *
 * Flags for the padtemplate
 */
typedef enum {
    /* FIXME0.11: this is not used and the purpose is unclear */
    GST_PAD_TEMPLATE_FIXED    = (GST_OBJECT_FLAG_LAST << 0),
    /* padding */
    GST_PAD_TEMPLATE_FLAG_LAST = (GST_OBJECT_FLAG_LAST << 4)
}

```

```

} GstPadTemplateFlags;

/**
 * GST_PAD_TEMPLATE_IS_FIXED:
 * @templ: the template to query
 *
 * Check if the properties of the padtemplate are fixed
 */
#define GST_PAD_TEMPLATE_IS_FIXED(templ) (GST_OBJECT_FLAG_IS_SET(templ,
GST_PAD_TEMPLATE_FIXED))

/**
 * GstPadTemplate:
 *
 * The padtemplate object.
 */
struct _GstPadTemplate {
    GObject    object;

    gchar      *name_template;
    GstPadDirection direction;
    GstPadPresence presence;
    GstCaps    *caps;

    gpointer _gst_reserved[GST_PADDING];
};

struct _GstPadTemplateClass {
    GObjectClass parent_class;

    /* signal callbacks */
    void (*pad_created) (GstPadTemplate *templ, GstPad *pad);

    gpointer _gst_reserved[GST_PADDING];
};

/**
 * GstStaticPadTemplate:
 * @name_template: the name of the template
 * @direction: the direction of the template
 * @presence: the presence of the template
 * @static_caps: the caps of the template.
 *
 * Structure describing the #GstStaticPadTemplate.
 */
struct _GstStaticPadTemplate {
    const gchar *name_template;
    GstPadDirection direction;

```



```

GstPadPresence  presence;
GstStaticCaps   static_caps;
};

/**
 * GST_STATIC_PAD_TEMPLATE:
 * @padname: the name template of the pad
 * @dir: the GstPadDirection of the pad
 * @pres: the GstPadPresence of the pad
 * @caps: the GstStaticCaps of the pad
 *
 * Convenience macro to fill the values of a GstStaticPadTemplate
 * structure.
 */
#define GST_STATIC_PAD_TEMPLATE(padname, dir, pres, caps) \
{ \
  /* name_template */  padname, \
  /* direction */      dir, \
  /* presence */       pres, \
  /* caps */           caps \
}

/* templates and factories */
GType  gst_pad_template_get_type (void);
GType  gst_static_pad_template_get_type (void);

GstPadTemplate* gst_pad_template_new (const gchar *name_template,
                                     GstPadDirection direction, GstPadPresence presence,
                                     GstCaps *caps) G_GNUC_MALLOC;

GstPadTemplate * gst_static_pad_template_get      (GstStaticPadTemplate *pad_template);
GstCaps*        gst_static_pad_template_get_caps (GstStaticPadTemplate *templ);
GstCaps*        gst_pad_template_get_caps (GstPadTemplate *templ);

void            gst_pad_template_pad_created      (GstPadTemplate * templ, GstPad * pad);

G_END_DECLS

#endif /* __GST_PAD_TEMPLATE_H__ */
/**
 * Check: a unit test framework for C
 * Copyright (C) 2001,2002 Arien Malec
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Lesser General Public
 * License as published by the Free Software Foundation; either
 * version 2.1 of the License, or (at your option) any later version.
 */

```

\* This library is distributed in the hope that it will be useful,  
 \* but WITHOUT ANY WARRANTY; without even the implied warranty of  
 \* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU  
 \* Lesser General Public License for more details.  
 \*  
 \* You should have received a copy of the GNU Lesser General Public  
 \* License along with this library; if not, write to the  
 \* Free Software Foundation, Inc., 59 Temple Place - Suite 330,  
 \* Boston, MA 02111-1307, USA.  
 \*/

```
#ifndef CHECK_IMPL_H
#define CHECK_IMPL_H
```

```
/* This header should be included by any module that needs
   to know the implementation details of the check structures
   Include stdio.h & list.h before this header
*/
```

```
typedef struct TF {
    TFunc fn;
    int loop_start;
    int loop_end;
    const char *name;
    int signal;
    unsigned char allowed_exit_value;
} TF;
```

```
struct Suite {
    const char *name;
    List *tclst; /* List of test cases */
};
```

```
typedef struct Fixture
{
    int ischecked;
    SFunc fun;
} Fixture;
```

```
struct TCase {
    const char *name;
    int timeout;
    List *tflst; /* list of test functions */
    List *unch_sflst;
    List *unch_tflst;
    List *ch_sflst;
    List *ch_tflst;
```

```

};

typedef struct TestStats {
    int n_checked;
    int n_failed;
    int n_errors;
} TestStats;

struct TestResult {
    enum test_result rtype; /* Type of result */
    enum ck_result_ctx ctx; /* When the result occurred */
    char *file; /* File where the test occurred */
    int line; /* Line number where the test occurred */
    int iter; /* The iteration value for looping tests */
    const char *tname; /* Test case that generated the result */
    const char *name; /* Test that generated the result */
    char *msg; /* Failure message */
};

TestResult *tr_create(void);
void tr_reset(TestResult *tr);

enum cl_event {
    CLINITLOG_SR,
    CLENDLOG_SR,
    CLSTART_SR,
    CLSTART_S,
    CLEND_SR,
    CLEND_S,
    CLSTART_T, /* A test case is about to run */
    CLEND_T
};

typedef void (*LFun) (SRunner *, FILE*, enum print_output,
    void *, enum cl_event);

typedef struct Log {
    FILE *lfile;
    LFun lfun;
    int close;
    enum print_output mode;
} Log;

struct SRunner {
    List *slst; /* List of Suite objects */
    TestStats *stats; /* Run statistics */
    List *resultlst; /* List of unit test results */
    const char *log_fname; /* name of log file */

```

```

const char *xml_fname; /* name of xml output file */
List *loglst; /* list of Log objects */
enum fork_status fstat; /* controls if suites are forked or not
    NOTE: Don't use this value directly,
    instead use srunner_fork_status */
};

void set_fork_status(enum fork_status fstat);
enum fork_status cur_fork_status (void);

#endif /* CHECK_IMPL_H */
/* GStreamer
 * Copyright (C) 1999,2000 Erik Walthinsen <omega@cse.ogi.edu>
 *      2000 Wim Taymans <wtay@chello.be>
 *      2005 Wim Taymans <wim@fluendo.com>
 *      2005 David Schleef <ds@schleef.org>
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public
 * License along with this library; if not, write to the
 * Free Software Foundation, Inc., 59 Temple Place - Suite 330,
 * Boston, MA 02111-1307, USA.
 */
/**
 * SECTION:element-capsfilter
 *
 * The element does not modify data as such, but can enforce limitations on the
 * data format.
 *
 * <refsect2>
 * <title>Example launch line</title>
 * |[
 * gst-launch videotestsrc ! video/x-raw-gray ! ffmpegcolorspace ! autovideosink
 * ]| Limits acceptable video from videotestsrc to be grayscale.
 * </refsect2>
 */

#ifdef HAVE_CONFIG_H

```

```

#include "config.h"
#endif

#include "../gst/gst-i18n-lib.h"
#include "gstcapsfilter.h"

enum
{
PROP_0,
PROP_FILTER_CAPS
};

static GstStaticPadTemplate sinktemplate = GST_STATIC_PAD_TEMPLATE ("sink",
    GST_PAD_SINK,
    GST_PAD_ALWAYS,
    GST_STATIC_CAPS_ANY);

static GstStaticPadTemplate srctemplate = GST_STATIC_PAD_TEMPLATE ("src",
    GST_PAD_SRC,
    GST_PAD_ALWAYS,
    GST_STATIC_CAPS_ANY);

GST_DEBUG_CATEGORY_STATIC (gst_capsfilter_debug);
#define GST_CAT_DEFAULT gst_capsfilter_debug

#define _do_init(bla) \
    GST_DEBUG_CATEGORY_INIT (gst_capsfilter_debug, "capsfilter", 0, \
        "capsfilter element");

GST_BOILERPLATE_FULL (GstCapsFilter, gst_capsfilter, GstBaseTransform,
    GST_TYPE_BASE_TRANSFORM, _do_init);

static void gst_capsfilter_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec);
static void gst_capsfilter_get_property (GObject * object, guint prop_id,
    GValue * value, GParamSpec * pspec);
static void gst_capsfilter_dispose (GObject * object);

static GstCaps *gst_capsfilter_transform_caps (GstBaseTransform * base,
    GstPadDirection direction, GstCaps * caps);
static gboolean gst_capsfilter_accept_caps (GstBaseTransform * base,
    GstPadDirection direction, GstCaps * caps);
static GstFlowReturn gst_capsfilter_transform_ip (GstBaseTransform * base,
    GstBuffer * buf);
static GstFlowReturn gst_capsfilter_prepare_buf (GstBaseTransform * trans,

```

```

    GstBuffer * input, gint size, GstCaps * caps, GstBuffer ** buf);

static void
gst_capsfilter_base_init (gpointer g_class)
{
    GstElementClass *gstelement_class = GST_ELEMENT_CLASS (g_class);

    gst_element_class_set_details_simple (gstelement_class,
        "CapsFilter",
        "Generic",
        "Pass data without modification, limiting formats",
        "David Schleef <ds@schleef.org>");
    gst_element_class_add_pad_template (gstelement_class,
        gst_static_pad_template_get (&srctemplate));
    gst_element_class_add_pad_template (gstelement_class,
        gst_static_pad_template_get (&sinktemplate));
}

static void
gst_capsfilter_class_init (GstCapsFilterClass * klass)
{
    GObjectClass *gobject_class;
    GstBaseTransformClass *trans_class;

    gobject_class = G_OBJECT_CLASS (klass);
    gobject_class->set_property = gst_capsfilter_set_property;
    gobject_class->get_property = gst_capsfilter_get_property;
    gobject_class->dispose = gst_capsfilter_dispose;

    g_object_class_install_property (gobject_class, PROP_FILTER_CAPS,
        g_param_spec_boxed ("caps", _("Filter caps"),
            _("Restrict the possible allowed capabilities (NULL means ANY). "
                "Setting this property takes a reference to the supplied GstCaps "
                "object."), GST_TYPE_CAPS,
            G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS));

    trans_class = GST_BASE_TRANSFORM_CLASS (klass);
    trans_class->transform_caps =
        GST_DEBUG_FUNCPTR (gst_capsfilter_transform_caps);
    trans_class->transform_ip = GST_DEBUG_FUNCPTR (gst_capsfilter_transform_ip);
    trans_class->accept_caps = GST_DEBUG_FUNCPTR (gst_capsfilter_accept_caps);
    trans_class->prepare_output_buffer =
        GST_DEBUG_FUNCPTR (gst_capsfilter_prepare_buf);
}

static void
gst_capsfilter_init (GstCapsFilter * filter, GstCapsFilterClass * g_class)
{

```

```

GstBaseTransform *trans = GST_BASE_TRANSFORM (filter);
gst_base_transform_set_gap_aware (trans, TRUE);
filter->filter_caps = gst_caps_new_any ();
}

static gboolean
copy_func (GQuark field_id, const GValue * value, GstStructure * dest)
{
    gst_structure_id_set_value (dest, field_id, value);

    return TRUE;
}

static void
gst_capsfilter_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec)
{
    GstCapsFilter *capsfilter = GST_CAPSFILTER (object);

    switch (prop_id) {
        case PROP_FILTER_CAPS: {
            GstCaps *new_caps;
            GstCaps *old_caps, *suggest, *nego;
            const GstCaps *new_caps_val = gst_value_get_caps (value);

            if (new_caps_val == NULL) {
                new_caps = gst_caps_new_any ();
            } else {
                new_caps = (GstCaps *) new_caps_val;
                gst_caps_ref (new_caps);
            }

            GST_OBJECT_LOCK (capsfilter);
            old_caps = capsfilter->filter_caps;
            capsfilter->filter_caps = new_caps;
            GST_OBJECT_UNLOCK (capsfilter);

            gst_caps_unref (old_caps);

            GST_DEBUG_OBJECT (capsfilter, "set new caps %" GST_PTR_FORMAT, new_caps);

            /* filter the currently negotiated format against the new caps */
            GST_OBJECT_LOCK (GST_BASE_TRANSFORM_SINK_PAD (object));
            nego = GST_PAD_CAPS (GST_BASE_TRANSFORM_SINK_PAD (object));
            if (nego) {
                GST_DEBUG_OBJECT (capsfilter, "we had negotiated caps %" GST_PTR_FORMAT,
                    nego);
            }
        }
    }
}

```

```

if (G_UNLIKELY (gst_caps_is_any (new_caps))) {
    GST_DEBUG_OBJECT (capsfilter, "not settings any suggestion");

    suggest = NULL;
} else {
    GstStructure *s1, *s2;

    /* first check if the name is the same */
    s1 = gst_caps_get_structure (nego, 0);
    s2 = gst_caps_get_structure (new_caps, 0);

    if (gst_structure_get_name_id (s1) == gst_structure_get_name_id (s2)) {
        /* same name, copy all fields from the new caps into the previously
         * negotiated caps */
        suggest = gst_caps_copy (nego);
        s1 = gst_caps_get_structure (suggest, 0);
        gst_structure_foreach (s2, (GstStructureForeachFunc) copy_func, s1);
        GST_DEBUG_OBJECT (capsfilter, "copied structure fields");
    } else {
        GST_DEBUG_OBJECT (capsfilter, "different structure names");
        /* different names, we can only suggest the complete caps */
        suggest = gst_caps_copy (new_caps);
    }
}
} else {
    GST_DEBUG_OBJECT (capsfilter, "no negotiated caps");
    /* Suggest the new caps, we can't just rely on _get_caps as this may
     * already be called at this point even though no buffer has been
     * pushed yet */
    suggest = gst_caps_copy (new_caps);
}
GST_OBJECT_UNLOCK (GST_BASE_TRANSFORM_SINK_PAD (object));

GST_DEBUG_OBJECT (capsfilter, "suggesting new caps %" GST_PTR_FORMAT,
    suggest);
gst_base_transform_suggest (GST_BASE_TRANSFORM (object), suggest, 0);
if (suggest)
    gst_caps_unref (suggest);

break;
}
default:
    G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
break;
}
}

static void

```



```

gst_capsfilter_get_property (GObject * object, guint prop_id, GValue * value,
    GParamSpec * pspec)
{
    GstCapsFilter *capsfilter = GST_CAPSFILTER (object);

    switch (prop_id) {
        case PROP_FILTER_CAPS:
            GST_OBJECT_LOCK (capsfilter);
            gst_value_set_caps (value, capsfilter->filter_caps);
            GST_OBJECT_UNLOCK (capsfilter);
            break;
        default:
            G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
            break;
    }
}

static void
gst_capsfilter_dispose (GObject * object)
{
    GstCapsFilter *filter = GST_CAPSFILTER (object);

    gst_caps_replace (&filter->filter_caps, NULL);

    G_OBJECT_CLASS (parent_class)->dispose (object);
}

static GstCaps *
gst_capsfilter_transform_caps (GstBaseTransform * base,
    GstPadDirection direction, GstCaps * caps)
{
    GstCapsFilter *capsfilter = GST_CAPSFILTER (base);
    GstCaps *ret, *filter_caps;

    GST_OBJECT_LOCK (capsfilter);
    filter_caps = gst_caps_ref (capsfilter->filter_caps);
    GST_OBJECT_UNLOCK (capsfilter);

    ret = gst_caps_intersect (caps, filter_caps);
    GST_DEBUG_OBJECT (capsfilter, "input: %" GST_PTR_FORMAT, caps);
    GST_DEBUG_OBJECT (capsfilter, "filter: %" GST_PTR_FORMAT, filter_caps);
    GST_DEBUG_OBJECT (capsfilter, "intersect: %" GST_PTR_FORMAT, ret);

    gst_caps_unref (filter_caps);

    return ret;
}

```

```

static gboolean
gst_capsfilter_accept_caps (GstBaseTransform * base,
    GstPadDirection direction, GstCaps * caps)
{
    GstCapsFilter *capsfilter = GST_CAPSFILTER (base);
    GstCaps *filter_caps;
    gboolean ret;

    GST_OBJECT_LOCK (capsfilter);
    filter_caps = gst_caps_ref (capsfilter->filter_caps);
    GST_OBJECT_UNLOCK (capsfilter);

    ret = gst_caps_can_intersect (caps, filter_caps);
    GST_DEBUG_OBJECT (capsfilter, "can intersect: %d", ret);
    if (ret) {
        /* if we can intersect, see if the other end also accepts */
        if (direction == GST_PAD_SRC)
            ret = gst_pad_peer_accept_caps (GST_BASE_TRANSFORM_SINK_PAD (base), caps);
        else
            ret = gst_pad_peer_accept_caps (GST_BASE_TRANSFORM_SRC_PAD (base), caps);
        GST_DEBUG_OBJECT (capsfilter, "peer accept: %d", ret);
    }

    gst_caps_unref (filter_caps);

    return ret;
}

static GstFlowReturn
gst_capsfilter_transform_ip (GstBaseTransform * base, GstBuffer * buf)
{
    /* No actual work here. It's all done in the prepare output buffer
    * func. */
    return GST_FLOW_OK;
}

/* Output buffer preparation... if the buffer has no caps, and
* our allowed output caps is fixed, then give the caps to the
* buffer.
* This ensures that outgoing buffers have caps if we can, so
* that pipelines like:
* gst-launch filesrc location=rawsamples.raw !
* audio/x-raw-int,width=16,depth=16,rate=48000,channels=2,
* endianness=4321,signed=(boolean)'true ! alsasink
* will work.
*/
static GstFlowReturn
gst_capsfilter_prepare_buf (GstBaseTransform * trans, GstBuffer * input,

```

```

    gint size, GstCaps * caps, GstBuffer ** buf)
{
    GstFlowReturn ret = GST_FLOW_OK;

    if (GST_BUFFER_CAPS (input) != NULL) {
        /* Output buffer already has caps */
        GST_LOG_OBJECT (trans, "Input buffer already has caps (implicitly fixed)");
        /* FIXME : Move this behaviour to basetransform. The given caps are the ones
        * of the source pad, therefore our outgoing buffers should always have
        * those caps. */
        if (GST_BUFFER_CAPS (input) != caps) {
            /* caps are different, make a metadata writable output buffer to set
            * caps */
            if (gst_buffer_is_metadata_writable (input)) {
                /* input is writable, just set caps and use this as the output */
                *buf = input;
                gst_buffer_set_caps (*buf, caps);
                gst_buffer_ref (input);
            } else {
                GST_DEBUG_OBJECT (trans, "Creating sub-buffer and setting caps");
                *buf = gst_buffer_create_sub (input, 0, GST_BUFFER_SIZE (input));
                gst_buffer_set_caps (*buf, caps);
            }
        } else {
            /* caps are right, just use a ref of the input as the outbuf */
            *buf = input;
            gst_buffer_ref (input);
        }
    } else {
        /* Buffer has no caps. See if the output pad only supports fixed caps */
        GstCaps *out_caps;

        out_caps = GST_PAD_CAPS (trans->srcpad);

        if (out_caps != NULL) {
            gst_caps_ref (out_caps);
        } else {
            out_caps = gst_pad_get_allowed_caps (trans->srcpad);
            g_return_val_if_fail (out_caps != NULL, GST_FLOW_ERROR);
        }

        out_caps = gst_caps_make_writable (out_caps);
        gst_caps_do_simplify (out_caps);

        if (gst_caps_is_fixed (out_caps) && !gst_caps_is_empty (out_caps)) {
            GST_DEBUG_OBJECT (trans, "Have fixed output caps %"
                GST_PTR_FORMAT " to apply to buffer with no caps", out_caps);
            if (gst_buffer_is_metadata_writable (input)) {

```

```

    gst_buffer_ref (input);
    *buf = input;
} else {
    GST_DEBUG_OBJECT (trans, "Creating sub-buffer and setting caps");
    *buf = gst_buffer_create_sub (input, 0, GST_BUFFER_SIZE (input));
}
GST_BUFFER_CAPS (*buf) = out_caps;

if (GST_PAD_CAPS (trans->srcpad) == NULL)
    gst_pad_set_caps (trans->srcpad, out_caps);
} else {
    gchar *caps_str = gst_caps_to_string (out_caps);

    GST_DEBUG_OBJECT (trans, "Cannot choose caps. Have unfixed output caps %"
        GST_PTR_FORMAT, out_caps);
    gst_caps_unref (out_caps);

    ret = GST_FLOW_ERROR;
    GST_ELEMENT_ERROR (trans, STREAM, FORMAT,
        ("Filter caps do not completely specify the output format"),
        ("Output caps are unfixed: %s", caps_str));
    g_free (caps_str);
}
}

return ret;
}
/* GStreamer
 * Copyright (C) 1999,2000 Erik Walthinsen <omega@cse.ogi.edu>
 *      2000 Wim Taymans <wtay@chello.be>
 *
 * gstidentity.h:
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public
 * License along with this library; if not, write to the
 * Free Software Foundation, Inc., 59 Temple Place - Suite 330,
 * Boston, MA 02111-1307, USA.
 */

```

```

#ifndef __GST_CAPSFILTER_H__
#define __GST_CAPSFILTER_H__

#include <gst/gst.h>
#include <gst/base/gstbasetransform.h>

G_BEGIN_DECLS

#define GST_TYPE_CAPSFILTER \
    (gst_capsfilter_get_type())
#define GST_CAPSFILTER(obj) \
    (G_TYPE_CHECK_INSTANCE_CAST((obj),GST_TYPE_CAPSFILTER,GstCapsFilter))
#define GST_CAPSFILTER_CLASS(klass) \
    (G_TYPE_CHECK_CLASS_CAST((klass),GST_TYPE_CAPSFILTER,GstCapsFilterClass))
#define GST_IS_CAPSFILTER(obj) \
    (G_TYPE_CHECK_INSTANCE_TYPE((obj),GST_TYPE_CAPSFILTER))
#define GST_IS_CAPSFILTER_CLASS(klass) \
    (G_TYPE_CHECK_CLASS_TYPE((klass),GST_TYPE_CAPSFILTER))

typedef struct _GstCapsFilter GstCapsFilter;
typedef struct _GstCapsFilterClass GstCapsFilterClass;

/**
 * GstCapsFilter:
 *
 * The opaque #GstCapsFilter data structure.
 */
struct _GstCapsFilter {
    GstBaseTransform trans;

    GstCaps *filter_caps;
};

struct _GstCapsFilterClass {
    GstBaseTransformClass trans_class;
};

GType gst_capsfilter_get_type (void);

G_END_DECLS

#endif /* __GST_CAPSFILTER_H__ */

```

# 1.9 gstreamer-plugins-bad 0.10.22.1

## 1.9.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free

software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

## GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1

above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,



b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or 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 counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

#### How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest

possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) 19yy <name of author>
```

```
This program is free software; you can redistribute it and/or modify  
it under the terms of the GNU General Public License as published by  
the Free Software Foundation; either version 2 of the License, or  
(at your option) any later version.
```

```
This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
GNU General Public License for more details.
```

```
You should have received a copy of the GNU General Public License  
along with this program; if not, write to the Free Software  
Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
```

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) 19yy name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program  
'Gnomovision' (which makes passes at compilers) written by James Hacker.
```

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

#### GNU LIBRARY GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1991 Free Software Foundation, Inc.

675 Mass Ave, Cambridge, MA 02139, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

#### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Library General Public License, applies to some specially designated Free Software Foundation software, and to any other libraries whose authors decide to use it. You can use it for your libraries, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link a program with the library, you must provide complete object files to the recipients so that they can relink them

with the library, after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright the library, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain that everyone understands that there is no warranty for this free library. If the library is modified by someone else and passed on, we want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve

this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

## GNU LIBRARY GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Library General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the



entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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 source along with the object code.

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.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood

that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

- b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute

the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that

system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

#### Appendix: How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Library General Public License for more details.

You should have received a copy of the GNU Library General Public License along with this library; if not, write to the Free Software Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if

necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

```
/* GStreamer
```

```
* Copyright (C) <1999> Erik Walthinsen <omega@cse.ogi.edu>
```

```
*
```

```
* This library is free software; you can redistribute it and/or
```

```
* modify it under the terms of the GNU Library General Public
```

```
* License as published by the Free Software Foundation; either
```

```
* version 2 of the License, or (at your option) any later version.
```

```
*
```

```
* This library is distributed in the hope that it will be useful,
```

```
* but WITHOUT ANY WARRANTY; without even the implied warranty of
```

```
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
```

```
* Library General Public License for more details.
```

```
*
```

```
* You should have received a copy of the GNU Library General Public
```

```
* License along with this library; if not, write to the
```

```
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
```

```
* Boston, MA 02111-1307, USA.
```

```
*/
```

Disclaimer: The GStreamer team makes a real effort to make sure that the information in this file is as up-to-date and accurate as possible.

However, this file may contain errors and omissions. Some dependant libraries change their licensing from version-to-version and some of the libraries listed here as LGPL were under the GPL license in older releases. Distributions which include GStreamer are responsible for ensuring that plugins are used in accordance with licensing terms and other laws.

GStreamer is developed under the terms of the LGPL (see LICENSE file for details).

Some of our plugins however rely on libraries which are available under other licenses. This means that if you are using an application which has a non-GPL compatible license, for instance a closed-source application with GStreamer you have to make sure not to use GPL linked or derived plugins. When using GPL linked plugins GStreamer is for all practical reasons under the GPL itself.

The plugins which use a GPL library are as follows:

a52dec      liba52      (<http://liba52.sourceforge.net/>)

aasink      aalib      (<http://sourceforge.net/projects/aa-project/>)

cdparanoia libcdparanoia (<http://www.xiph.org/paranoia/>)  
 dtsdec libdts (<http://www.videolan.org/dtsdec.html>)  
 dvdnavsrc libdvdnav (<http://dvd.sourceforge.net/>)  
 dxr3 (<http://dxr3.sourceforge.net/>)  
 icecastsend libshout (<http://www.icecast.org>)  
 mad libmad (<http://www.mars.org/home/rob/proj/mpeg/>)  
 mpeg2dec libmpeg2 (<http://libmpeg2.sourceforge.net/>)  
 mpeg2enc libmpeg2enc (<http://mjpeg.sourceforge.net/>)  
 mplex libmplex (<http://mjpeg.sourceforge.net/>)  
 siddec libsidplay 1.36 (<http://www.geocities.com/SiliconValley/Lakes/5147/sidplay/>,  
<http://sourceforge.net/projects/sidplay2/>)  
 trm libmusicbrainz (<http://www.musicbrainz.org/>)  
 xine libxine (<http://xinehq.de/>)  
 xvid libxvidcore (<http://www.xvid.org/>)

Plugins derived from GPL code are as follows:

dvdreadsrc libdvdread (<http://www.dtek.chalmers.se/groups/dvd/>)  
 monoscope None (Algorithm by Ralph Loader, Joerg Walter,  
 Richard Boulton, and Andy Lo A Foe)  
 rtjpeg None (Erik Walthinsen's algorithm)  
 rtp None (<http://www.linphone.org/ortp/>)  
 synaesthesia (<http://www.logarithmic.net/pfh/synaesthesia>)  
 system\_encode None (Algorithm by Chrisoph Moar, Wim Tayman's and  
 Erik Walthinsen)  
 vbidec None (Algorithm by Billy Biggs, Doug Bell,  
 Erik Walthinsen and David I. Lehn)

Plugins which use a LGPL library are as follows:

alsa alsa (<http://alsa-project.org/>)  
 artsdsink aRts (<http://arts-project.org/>)  
 cacasink libcaca (<http://sam.zoy.org/projects/libcaca/>)  
 colorspacecs libcolorspace  
 dvdec libdv (<http://libdv.sourceforge.net/>)  
 esdmon,esdsink libesd (<ftp.gnome.org/pub/GNOME/stable/sources/esound/>)  
 faac libfaac (<http://www.audiocoding.com/modules/mydownloads/>)  
 fameenc libfame (<http://fame.sourceforge.net/>)  
 ffmpeg ffmpeg (<http://ffmpeg.sourceforge.net/>)  
 gdkpixbuf GTK+ (<http://www.gtk.org/>)  
 gnomevfs gnome-vfs (<ftp.gnome.org/pub/GNOME/stable/sources/gnome-vfs/>)  
 gst\_arts aRts (<http://arts-project.org/>)  
 gst1394 libraw1394 (<http://www.linux1394.org/>)  
 gstaf libaudiofile (<http://www.68k.org/~michael/audiofile/>)  
 gstsfile libsndfile (<http://www.mega-nerd.com/libsndfile/>)  
 hermescolorspace Hermes (<http://www.clanlib.org/hermes/>)  
 kio KDE (<http://www.kde.org/>)  
 ladspa (<http://www.ladspa.org/>)



lame libmp3lame (<http://lame.sourceforge.net/>)  
 libvisual libvisual (<http://libvisual.sourceforge.net/>)  
 matroska (<http://www.matroska.org/>)  
 mikmod libmikmod (<http://mikmod.raphnet.net/>)  
 ossaudio (<http://www.opensound.com/>)  
 qcamsrc  
 rfbenc librfb  
 sdlvideosink libsdl (<http://www.libsdl.org/>)  
 shout2send libshout2 (<http://www.icecast.org>)  
 smoothwave  
 swfdec (<http://swfdec.sourceforge.net/>)  
 tarkin (<http://svn.xiph.org/trunk/tarkin/>)  
 textoverlay pango (<http://www.pango.org/>)  
 dirac (<http://www.bbc.co.uk/rd/projects/dirac/>)  
 effectv (Our ports was relicensed)(<http://effectv.sourceforge.net/>)  
 musepack (<http://www.musepack.net/>)  
 kate libtiger (<http://libtiger.googlecode.com/>)  
 Optional, only for the tiger element

Plugins which use a BSD covered library are as follows:

ogg libogg/libvorbis (<http://www.xiph.org/ogg/vorbis/>)  
 vorbis libogg/libvorbis (<http://www.xiph.org/ogg/vorbis/>)  
 gsttheora libtheora (<http://www.theora.org/>)  
 speex (<http://www.speex.org/>)  
 flac libFLAC (<http://flac.sourceforge.net/>)  
 kate libkate (<http://libkate.googlecode.com/>)

Plugins based on libraries with other free licenses:

ximagesink libXv  
 xvimagesink libXv  
 - license: MIT X11 / X Consortium license  
  
 gsm libgsm  
 - license MIT license <http://kbs.cs.tu-berlin.de/~jutta/toast.html>  
  
 festival (<http://www.cstr.ed.ac.uk/projects/festival/>)  
 - license: <http://www.cstr.ed.ac.uk/projects/festival/freecopyright.shtml>  
  
 jpeg (<http://www.ijg.org/>)  
 - license: IJG license  
  
 nas (<http://radscan.com/nas.html>)  
 - license: NAS license  
  
 snapshot libpng (<http://www.libpng.org/pub/png/>)  
 - license: PNG license

mngdec/mngenc libmng (<http://gjuyn.xs4all.nl/libmng>)

- license PNG license

Plugins using non-free libraries:

divxdec, divxenc (<http://www.divx.com/>)

osxaudio (<http://www.apple.com/macosx/>)

sunaudiosink (<http://www.sun.com/>)

Unsure:

faad libfaad (<http://www.audiocoding.com/>)

faad's license depends on its major version :

- for FAAD1 : it is LGPL

- for FAAD2 : it is GPL

look at these pages for more information on licenses :

<http://www.audiocoding.com/modules/wiki/?page=FAAD2>

<http://www.audiocoding.com/modules/wiki/?page=FAAC>

by default, GStreamer faad plugin would compile against FAAD2 if available.

it falls back to FAAD1 if not.

```
/* GStreamer
```

```
* Copyright (C) <1999> Erik Walthinsen <omega@cse.ogi.edu>
```

```
* Copyright (C) 2003,2004 David A. Schleeff <ds@schleeff.org>
```

```
*
```

```
* This library is free software; you can redistribute it and/or
```

```
* modify it under the terms of the GNU Library General Public
```

```
* License as published by the Free Software Foundation; either
```

```
* version 2 of the License, or (at your option) any later version.
```

```
*
```

```
* This library is distributed in the hope that it will be useful,
```

```
* but WITHOUT ANY WARRANTY; without even the implied warranty of
```

```
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
```

```
* Library General Public License for more details.
```

```
*
```

```
* You should have received a copy of the GNU Library General Public
```

```
* License along with this library; if not, write to the
```

```
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
```

```
* Boston, MA 02111-1307, USA.
```

```
*/
```

```
/* Element-Checklist-Version: 5 */
```

```
#ifdef HAVE_CONFIG_H
```

```
#include "config.h"
```

```
#endif
```

```
#include <string.h>
```

```
#include <math.h>
```

```

/*#define DEBUG_ENABLED */
#include "gstaudioresample.h"
#include <gst/audio/audio.h>

GST_DEBUG_CATEGORY_STATIC (audioresample_debug);
#define GST_CAT_DEFAULT audioresample_debug

/* Audioresample signals and args */
enum
{
/* FILL ME */
LAST_SIGNAL
};

enum
{
ARG_0,
ARG_FILTERLEN
};

#define SUPPORTED_CAPS \
GST_STATIC_CAPS (\
"audio/x-raw-int, " \
"rate = (int) [ 1, MAX ], " \
"channels = (int) [ 1, MAX ], " \
"endianness = (int) BYTE_ORDER, " \
"width = (int) 16, " \
"depth = (int) 16, " \
"signed = (boolean) true"
#if 0
/* disabled because it segfaults */
"audio/x-raw-float, "
"rate = (int) [ 1, MAX ], "
"channels = (int) [ 1, MAX ], "
"endianness = (int) BYTE_ORDER, " "width = (int) 32"
#endif
)

static GstStaticPadTemplate gst_audioresample_sink_template =
    GST_STATIC_PAD_TEMPLATE ("sink",
        GST_PAD_SINK, GST_PAD_ALWAYS, SUPPORTED_CAPS);

static GstStaticPadTemplate gst_audioresample_src_template =
    GST_STATIC_PAD_TEMPLATE ("src",
        GST_PAD_SRC, GST_PAD_ALWAYS, SUPPORTED_CAPS);

static void gst_audioresample_base_init (gpointer g_class);

```

```

static void gst_audioresample_class_init (AudioresampleClass * klass);
static void gst_audioresample_init (Audioresample * audioresample);
static void gst_audioresample_dispose (GObject * object);

static void gst_audioresample_chain (GstPad * pad, GstData * _data);

static void gst_audioresample_set_property (GObject * object,
      guint prop_id, const GValue * value, GParamSpec * pspec);
static void gst_audioresample_get_property (GObject * object,
      guint prop_id, GValue * value, GParamSpec * pspec);

static GstElementClass *parent_class = NULL;

/*static guint gst_audioresample_signals[LAST_SIGNAL] = { 0 }; */

GType audioresample_get_type (void)
{
    static GType audioresample_type = 0;

    if (!audioresample_type)
    {
        static const GTypeInfo audioresample_info = {
            sizeof (AudioresampleClass),
            gst_audioresample_base_init,
            NULL,
            (GClassInitFunc) gst_audioresample_class_init,
            NULL,
            NULL,
            sizeof (Audioresample), 0,
            (GInstanceInitFunc) gst_audioresample_init,};

        audioresample_type =
            g_type_register_static (GST_TYPE_ELEMENT, "Audioresample",
                &audioresample_info, 0);
    }
    return audioresample_type;
}

static void gst_audioresample_base_init (gpointer g_class)
{
    GstElementClass *gstelement_class = GST_ELEMENT_CLASS (g_class);

    gst_element_class_add_pad_template (gstelement_class,
        gst_static_pad_template_get (&gst_audioresample_src_template));
    gst_element_class_add_pad_template (gstelement_class,
        gst_static_pad_template_get (&gst_audioresample_sink_template));

    gst_element_class_set_details_simple (gstelement_class, "Audio scaler",

```

```

    "Filter/Converter/Audio",
    "Resample audio", "David Schleef <ds@schleef.org>");
}

static void gst_audioresample_class_init (AudioresampleClass * klass)
{
    GObjectClass *gobject_class;
    GstElementClass *gstelement_class;

    gobject_class = (GObjectClass *) klass;
    gstelement_class = (GstElementClass *) klass;

    gobject_class->set_property = gst_audioresample_set_property;
    gobject_class->get_property = gst_audioresample_get_property;
    gobject_class->dispose = gst_audioresample_dispose;

    g_object_class_install_property (G_OBJECT_CLASS (klass), ARG_FILTERLEN,
        g_param_spec_int ("filter-length", "filter_length", "filter_length",
            0, G_MAXINT, 16,
            G_PARAM_READWRITE | G_PARAM_CONSTRUCT | G_PARAM_STATIC_STRINGS));

    parent_class = g_type_class_peek_parent (klass);

    GST_DEBUG_CATEGORY_INIT (audioresample_debug, "audioresample", 0,
        "audioresample element");
}

static void gst_audioresample_expand_caps (GstCaps * caps)
{
    gint i;

    for (i = 0; i < gst_caps_get_size (caps); i++) {
        GstStructure *structure = gst_caps_get_structure (caps, i);
        const GValue *value;

        value = gst_structure_get_value (structure, "rate");
        if (value == NULL) {
            GST_ERROR ("caps structure doesn't have required rate field");
            return;
        }

        gst_structure_set (structure, "rate", GST_TYPE_INT_RANGE, 1, G_MAXINT, 0);
    }
}

static GstCaps *gst_audioresample_getcaps (GstPad * pad)
{
    Audioresample *audioresample;

```

```

GstCaps *caps;
GstPad *otherpad;

audioresample = GST_AUDIORESAMPLE (gst_pad_get_parent (pad));

otherpad = (pad == audioresample->srcpad) ? audioresample->sinkpad :
    audioresample->srcpad;
caps = gst_pad_get_allowed_caps (otherpad);

gst_audioresample_expand_caps (caps);

return caps;
}

static GstCaps *gst_audioresample_fixate (GstPad * pad, const GstCaps * caps)
{
    Audioresample *audioresample;
    GstPad *otherpad;
    int rate;
    GstCaps *copy;
    GstStructure *structure;

    audioresample = GST_AUDIORESAMPLE (gst_pad_get_parent (pad));

    if (pad == audioresample->srcpad) {
        otherpad = audioresample->sinkpad;
        rate = audioresample->i_rate;
    } else
    {
        otherpad = audioresample->srcpad;
        rate = audioresample->o_rate;
    }
    if (!GST_PAD_IS_NEGOTIATING (otherpad))
        return NULL;
    if (gst_caps_get_size (caps) > 1)
        return NULL;

    copy = gst_caps_copy (caps);
    structure = gst_caps_get_structure (copy, 0);
    if (rate) {
        if (gst_structure_fixate_field_nearest_int (structure, "rate", rate)) {
            return copy;
        }
    }
    gst_caps_free (copy);
    return NULL;
}

```

```

static GstPadLinkReturn gst_audioresample_link (GstPad * pad,
    const GstCaps * caps)
{
    Audioresample *audioresample;
    GstStructure *structure;
    int rate;
    int channels;
    gboolean ret;
    GstPad *otherpad;

    audioresample = GST_AUDIORESAMPLE (gst_pad_get_parent (pad));

    otherpad = (pad == audioresample->srcpad) ? audioresample->sinkpad :
        audioresample->srcpad;

    structure = gst_caps_get_structure (caps, 0);
    ret = gst_structure_get_int (structure, "rate", &rate);
    ret &= gst_structure_get_int (structure, "channels", &channels);
    if (!ret)
    {
        return GST_PAD_LINK_REFUSED;
    }

    if (gst_pad_is_negotiated (otherpad))
    {
        GstCaps *othercaps = gst_caps_copy (caps);
        int otherrate;
        GstPadLinkReturn linkret;

        if (pad == audioresample->srcpad) {
            otherrate = audioresample->i_rate;
        } else {
            otherrate = audioresample->o_rate;
        }
        gst_caps_set_simple (othercaps, "rate", G_TYPE_INT, otherrate, NULL);
        linkret = gst_pad_try_set_caps (otherpad, othercaps);
        if (GST_PAD_LINK_FAILED (linkret)) {
            return GST_PAD_LINK_REFUSED;
        }
    }

    audioresample->channels = channels;
    resample_set_n_channels (audioresample->resample, audioresample->channels);
    if (pad == audioresample->srcpad) {
        audioresample->o_rate = rate;
        resample_set_output_rate (audioresample->resample, audioresample->o_rate);
        GST_DEBUG ("set o_rate to %d", rate);
    }
}

```

```

} else {
    audioresample->i_rate = rate;
    resample_set_input_rate (audioresample->resample, audioresample->i_rate);
    GST_DEBUG ("set i_rate to %d", rate);
}

return GST_PAD_LINK_OK;
}

static void gst_audioresample_init (Audioresample * audioresample)
{
    ResampleState *r;

    audioresample->sinkpad =
        gst_pad_new_from_static_template (&gst_audioresample_sink_template,
            "sink");
    gst_element_add_pad (GST_ELEMENT (audioresample), audioresample->sinkpad);
    gst_pad_set_chain_function (audioresample->sinkpad, gst_audioresample_chain);
    gst_pad_set_link_function (audioresample->sinkpad, gst_audioresample_link);
    gst_pad_set_getcaps_function (audioresample->sinkpad,
        gst_audioresample_getcaps);
    gst_pad_set_fixate_function (audioresample->sinkpad,
        gst_audioresample_fixate);

    audioresample->srcpad =
        gst_pad_new_from_static_template (&gst_audioresample_src_template, "src");

    gst_element_add_pad (GST_ELEMENT (audioresample), audioresample->srcpad);
    gst_pad_set_link_function (audioresample->srcpad, gst_audioresample_link);
    gst_pad_set_getcaps_function (audioresample->srcpad,
        gst_audioresample_getcaps);
    gst_pad_set_fixate_function (audioresample->srcpad, gst_audioresample_fixate);

    r = resample_new ();
    audioresample->resample = r;

    resample_set_filter_length (r, 64);
    resample_set_format (r, RESAMPLE_FORMAT_S16);
}

static void gst_audioresample_dispose (GObject * object)
{
    Audioresample *audioresample = GST_AUDIORESAMPLE (object);

    if (audioresample->resample) {
        resample_free (audioresample->resample);
    }
}

```



```

G_OBJECT_CLASS (parent_class)->dispose (object);
}

static void gst_audioresample_chain (GstPad * pad, GstData * _data)
{
    GstBuffer *buf = GST_BUFFER (_data);
    Audioresample *audioresample;
    ResampleState *r;
    guchar *data;
    gulong size;
    int outsize;
    GstBuffer *outbuf;

    g_return_if_fail (pad != NULL);
    g_return_if_fail (GST_IS_PAD (pad));
    g_return_if_fail (buf != NULL);

    audioresample = GST_AUDIORESAMPLE (gst_pad_get_parent (pad));

    if (!GST_IS_BUFFER (_data)) {
        gst_pad_push (audioresample->srcpad, _data);
        return;
    }

    if (audioresample->passthru) {
        gst_pad_push (audioresample->srcpad, GST_DATA (buf));
        return;
    }

    r = audioresample->resample;

    data = GST_BUFFER_DATA (buf);
    size = GST_BUFFER_SIZE (buf);

    GST_DEBUG ("got buffer of %ld bytes", size);

    resample_add_input_data (r, data, size, (ResampleCallback) gst_data_unref,
        buf);

    outsize = resample_get_output_size (r);
    /* FIXME this is audioresample being dumb. dunno why */
    if (outsize == 0) {
        GST_ERROR ("overriding outbuf size");
        outsize = size;
    }
    outbuf = gst_buffer_new_and_alloc (outsize);

    outsize = resample_get_output_data (r, GST_BUFFER_DATA (outbuf), outsize);

```

```

GST_BUFFER_SIZE (outbuf) = outsize;

GST_BUFFER_TIMESTAMP (outbuf) =
    audioresample->offset * GST_SECOND / audioresample->o_rate;
audioresample->offset += outsize / sizeof (gint16) / audioresample->channels;

gst_pad_push (audioresample->srcpad, GST_DATA (outbuf));
}

static void
gst_audioresample_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec)
{
    Audioresample *audioresample;

    g_return_if_fail (GST_IS_AUDIORESAMPLE (object));
    audioresample = GST_AUDIORESAMPLE (object);

    switch (prop_id) {
        case ARG_FILTERLEN:
            audioresample->filter_length = g_value_get_int (value);
            GST_DEBUG_OBJECT (GST_ELEMENT (audioresample), "new filter length %d\n",
                audioresample->filter_length);
            resample_set_filter_length (audioresample->resample,
                audioresample->filter_length);
            break;
        default:G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
            break;
    }
}

static void
gst_audioresample_get_property (GObject * object, guint prop_id,
    GValue * value, GParamSpec * pspec)
{
    Audioresample *audioresample;

    g_return_if_fail (GST_IS_AUDIORESAMPLE (object));
    audioresample = GST_AUDIORESAMPLE (object);

    switch (prop_id) {
        case ARG_FILTERLEN:
            g_value_set_int (value, audioresample->filter_length);
            break;
        default:
            G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
            break;
    }
}

```

```

}

static gboolean plugin_init (GstPlugin * plugin)
{
    resample_init ();

    if (!gst_element_register (plugin, "audioresample", GST_RANK_PRIMARY,
        GST_TYPE_AUDIORESAMPLE)) {
        return FALSE;
    }

    return TRUE;
}

GST_PLUGIN_DEFINE (GST_VERSION_MAJOR,
    GST_VERSION_MINOR,
    "audioresample",
    "Resamples audio", plugin_init, VERSION, "LGPL", GST_PACKAGE_NAME,
    GST_PACKAGE_ORIGIN)
/* GStreamer
 * Copyright (C) <1999> Erik Walthinsen <omega@cse.ogi.edu>
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public
 * License along with this library; if not, write to the
 * Free Software Foundation, Inc., 59 Temple Place - Suite 330,
 * Boston, MA 02111-1307, USA.
 */

#ifndef __AUDIORESAMPLE_H__
#define __AUDIORESAMPLE_H__

#include <gst/gst.h>

#include <audioresample/resample.h>

```

G\_BEGIN\_DECLS

```
#define GST_TYPE_AUDIORESAMPLE \  
  (audioresample_get_type())  
#define GST_AUDIORESAMPLE(obj) \  
  (G_TYPE_CHECK_INSTANCE_CAST((obj),GST_TYPE_AUDIORESAMPLE,Audioresample))  
#define GST_AUDIORESAMPLE_CLASS(klass) \  
  (G_TYPE_CHECK_CLASS_CAST((klass),GST_TYPE_AUDIORESAMPLE,AudioresampleClass))  
#define GST_IS_AUDIORESAMPLE(obj) \  
  (G_TYPE_CHECK_INSTANCE_TYPE((obj),GST_TYPE_AUDIORESAMPLE))  
#define GST_IS_AUDIORESAMPLE_CLASS(klass) \  
  (G_TYPE_CHECK_CLASS_TYPE((klass),GST_TYPE_AUDIORESAMPLE))
```

```
typedef struct _Audioresample Audioresample;  
typedef struct _AudioresampleClass AudioresampleClass;
```

```
struct _Audioresample {  
  GstElement element;
```

```
  GstPad *sinkpad,*srcpad;
```

```
  gboolean passthru;
```

```
  gint64 offset;  
  int channels;
```

```
  int i_rate;  
  int o_rate;  
  int filter_length;
```

```
  ResampleState * resample;  
};
```

```
struct _AudioresampleClass {  
  GstElementClass parent_class;  
};
```

```
GType gst_audioresample_get_type(void);
```

G\_END\_DECLS

```
#endif /* __AUDIORESAMPLE_H__ */  
/* GStreamer  
 * Copyright (C) <1999> Erik Walthinsen <omega@cse.ogi.edu>
```

```

* Copyright (C) <2003> David Schleefer <ds@schleefer.org>
*
* This library is free software; you can redistribute it and/or
* modify it under the terms of the GNU Library General Public
* License as published by the Free Software Foundation; either
* version 2 of the License, or (at your option) any later version.
*
* This library is distributed in the hope that it will be useful,
* but WITHOUT ANY WARRANTY; without even the implied warranty of
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
* Library General Public License for more details.
*
* You should have received a copy of the GNU Library General Public
* License along with this library; if not, write to the
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
* Boston, MA 02111-1307, USA.
*/

/*
* This file was (probably) generated from
* gstvideotemplate.c,v 1.18 2005/11/14 02:13:34 thomasvs Exp
* and
* $Id: make_filter,v 1.8 2004/04/19 22:51:57 ds Exp $
*/

#ifdef HAVE_CONFIG_H
#include "config.h"
#endif

#include <gst/gst.h>
#include <gst/base/gstbasetransform.h>
#include <gst/video/video.h>
#include <string.h>
#include <glib/glib.h>
#include <math.h>
#include <glib/glib.h>

#define GST_TYPE_COGDOWNSAMPLE \
(gst_cogdownsample_get_type())
#define GST_COGDOWNSAMPLE(obj) \
(G_TYPE_CHECK_INSTANCE_CAST((obj),GST_TYPE_COGDOWNSAMPLE,GstCogdownsample))
#define GST_COGDOWNSAMPLE_CLASS(klass) \
(G_TYPE_CHECK_CLASS_CAST((klass),GST_TYPE_COGDOWNSAMPLE,GstCogdownsampleClass))
#define GST_IS_COGDOWNSAMPLE(obj) \
(G_TYPE_CHECK_INSTANCE_TYPE((obj),GST_TYPE_COGDOWNSAMPLE))
#define GST_IS_COGDOWNSAMPLE_CLASS(klass) \
(G_TYPE_CHECK_CLASS_TYPE((klass),GST_TYPE_COGDOWNSAMPLE))

```

```

typedef struct _GstCogdownsample GstCogdownsample;
typedef struct _GstCogdownsampleClass GstCogdownsampleClass;

struct _GstCogdownsample
{
    GstBaseTransform base_transform;

};

struct _GstCogdownsampleClass
{
    GstBaseTransformClass parent_class;

};

GType gst_cogdownsample_get_type (void);

enum
{
    ARG_0
};

static void gst_cogdownsample_base_init (gpointer g_class);
static void gst_cogdownsample_class_init (gpointer g_class,
    gpointer class_data);
static void gst_cogdownsample_init (GTypeInstance * instance, gpointer g_class);

static void gst_cogdownsample_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec);
static void gst_cogdownsample_get_property (GObject * object, guint prop_id,
    GValue * value, GParamSpec * pspec);

static GstCaps *gst_cogdownsample_transform_caps (GstBaseTransform *
    base_transform, GstPadDirection direction, GstCaps * caps);
static GstFlowReturn gst_cogdownsample_transform (GstBaseTransform *
    base_transform, GstBuffer * inbuf, GstBuffer * outbuf);
static gboolean gst_cogdownsample_get_unit_size (GstBaseTransform *
    base_transform, GstCaps * caps, guint * size);

static GstStaticPadTemplate gst_cogdownsample_sink_template =
GST_STATIC_PAD_TEMPLATE ("sink",
    GST_PAD_SINK,
    GST_PAD_ALWAYS,
    GST_STATIC_CAPS (GST_VIDEO_CAPS_YUV ("{ I420, YV12, YUY2, UYVY, AYUV }")))
);

static GstStaticPadTemplate gst_cogdownsample_src_template =
GST_STATIC_PAD_TEMPLATE ("src",

```

```

GST_PAD_SRC,
GST_PAD_ALWAYS,
GST_STATIC_CAPS (GST_VIDEO_CAPS_YUV ("{ I420, YV12, YUY2, UYVY, AYUV }"))
);

GType
gst_cogdownsample_get_type (void)
{
    static GType compress_type = 0;

    if (!compress_type) {
        static const GTypeInfo compress_info = {
            sizeof (GstCogdownsampleClass),
            gst_cogdownsample_base_init,
            NULL,
            gst_cogdownsample_class_init,
            NULL,
            NULL,
            sizeof (GstCogdownsample),
            0,
            gst_cogdownsample_init,
        };

        compress_type = g_type_register_static (GST_TYPE_BASE_TRANSFORM,
            "GstCogdownsample", &compress_info, 0);
    }
    return compress_type;
}

static void
gst_cogdownsample_base_init (gpointer g_class)
{
    GstElementClass *element_class = GST_ELEMENT_CLASS (g_class);

    gst_element_class_add_pad_template (element_class,
        gst_static_pad_template_get (&gst_cogdownsample_src_template));
    gst_element_class_add_pad_template (element_class,
        gst_static_pad_template_get (&gst_cogdownsample_sink_template));

    gst_element_class_set_details_simple (element_class,
        "Scale down video by factor of 2", "Filter/Effect/Video",
        "Scales down video by a factor of 2", "David Schleef <ds@schleef.org>");
}

static void
gst_cogdownsample_class_init (gpointer g_class, gpointer class_data)

```

```

{
GObjectClass *gobject_class;
GstBaseTransformClass *base_transform_class;

gobject_class = G_OBJECT_CLASS (g_class);
base_transform_class = GST_BASE_TRANSFORM_CLASS (g_class);

gobject_class->set_property = gst_cogdownsample_set_property;
gobject_class->get_property = gst_cogdownsample_get_property;

base_transform_class->transform = gst_cogdownsample_transform;
base_transform_class->transform_caps = gst_cogdownsample_transform_caps;
base_transform_class->get_unit_size = gst_cogdownsample_get_unit_size;
}

static void
gst_cogdownsample_init (GTypeInstance * instance, gpointer g_class)
{

GST_DEBUG ("gst_cogdownsample_init");
}

static void
gst_cogdownsample_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec)
{
GstCogdownsample *src;

g_return_if_fail (GST_IS_COGDOWNSAMPLE (object));
src = GST_COGDOWNSAMPLE (object);

GST_DEBUG ("gst_cogdownsample_set_property");
switch (prop_id) {
    default:
        break;
}
}

static void
gst_cogdownsample_get_property (GObject * object, guint prop_id, GValue * value,
    GParamSpec * pspec)
{
GstCogdownsample *src;

g_return_if_fail (GST_IS_COGDOWNSAMPLE (object));
src = GST_COGDOWNSAMPLE (object);

switch (prop_id) {

```



```

default:
    G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
    break;
}
}

static void
transform_value (GValue * dest, const GValue * src, GstPadDirection dir)
{
    g_value_init (dest, G_VALUE_TYPE (src));

    if (G_VALUE HOLDS_INT (src)) {
        int x;

        x = g_value_get_int (src);
        if (dir == GST_PAD_SINK) {
            g_value_set_int (dest, x / 2);
        } else {
            g_value_set_int (dest, x * 2);
        }
    } else if (GST_VALUE HOLDS_INT_RANGE (src)) {
        int min, max;

        min = gst_value_get_int_range_min (src);
        max = gst_value_get_int_range_max (src);

        if (dir == GST_PAD_SINK) {
            min = (min + 1) / 2;
            if (max == G_MAXINT) {
                max = G_MAXINT / 2;
            } else {
                max = (max + 1) / 2;
            }
        } else {
            if (max > G_MAXINT / 2) {
                max = G_MAXINT;
            } else {
                max = max * 2;
            }
            if (min > G_MAXINT / 2) {
                min = G_MAXINT;
            } else {
                min = min * 2;
            }
        }
        gst_value_set_int_range (dest, min, max);
    } else {
        /* FIXME */
    }
}

```

```

    g_warning ("case not handled");
    g_value_set_int (dest, 100);
}
}

static GstCaps *
gst_cogdownsample_transform_caps (GstBaseTransform * base_transform,
    GstPadDirection direction, GstCaps * caps)
{
    int i;
    GstStructure *structure;
    GValue new_value = { 0 };
    const GValue *value;

    caps = gst_caps_copy (caps);

    for (i = 0; i < gst_caps_get_size (caps); i++) {
        structure = gst_caps_get_structure (caps, i);

        value = gst_structure_get_value (structure, "width");
        transform_value (&new_value, value, direction);
        gst_structure_set_value (structure, "width", &new_value);
        g_value_unset (&new_value);

        value = gst_structure_get_value (structure, "height");
        transform_value (&new_value, value, direction);
        gst_structure_set_value (structure, "height", &new_value);
        g_value_unset (&new_value);
    }

    return caps;
}

static gboolean
gst_cogdownsample_get_unit_size (GstBaseTransform * base_transform,
    GstCaps * caps, guint * size)
{
    int width, height;
    uint32_t format;

    gst_structure_get_fourcc (gst_caps_get_structure (caps, 0),
        "format", &format);
    gst_structure_get_int (gst_caps_get_structure (caps, 0), "width", &width);
    gst_structure_get_int (gst_caps_get_structure (caps, 0), "height", &height);

    switch (format) {
        case GST_MAKE_FOURCC ('I', '4', '2', '0'):
        case GST_MAKE_FOURCC ('Y', 'V', '1', '2'):

```

```

    *size = width * height * 3 / 2;
    break;
case GST_MAKE_FOURCC ('Y', 'U', 'Y', '2'):
case GST_MAKE_FOURCC ('U', 'Y', 'V', 'Y'):
    *size = width * height * 2;
    break;
case GST_MAKE_FOURCC ('A', 'Y', 'U', 'V'):
    *size = width * height * 4;
    break;
default:
    g_assert_not_reached ();
}

return TRUE;
}

static GstFlowReturn
gst_cogdownsample_transform (GstBaseTransform * base_transform,
    GstBuffer * inbuf, GstBuffer * outbuf)
{
    GstCogdownsample *compress;
    CogFrame *outframe;
    int width, height;
    uint32_t format;
    CogFrame *frame;

    g_return_val_if_fail (GST_IS_COGDOWNSAMPLE (base_transform), GST_FLOW_ERROR);
    compress = GST_COGDOWNSAMPLE (base_transform);

    gst_structure_get_fourcc (gst_caps_get_structure (inbuf->caps, 0),
        "format", &format);
    gst_structure_get_int (gst_caps_get_structure (inbuf->caps, 0),
        "width", &width);
    gst_structure_get_int (gst_caps_get_structure (inbuf->caps, 0),
        "height", &height);

    switch (format) {
    case GST_MAKE_FOURCC ('I', '4', '2', '0'):
        frame = cog_frame_new_from_data_I420 (GST_BUFFER_DATA (inbuf),
            width, height);
        outframe = cog_frame_new_from_data_I420 (GST_BUFFER_DATA (outbuf),
            width / 2, height / 2);
        break;
    case GST_MAKE_FOURCC ('Y', 'V', '1', '2'):
        frame = cog_frame_new_from_data_YV12 (GST_BUFFER_DATA (inbuf),
            width, height);
        outframe = cog_frame_new_from_data_YV12 (GST_BUFFER_DATA (outbuf),
            width / 2, height / 2);

```

```

    break;
case GST_MAKE_FOURCC ('Y', 'U', 'Y', '2'):
    frame = cog_frame_new_from_data_YUY2 (GST_BUFFER_DATA (inbuf),
        width, height);
    outframe = cog_frame_new_from_data_YUY2 (GST_BUFFER_DATA (outbuf),
        width / 2, height / 2);
    break;
case GST_MAKE_FOURCC ('U', 'Y', 'V', 'Y'):
    frame = cog_frame_new_from_data_UYVY (GST_BUFFER_DATA (inbuf),
        width, height);
    outframe = cog_frame_new_from_data_UYVY (GST_BUFFER_DATA (outbuf),
        width / 2, height / 2);
    break;
case GST_MAKE_FOURCC ('A', 'Y', 'U', 'V'):
    frame = cog_frame_new_from_data_AYUV (GST_BUFFER_DATA (inbuf),
        width, height);
    outframe = cog_frame_new_from_data_AYUV (GST_BUFFER_DATA (outbuf),
        width / 2, height / 2);
    break;
default:
    g_assert_not_reached ();
    return GST_FLOW_ERROR;
}

frame = cog_virt_frame_new_unpack (frame);
frame = cog_virt_frame_new_horiz_downsample (frame, 3);
frame = cog_virt_frame_new_vert_downsample (frame, 2);

switch (format) {
case GST_MAKE_FOURCC ('Y', 'U', 'Y', '2'):
    frame = cog_virt_frame_new_pack_YUY2 (frame);
    break;
case GST_MAKE_FOURCC ('U', 'Y', 'V', 'Y'):
    frame = cog_virt_frame_new_pack_UYVY (frame);
    break;
case GST_MAKE_FOURCC ('A', 'Y', 'U', 'V'):
    frame = cog_virt_frame_new_pack_AYUV (frame);
    break;
default:
    break;
}

cog_virt_frame_render (frame, outframe);
cog_frame_unref (frame);
cog_frame_unref (outframe);

return GST_FLOW_OK;
}

```

```

/* GStreamer mplex (mjpegtools) wrapper
* (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
* (c) 2008 Mark Nauwelaerts <mnauw@users.sourceforge.net>
*
* gstmplex.cc: gstreamer mplex wrapper
*
* This library is free software; you can redistribute it and/or
* modify it under the terms of the GNU Library General Public
* License as published by the Free Software Foundation; either
* version 2 of the License, or (at your option) any later version.
*
* This library is distributed in the hope that it will be useful,
* but WITHOUT ANY WARRANTY; without even the implied warranty of
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
* Library General Public License for more details.
*
* You should have received a copy of the GNU Library General Public
* License along with this library; if not, write to the
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
* Boston, MA 02111-1307, USA.
*/

/**
* SECTION:element-mplex
* @see_also: mpeg2enc
*
* This element is an audio/video multiplexer for MPEG-1/2 video streams
* and (un)compressed audio streams such as AC3, MPEG layer I/II/III.
* It is based on the <ulink url="http://mjpeg.sourceforge.net/">mjpegtools</ulink> library.
* Documentation on creating MPEG videos in general can be found in the
* <ulink url="https://sourceforge.net/docman/display_doc.php?docid=3456&group_id=5776">MJPEG
Howto</ulink>
* and the man-page of the mplex tool documents the properties of this element,
* which are shared with the mplex tool.
*
* <refsect2>
* <title>Example pipeline</title>
* ||
* gst-launch -v videotestsrc num-buffers=1000 ! mpeg2enc ! mplex ! filesink location=videotestsrc.mpg
* || This example pipeline will encode a test video source to an
* MPEG1 elementary stream and multiplexes this to an MPEG system stream.
* <para>
* If several streams are being multiplexed, there should (as usual) be
* a queue in each stream, and due to mplex' buffering the capacities of these
* may have to be set to a few times the default settings to prevent the
* pipeline stalling.
* </para>
* </refsect2>

```

```

*/

#ifdef HAVE_CONFIG_H
#include "config.h"
#endif

#include <string.h>

#include "gstmux.h"
#include "gstmuxoutputstream.h"
#include "gstmuxibitstream.h"
#include "gstmuxjob.h"

GST_DEBUG_CATEGORY (mux_debug);

static GstStaticPadTemplate src_tmpl = GST_STATIC_PAD_TEMPLATE ("src",
    GST_PAD_SRC,
    GST_PAD_ALWAYS,
    GST_STATIC_CAPS ("video/mpeg, systemstream = (boolean) true ")
);

static GstStaticPadTemplate video_sink_tmpl =
GST_STATIC_PAD_TEMPLATE ("video_%d",
    GST_PAD_SINK,
    GST_PAD_REQUEST,
    GST_STATIC_CAPS ("video/mpeg, "
        "mpegversion = (int) { 1, 2 }, "
        "systemstream = (boolean) false, "
        "width = (int) [ 16, 4096 ], "
        "height = (int) [ 16, 4096 ], framerate = (fraction) [ 0, MAX ]")
);

#define COMMON_AUDIO_CAPS \
"channels = (int) [ 1, 8 ], " \
"rate = (int) [ 8000, 96000 ]"

static GstStaticPadTemplate audio_sink_tmpl =
    GST_STATIC_PAD_TEMPLATE ("audio_%d",
    GST_PAD_SINK,
    GST_PAD_REQUEST,
    GST_STATIC_CAPS ("audio/mpeg, "
        "mpegversion = (int) 1, "
        "layer = (int) [ 1, 3 ], "
        COMMON_AUDIO_CAPS "; "
        "audio/x-ac3, "
        COMMON_AUDIO_CAPS "; "
        "audio/x-dts; "
        "audio/x-raw-int, "

```

```

        "endianness = (int) BIG_ENDIAN, "
        "signed = (boolean) TRUE, "
        "width = (int) { 16, 20, 24 }, "
        "depth = (int) { 16, 20, 24 }, "
        "rate = (int) { 48000, 96000 }, " "channels = (int) [ 1, 6 ]")
    );

/* FIXME: subtitles */

static void gst_muxer_finalize (GObject * object);
static void gst_muxer_reset (GstMuxer * muxer);
static void gst_muxer_loop (GstMuxer * muxer);
static GstPad *gst_muxer_request_new_pad (GstElement * element,
    GstPadTemplate * templ, const gchar * name);
static void gst_muxer_release_pad (GstElement * element, GstPad * pad);
static gboolean gst_muxer_src_activate_push (GstPad * pad, gboolean active);
static GstStateChangeReturn gst_muxer_change_state (GstElement * element,
    GstStateChange transition);

static void gst_muxer_get_property (GObject * object,
    guint prop_id, GValue * value, GParamSpec * pspec);
static void gst_muxer_set_property (GObject * object,
    guint prop_id, const GValue * value, GParamSpec * pspec);

GST_BOILERPLATE (GstMuxer, gst_muxer, GstElement, GST_TYPE_ELEMENT);

static void
gst_muxer_base_init (gpointer klass)
{
    GstElementClass *element_class = GST_ELEMENT_CLASS (klass);

    gst_element_class_set_details_simple (element_class,
        "muxer video multiplexer", "Codec/Muxer",
        "High-quality MPEG/DVD/SVCD/VCD video/audio multiplexer",
        "Andrew Stevens <andrew.stevens@nexgo.de>\n"
        "Ronald Bultje <rbultje@ronald.bitfreak.net>\n"
        "Mark Nauwelaerts <mnauw@users.sourceforge.net>");

    gst_element_class_add_pad_template (element_class,
        gst_static_pad_template_get (&src_tmpl));
    gst_element_class_add_pad_template (element_class,
        gst_static_pad_template_get (&video_sink_tmpl));
    gst_element_class_add_pad_template (element_class,
        gst_static_pad_template_get (&audio_sink_tmpl));
}

static void
gst_muxer_class_init (GstMuxerClass * klass)

```

```

{
GObjectClass *object_class = G_OBJECT_CLASS (klass);
GstElementClass *element_class = GST_ELEMENT_CLASS (klass);

GST_DEBUG_CATEGORY_INIT (mplex_debug, "mplex", 0, "MPEG video/audio muxer");

object_class->set_property = gst_mplex_set_property;
object_class->get_property = gst_mplex_get_property;

/* register properties */
GstMplexJob::initProperties (object_class);

object_class->finalize = GST_DEBUG_FUNCPtr (gst_mplex_finalize);

element_class->change_state = GST_DEBUG_FUNCPtr (gst_mplex_change_state);
element_class->request_new_pad =
    GST_DEBUG_FUNCPtr (gst_mplex_request_new_pad);
element_class->release_pad = GST_DEBUG_FUNCPtr (gst_mplex_release_pad);
}

static void
gst_mplex_finalize (GObject * object)
{
    GstMplex *mplex = GST_MPLEX (object);
    GSList *walk;

    /* release all pads */
    walk = mplex->pads;
    while (walk) {
        GstMplexPad *mpad = (GstMplexPad *) walk->data;

        gst_object_unref (mpad->pad);
        mpad->pad = NULL;
        walk = walk->next;
    }

    /* clean up what's left of them */
    gst_mplex_reset (mplex);

    /* ... and of the rest */
    delete mplex->job;

    g_mutex_free (mplex->tlock);

    G_OBJECT_CLASS (parent_class)->finalize (object);
}

static void

```



```

gst_mux_init (GstMux * mux, GstMuxClass * g_class)
{
    GstElement *element = GST_ELEMENT (mux);
    GstElementClass *element_class = GST_ELEMENT_CLASS (g_class);

    mux->srcpad =
        gst_pad_new_from_template (gst_element_class_get_pad_template
            (element_class, "src"), "src");
    gst_element_add_pad (element, mux->srcpad);
    gst_pad_use_fixed_caps (mux->srcpad);
    gst_pad_set_activatepush_function (mux->srcpad,
        GST_DEBUG_FUNCPTR (gst_mux_src_activate_push));

    mux->job = new GstMuxJob ();
    mux->num_apads = 0;
    mux->num_vpads = 0;

    mux->tlock = g_mutex_new ();

    gst_mux_reset (mux);
}

static void
gst_mux_reset (GstMux * mux)
{
    GSList *walk;
    GSList *nlist = NULL;

    mux->eos = FALSE;
    mux->srcresult = GST_FLOW_CUSTOM_SUCCESS;

    /* reset existing streams */
    walk = mux->pads;
    while (walk != NULL) {
        GstMuxPad *mpad;

        mpad = (GstMuxPad *) walk->data;

        mpad->needed = 0;
        mpad->eos = FALSE;
        gst_adapter_clear (mpad->adapter);
        if (mpad->bs) {
            delete mpad->bs;

            mpad->bs = NULL;
        }

        if (!mpad->pad) {

```

```

    g_cond_free (mpad->cond);
    g_object_unref (mpad->adapter);
    g_free (mpad);
} else
    nlist = g_slist_append (nlist, mpad);

walk = walk->next;
}

g_slist_free (mplex->pads);
mplex->pads = nlist;

/* clear mplex stuff */
/* clean up stream settings */
while (!mplex->job->streams.empty ()) {
    delete mplex->job->streams.back ();

    mplex->job->streams.pop_back ();
}
while (!mplex->job->video_param.empty ()) {
    delete mplex->job->video_param.back ();

    mplex->job->video_param.pop_back ();
}
while (!mplex->job->lpcm_param.empty ()) {
    delete mplex->job->lpcm_param.back ();

    mplex->job->lpcm_param.pop_back ();
}
}
mplex->job->audio_tracks = 0;
mplex->job->video_tracks = 0;
mplex->job->lpcm_tracks = 0;
}

static gboolean
gst_muxer_setcaps (GstPad * pad, GstCaps * caps)
{
    GstMplex *mplex;
    const gchar *mime;
    GstStructure *structure;
    StreamKind type;
    JobStream *jobstream;
    GstMplexIBitStream *inputstream;
    GstMplexPad *mpad;
    GstCaps *othercaps;
    gboolean ret = TRUE;

    mplex = GST_MPLEX (GST_PAD_PARENT (pad));

```

```

/* does not go well to negotiate when started */
if (mplex->srcresult != GST_FLOW_CUSTOM_SUCCESS)
    goto refuse_renegotiation;

/* since muxer does not really check much ... */
othercaps = gst_caps_intersect (caps, gst_pad_get_pad_template_caps (pad));
if (othercaps)
    gst_caps_unref (othercaps);
else
    goto refuse_caps;

/* set the fixed template caps on the srcpad, should accept without objection */
othercaps = gst_caps_copy (gst_pad_get_pad_template_caps (mplex->srcpad));
ret = gst_pad_set_caps (mplex->srcpad, othercaps);
gst_caps_unref (othercaps);
if (!ret)
    goto refuse_caps;

structure = gst_caps_get_structure (caps, 0);
mime = gst_structure_get_name (structure);

if (!strcmp (mime, "video/mpeg")) { /* video */
    VideoParams *params;

    type = MPEG_VIDEO;
    if (mplex->job->bufsize)
        params = VideoParams::Checked (mplex->job->bufsize);
    else
        params = VideoParams::Default (mplex->job->mux_format);
    /* set standard values if forced by the selected profile */
    if (params->Force (mplex->job->mux_format))
        GST_WARNING_OBJECT (mplex,
            "overriding non-standard option due to selected profile");

    mplex->job->video_param.push_back (params);
    mplex->job->video_tracks++;
} else { /* audio */
    if (!strcmp (mime, "audio/mpeg")) {
        type = MPEG_AUDIO;
    } else if (!strcmp (mime, "audio/x-ac3")) {
        type = AC3_AUDIO;
    } else if (!strcmp (mime, "audio/x-dts")) {
        type = DTS_AUDIO;
    } else if (!strcmp (mime, "audio/x-raw-int")) {
        LpcmParams *params;
        gint bits, chans, rate;
        gboolean result = TRUE;

```

```

type = LPCM_AUDIO;

/* set LPCM params */
result &= gst_structure_get_int (structure, "depth", &bits);
result &= gst_structure_get_int (structure, "rate", &rate);
result &= gst_structure_get_int (structure, "channels", &chans);
if (!result)
    goto refuse_caps;

params = LpcmParams::Checked (rate, chans, bits);

mplex->job->lpcm_param.push_back (params);
mplex->job->lpcm_tracks++;
} else
    goto refuse_caps;

mplex->job->audio_tracks++;
}

mpad = (GstMplexPad *) gst_pad_get_element_private (pad);
g_return_val_if_fail (mpad, FALSE);
inputstream = new GstMplexIBitStream (mpad);
mpad->bs = inputstream;
jobstream = new JobStream (inputstream, type);
mplex->job->streams.push_back (jobstream);

return TRUE;

refuse_caps:
{
    GST_WARNING_OBJECT (mplex, "refused caps %" GST_PTR_FORMAT, caps);

    /* undo if we were a bit too fast/confident */
    if (GST_PAD_CAPS (mplex->srcpad))
        gst_pad_set_caps (mplex->srcpad, NULL);

    return FALSE;
}

refuse_renegotiation:
{
    GST_WARNING_OBJECT (mplex, "already started; "
        "refused (re)negotiation (to %" GST_PTR_FORMAT ")", caps);

    return FALSE;
}
}
}

```

```

static void
gst_mux_loop (GstMplex * mplex)
{
    GstMplexOutputStream *out = NULL;
    Multiplexor *mux = NULL;
    GSList *walk;

    /* do not try to resume muxing after it finished
     * this can be relevant mainly/only in case of forced state change */
    if (mplex->eos)
        goto eos;

    /* inform downstream about what's coming */
    gst_pad_push_event (mplex->srcpad, gst_event_new_new_segment (FALSE, 1.0,
        GST_FORMAT_BYTES, 0, -1, 0));

    /* hm (!) each inputstream really needs an initial read
     * so that all is internally in the proper state */
    walk = mplex->pads;
    while (walk != NULL) {
        GstMplexPad *mpad;

        mpad = (GstMplexPad *) walk->data;
        mpad->bs->ReadBuffer ();

        walk = walk->next;
    }

    /* create new multiplexer with inputs/output */
    out = new GstMplexOutputStream (mplex, mplex->srcpad);
    #if GST_MJPEGTOOLS_API >= 10900
        mux = new Multiplexor (*mplex->job, *out, NULL);
    #else
        mux = new Multiplexor (*mplex->job, *out);
    #endif

    if (mux) {
        mux->Multiplex ();
        delete mux;
        delete out;
    }

    /* if not well and truly eos, something strange happened */
    if (!mplex->eos) {
        GST_ERROR_OBJECT (mplex, "muxing task ended without being eos");
        /* notify there is no point in collecting any more */
        GST_MPLEX_MUTEX_LOCK (mplex);
        mplex->srcresult = GST_FLOW_ERROR;
        GST_MPLEX_SIGNAL_ALL (mplex);
    }
}

```

```

    GST_MPLEX_MUTEX_UNLOCK (mplex);
} else
    goto eos;
} else {
    GST_WARNING_OBJECT (mplex, "failed to create Multiplexor");
}

/* fall-through */
done:
{
    /* no need to run wildly, stopped elsewhere, e.g. state change */
    GST_DEBUG_OBJECT (mplex, "pausing muxing task");
    gst_pad_pause_task (mplex->srcpad);

    return;
}
eos:
{
    GST_DEBUG_OBJECT (mplex, "encoding task reached eos");
    goto done;
}
}

static gboolean
gst_mux_sink_event (GstPad * sinkpad, GstEvent * event)
{
    GstMplex *mplex;
    GstMplexPad *mpad;
    gboolean result = TRUE;

    mplex = (GstMplex *) (GST_PAD_PARENT (sinkpad));
    mpad = (GstMplexPad *) gst_pad_get_element_private (sinkpad);
    g_return_val_if_fail (mpad, FALSE);

    switch (GST_EVENT_TYPE (event)) {
    case GST_EVENT_FLUSH_START:
        /* forward event */
        gst_pad_event_default (sinkpad, event);

        /* now unblock the chain function */
        GST_MPLEX_MUTEX_LOCK (mplex);
        mplex->srcresult = GST_FLOW_WRONG_STATE;
        GST_MPLEX_SIGNAL (mplex, mpad);
        GST_MPLEX_MUTEX_UNLOCK (mplex);
        /* no way to pause/restart loop task */
        goto done;
    case GST_EVENT_FLUSH_STOP:
        /* forward event */

```

```

gst_pad_event_default (sinkpad, event);

/* clear state and resume */
GST_MPLEX_MUTEX_LOCK (mplex);
gst_adapter_clear (mpad->adapter);
mplex->srcresult = GST_FLOW_OK;
GST_MPLEX_MUTEX_UNLOCK (mplex);
goto done;
case GST_EVENT_NEWSEGMENT:
/* eat segments; we make our own (byte)stream */
gst_event_unref (event);
goto done;
case GST_EVENT_EOS:
/* inform this pad that it can stop now */
GST_MPLEX_MUTEX_LOCK (mplex);
mpad->eos = TRUE;
GST_MPLEX_SIGNAL (mplex, mpad);
GST_MPLEX_MUTEX_UNLOCK (mplex);

/* eat this event for now, task will send eos when finished */
gst_event_unref (event);
goto done;
default:
/* for a serialized event, wait until earlier data is gone,
 * though this is no guarantee as to when task is done with it.
 * Only wait if loop has been started already */
if (GST_EVENT_IS_SERIALIZED (event)) {
GST_MPLEX_MUTEX_LOCK (mplex);
while (mplex->srcresult == GST_FLOW_OK && !mpad->needed)
GST_MPLEX_WAIT (mplex, mpad);
GST_MPLEX_MUTEX_UNLOCK (mplex);
}
break;
}

result = gst_pad_event_default (sinkpad, event);

done:
return result;
}

/* starts task if conditions are right for it
 * must be called with mutex_lock held */
static void
gst_mplex_start_task (GstMplex * mplex)
{
/* start task to create multiplexor and start muxing */
if (G_UNLIKELY (mplex->srcresult == GST_FLOW_CUSTOM_SUCCESS))

```

```

    && mplex->job->video_tracks == mplex->num_vpads
    && mplex->job->audio_tracks == mplex->num_apads) {
gst_pad_start_task (mplex->srcpad, (GstTaskFunction) gst_mux_loop, mplex);
mplex->srcresult = GST_FLOW_OK;
}
}

```

```

static GstFlowReturn

```

```

gst_mux_chain (GstPad * sinkpad, GstBuffer * buffer)

```

```

{

```

```

    GstMux *mux;

```

```

    GstMuxPad *mpad;

```

```

    mux = (GstMux *) (GST_PAD_PARENT (sinkpad));

```

```

    mpad = (GstMuxPad *) gst_pad_get_element_private (sinkpad);

```

```

    g_return_val_if_fail (mpad, GST_FLOW_ERROR);

```

```

    /* check if pad were properly negotiated and set up */

```

```

    if (G_UNLIKELY (!mpad->bs)) {

```

```

        GST_ELEMENT_ERROR (mux, CORE, NEGOTIATION, (NULL),
            ("input pad has not been set up prior to chain function"));

```

```

        return GST_FLOW_NOT_NEGOTIATED;

```

```

    }

```

```

    GST_MUX_MUTEX_LOCK (mux);

```

```

    gst_mux_start_task (mux);

```

```

    if (G_UNLIKELY (mpad->eos))

```

```

        goto eos;

```

```

    if (G_UNLIKELY (mux->srcresult != GST_FLOW_OK))

```

```

        goto ignore;

```

```

    gst_adapter_push (mpad->adapter, buffer);

```

```

    buffer = NULL;

```

```

    while (gst_adapter_available (mpad->adapter) >= mpad->needed) {

```

```

        GST_MUX_SIGNAL (mux, mpad);

```

```

        GST_MUX_WAIT (mux, mpad);

```

```

        /* may have become flushing or in error */

```

```

        if (G_UNLIKELY (mux->srcresult != GST_FLOW_OK))

```

```

            goto ignore;

```

```

        /* or been removed */

```

```

        if (G_UNLIKELY (mpad->eos))

```

```

            goto eos;

```

```

    }

```

```

    GST_MUX_MUTEX_UNLOCK (mux);

```



```

return GST_FLOW_OK;

/* special cases */
eos:
{
    GST_DEBUG_OBJECT (mplex, "ignoring buffer at end-of-stream");
    GST_MPLEX_MUTEX_UNLOCK (mplex);

    gst_buffer_unref (buffer);
    return GST_FLOW_UNEXPECTED;
}
ignore:
{
    GstFlowReturn ret = mplex->srcresult;

    GST_DEBUG_OBJECT (mplex, "ignoring buffer because src task encountered %s",
        gst_flow_get_name (ret));
    GST_MPLEX_MUTEX_UNLOCK (mplex);

    if (buffer)
        gst_buffer_unref (buffer);
    return ret;
}
}

static GstPad *
gst_mux_request_new_pad (GstElement * element,
    GstPadTemplate * templ, const gchar * name)
{
    GstElementClass *klass = GST_ELEMENT_GET_CLASS (element);
    GstMplex *mplex = GST_MPLEX (element);
    gchar *padname;
    GstPad *newpad;
    GstMplexPad *mpad;

    if (templ == gst_element_class_get_pad_template (klass, "audio_%d")) {
        GST_DEBUG_OBJECT (mplex, "request pad audio %d", mplex->num_apads);
        padname = g_strdup_printf ("audio_%d", mplex->num_apads++);
    } else if (templ == gst_element_class_get_pad_template (klass, "video_%d")) {
        GST_DEBUG_OBJECT (mplex, "request pad video %d", mplex->num_vpads);
        padname = g_strdup_printf ("video_%d", mplex->num_vpads++);
    } else {
        GST_WARNING_OBJECT (mplex, "This is not our template!");
        return NULL;
    }

    newpad = gst_pad_new_from_template (templ, padname);

```

```

g_free (padname);

mpad = g_new0 (GstMplexPad, 1);
mpad->adapter = gst_adapter_new ();
mpad->cond = g_cond_new ();
gst_object_ref (newpad);
mpad->pad = newpad;

gst_pad_set_setcaps_function (newpad, GST_DEBUG_FUNCPTR (gst_mplex_setcaps));
gst_pad_set_chain_function (newpad, GST_DEBUG_FUNCPTR (gst_mplex_chain));
gst_pad_set_event_function (newpad, GST_DEBUG_FUNCPTR (gst_mplex_sink_event));
gst_pad_set_element_private (newpad, mpad);
gst_element_add_pad (element, newpad);
mplex->pads = g_slist_append (mplex->pads, mpad);

return newpad;
}

static void
gst_mplex_release_pad (GstElement * element, GstPad * pad)
{
    GstMplex *mplex = GST_MPLEX (element);
    GstMplexPad *mpad;

    g_return_if_fail (pad);
    mpad = (GstMplexPad *) gst_pad_get_element_private (pad);
    g_return_if_fail (mpad);

    if (gst_element_remove_pad (element, pad)) {
        gchar *padname;

        GST_MPLEX_MUTEX_LOCK (mplex);
        mpad->eos = TRUE;
        gst_object_unref (mpad->pad);
        mpad->pad = NULL;
        /* wake up if waiting on this pad */
        GST_MPLEX_SIGNAL (mplex, mpad);

        padname = gst_object_get_name (GST_OBJECT (pad));
        if (strstr (padname, "audio")) {
            mplex->num_apads--;
        } else {
            mplex->num_vpads--;
        }
        g_free (padname);

        /* may now be up to us to get things going */
        gst_mplex_start_task (mplex);
    }
}

```

```

    GST_MPLEX_MUTEX_UNLOCK (mplex);
}
}

static void
gst_mplex_get_property (GObject * object,
    guint prop_id, GValue * value, GParamSpec * pspec)
{
    GST_MPLEX (object)->job->getProperty (prop_id, value);
}

static void
gst_mplex_set_property (GObject * object,
    guint prop_id, const GValue * value, GParamSpec * pspec)
{
    GST_MPLEX (object)->job->setProperty (prop_id, value);
}

static gboolean
gst_mplex_src_activate_push (GstPad * pad, gboolean active)
{
    gboolean result = TRUE;
    GstMplex *mplex;

    mplex = GST_MPLEX (GST_PAD_PARENT (pad));

    if (active) {
        /* chain will start task once all streams have been setup */
    } else {
        /* end the muxing loop by forcing eos and unblock chains */
        GST_MPLEX_MUTEX_LOCK (mplex);
        mplex->eos = TRUE;
        mplex->srcresult = GST_FLOW_WRONG_STATE;
        GST_MPLEX_SIGNAL_ALL (mplex);
        GST_MPLEX_MUTEX_UNLOCK (mplex);

        /* muxing loop should have ended now and can be joined */
        result = gst_pad_stop_task (pad);
    }

    return result;
}

static GstStateChangeReturn
gst_mplex_change_state (GstElement * element, GstStateChange transition)
{
    GstMplex *mplex = GST_MPLEX (element);
    GstStateChangeReturn ret;

```

```

switch (transition) {
    case GST_STATE_CHANGE_NULL_TO_READY:
        break;
    case GST_STATE_CHANGE_READY_TO_PAUSED:
        break;
    case GST_STATE_CHANGE_PAUSED_TO_PLAYING:
        break;
    default:
        break;
}

ret = GST_ELEMENT_CLASS (parent_class)->change_state (element, transition);
if (ret == GST_STATE_CHANGE_FAILURE)
    goto done;

switch (transition) {
    case GST_STATE_CHANGE_PAUSED_TO_READY:
        gst_mux_reset (mux);
        break;
    default:
        break;
}

done:
return ret;
}

#ifdef GST_DISABLE_GST_DEBUG

static mjpeg_log_handler_t old_handler = NULL;

/* note that this will affect all mjpegtools elements/threads */
static void
gst_mux_log_callback (log_level_t level, const char *message)
{
    GstDebugLevel gst_level;

#ifdef GST_MJPEGTOOLS_API >= 10900
    static const gint mjpeg_log_error = mjpeg_loglev_t ("error");
    static const gint mjpeg_log_warn = mjpeg_loglev_t ("warn");
    static const gint mjpeg_log_info = mjpeg_loglev_t ("info");
    static const gint mjpeg_log_debug = mjpeg_loglev_t ("debug");
#else
    static const gint mjpeg_log_error = LOG_ERROR;
    static const gint mjpeg_log_warn = LOG_WARN;
    static const gint mjpeg_log_info = LOG_INFO;
    static const gint mjpeg_log_debug = LOG_DEBUG;
#endif
}

```

```

#endif

if (level == mjpeg_log_error) {
    gst_level = GST_LEVEL_ERROR;
} else if (level == mjpeg_log_warn) {
    gst_level = GST_LEVEL_WARNING;
} else if (level == mjpeg_log_info) {
    gst_level = GST_LEVEL_INFO;
} else if (level == mjpeg_log_debug) {
    gst_level = GST_LEVEL_DEBUG;
} else {
    gst_level = GST_LEVEL_INFO;
}

/* message could have a % in it, do not segfault in such case */
gst_debug_log (mplex_debug, gst_level, "", "", 0, NULL, "%s", message);

/* chain up to the old handler;
 * this could actually be a handler from another mjpegtools based
 * gstreamer element; in which case messages can come out double or from
 * the wrong element ... */
old_handler (level, message);
}
#endif

static gboolean
plugin_init (GstPlugin * plugin)
{
#ifdef GST_DISABLE_GST_DEBUG
    old_handler = mjpeg_log_set_handler (gst_mplex_log_callback);
    g_assert (old_handler != NULL);
#endif
/* in any case, we do not want default handler output */
mjpeg_default_handler_verbosity (0);

return gst_element_register (plugin, "mplex", GST_RANK_NONE, GST_TYPE_MPLEX);
}

GST_PLUGIN_DEFINE (GST_VERSION_MAJOR,
    GST_VERSION_MINOR,
    "mplex",
    "High-quality MPEG/DVD/SVCD/VCD video/audio multiplexer",
    plugin_init, VERSION, "GPL", GST_PACKAGE_NAME, GST_PACKAGE_ORIGIN)
/* GStreamer mplex (mjpegtools) wrapper
 * (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
 *
 * gstmplex.hh: gstreamer mplex wrapper
 *

```

\* This library is free software; you can redistribute it and/or  
 \* modify it under the terms of the GNU Library General Public  
 \* License as published by the Free Software Foundation; either  
 \* version 2 of the License, or (at your option) any later version.  
 \*  
 \* This library is distributed in the hope that it will be useful,  
 \* but WITHOUT ANY WARRANTY; without even the implied warranty of  
 \* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU  
 \* Library General Public License for more details.  
 \*  
 \* You should have received a copy of the GNU Library General Public  
 \* License along with this library; if not, write to the  
 \* Free Software Foundation, Inc., 59 Temple Place - Suite 330,  
 \* Boston, MA 02111-1307, USA.  
 \*/

```
#ifndef __GST_MPLEX_H__
#define __GST_MPLEX_H__
```

```
#include <gst/gst.h>
#include <gst/base/gstadapter.h>
#include <multiplexor.hpp>
#include "gstmplexibitstream.hh"
#include "gstmplexjob.hh"
```

```
G_BEGIN_DECLS
```

```
#define GST_TYPE_MPLEX \
(gst_mplex_get_type ())
#define GST_MPLEX(obj) \
(G_TYPE_CHECK_INSTANCE_CAST ((obj), GST_TYPE_MPLEX, GstMplex))
#define GST_MPLEX_CLASS(klass) \
(G_TYPE_CHECK_CLASS_CAST ((klass), GST_TYPE_MPLEX, GstMplex))
#define GST_IS_MPLEX(obj) \
(G_TYPE_CHECK_INSTANCE_TYPE ((obj), GST_TYPE_MPLEX))
#define GST_IS_MPLEX_CLASS(obj) \
(G_TYPE_CHECK_CLASS_TYPE ((klass), GST_TYPE_MPLEX))
```

```
GST_DEBUG_CATEGORY_EXTERN (mplex_debug);
#define GST_CAT_DEFAULT mplex_debug
```

```
#define GST_MPLEX_MUTEX_LOCK(m) G_STMT_START { \
GST_LOG_OBJECT (m, "locking tlock from thread %p", g_thread_self ()); \
g_mutex_lock ((m)->tlock); \
GST_LOG_OBJECT (m, "locked tlock from thread %p", g_thread_self ()); \
} G_STMT_END
```

```
#define GST_MPLEX_MUTEX_UNLOCK(m) G_STMT_START { \
```

```

GST_LOG_OBJECT (m, "unlocking tlock from thread %p", g_thread_self ()); \
g_mutex_unlock ((m)->tlock); \
} G_STMT_END

#define GST_MPLEX_WAIT(m, p) G_STMT_START { \
GST_LOG_OBJECT (m, "thread %p waiting", g_thread_self ()); \
g_cond_wait ((p)->cond, (m)->tlock); \
} G_STMT_END

#define GST_MPLEX_SIGNAL(m, p) G_STMT_START { \
GST_LOG_OBJECT (m, "signalling from thread %p", g_thread_self ()); \
g_cond_signal ((p)->cond); \
} G_STMT_END

#define GST_MPLEX_SIGNAL_ALL(m) G_STMT_START { \
GST_LOG_OBJECT (m, "signalling all from thread %p", g_thread_self ()); \
GSList *walk = m->pads; \
while (walk) { \
GST_MPLEX_SIGNAL (m, (GstMplexPad *) walk->data); \
walk = walk->next; \
} \
} G_STMT_END

typedef struct _GstMplexPad
{
/* associated pad */
GstPad *pad;
/* with mplex TLOCK */
/* adapter collecting buffers for this pad */
GstAdapter *adapter;
/* no more to expect on this pad */
gboolean eos;
/* signals counterpart thread to have a look */
GCond *cond;
/* amount needed by mplex on this stream */
guint needed;
/* bitstream for this pad */
GstMplexIBitStream *bs;
} GstMplexPad;

typedef struct _GstMplex {
GstElement parent;

/* pads */
GSList *pads;
GstPad *srcpad;
guint num_apads, num_vpads;

```

```

/* options wrapper */
GstMplexJob *job;

/* lock for syncing */
GMutex *tlock;
/* with TLOCK */
/* muxer writer generated eos */
gboolean eos;
/* flowreturn obtained by muxer task */
GstFlowReturn srcresult;
} GstMplex;

typedef struct _GstMplexClass {
    GstElementClass parent;
} GstMplexClass;

GType gst_muxer_get_type (void);

G_END_DECLS

#endif /* __GST_MPLEX_H__ */
/* GStreamer mplex (mjpegtools) wrapper
* (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
* (c) 2008 Mark Nauwelaerts <mnauw@users.sourceforge.net>
*
* gstmplexibitstream.hh: gstreamer/mplex input bitstream wrapper
*
* This library is free software; you can redistribute it and/or
* modify it under the terms of the GNU Library General Public
* License as published by the Free Software Foundation; either
* version 2 of the License, or (at your option) any later version.
*
* This library is distributed in the hope that it will be useful,
* but WITHOUT ANY WARRANTY; without even the implied warranty of
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
* Library General Public License for more details.
*
* You should have received a copy of the GNU Library General Public
* License along with this library; if not, write to the
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
* Boston, MA 02111-1307, USA.
*/

#ifdef HAVE_CONFIG_H
#include "config.h"
#endif

#include <string.h>

```



```

#include "gstmux.h"
#include "gstmuxibitstream.h"

/*
 * Class init/exit functions.
 */

GstMuxIBitStream::GstMuxIBitStream (GstMuxPad * _data, guint buf_size):
IBitStream ()
{
    mpad = _data;
    mux = GST_MUX (GST_PAD_PARENT (mpad->pad));
    eos = FALSE;

    SetBufSize (buf_size);
    eobs = false;
    byteidx = 0;
}

/*
 * Read data.
 */

size_t
GstMuxIBitStream::ReadStreamBytes (uint8_t * buf, size_t size =
    BUFFER_SIZE)
{
    guint8 *data;

    GST_MUX_MUTEX_LOCK (mux);

    GST_DEBUG_OBJECT (mux, "needing %d bytes", (guint) size);

    while (gst_adapter_available (mpad->adapter) < size
        && !mux->eos && !mpad->eos) {
        mpad->needed = size;
        GST_MUX_SIGNAL (mux, mpad);
        GST_MUX_WAIT (mux, mpad);
    }

    mpad->needed = 0;
    size = MIN (size, gst_adapter_available (mpad->adapter));
    if (size) {
        data = gst_adapter_take (mpad->adapter, size);
        memcpy (buf, data, size);
        g_free (data);
    }
}

```

```

GST_MPLEX_MUTEX_UNLOCK (mplex);

return size;
}

/*
 * Are we at EOS?
 */

bool GstMplexIBitStream::EndOfStream (void)
{
return eos;
}

bool GstMplexIBitStream::ReadBuffer ()
{
return ReadIntoBuffer (BUFFER_SIZE);
}
/* GStreamer mplex (mjpegtools) wrapper
 * (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
 * (c) 2008 Mark Nauwelaerts <mnauw@users.sourceforge.net>
 *
 * gstmplexibitstream.hh: gstreamer/mplex input bitstream wrapper
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public
 * License along with this library; if not, write to the
 * Free Software Foundation, Inc., 59 Temple Place - Suite 330,
 * Boston, MA 02111-1307, USA.
 */

#ifndef __GST_MPLEXIBITSTREAM_H__
#define __GST_MPLEXIBITSTREAM_H__

#include <gst/gst.h>
#include <mjpeg_types.h>
#include <bits.hpp>

```

```

#include "gstmux.h"

/* forward declaration; break circular referencing */
typedef struct _GstMux GstMux;
typedef struct _GstMuxPad GstMuxPad;

class GstMuxIBitStream : public IBitStream {
public:
    GstMuxIBitStream (GstMuxPad *pad, guint buf_size = BUFFER_SIZE);
    bool ReadBuffer ();

protected:
    /* read data */
    size_t ReadStreamBytes (uint8_t *buf, size_t number);

    /* are we at EOS? */
    bool EndOfStream (void);

private:
    GstMux *mux;
    GstMuxPad *mpad;
    gboolean eos;
};

#endif /* __GST_MUXIBITSTREAM_H__ */
/* GStreamer mux (mjpegtools) wrapper
* (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
*
* gstmuxjob.hh: gstreamer/mux multiplex-job wrapper
*
* This library is free software; you can redistribute it and/or
* modify it under the terms of the GNU Library General Public
* License as published by the Free Software Foundation; either
* version 2 of the License, or (at your option) any later version.
*
* This library is distributed in the hope that it will be useful,
* but WITHOUT ANY WARRANTY; without even the implied warranty of
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
* Library General Public License for more details.
*
* You should have received a copy of the GNU Library General Public
* License along with this library; if not, write to the
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
* Boston, MA 02111-1307, USA.
*/

#ifdef HAVE_CONFIG_H
#include "config.h"

```

```

#endif

#include "gstmplexjob.hh"

enum
{
  ARG_0,
  ARG_FORMAT,
  ARG_MUX_BITRATE,
  ARG_VBR,
  ARG_SYSTEM_HEADERS,
  ARG_SPLIT_SEQUENCE,
  ARG_SEGMENT_SIZE,
  ARG_PACKETS_PER_PACK,
  ARG_SECTOR_SIZE,
  ARG_BUFSIZE
  /* FILL ME */
};

/*
 * Property enumeration types.
 */

#define GST_TYPE_MPLEX_FORMAT \
(gst_mplex_format_get_type ())

static GType
gst_mplex_format_get_type (void)
{
  static GType mplex_format_type = 0;

  if (!mplex_format_type) {
    static const GEnumValue mplex_formats[] = {
      {0, "Generic MPEG-1", "0"},
      {1, "Standard VCD", "1"},
      {2, "User VCD", "2"},
      {3, "Generic MPEG-2", "3"},
      {4, "Standard SVCD", "4"},
      {5, "User SVCD", "5"},
      {6, "VCD Stills sequences", "6"},
      {7, "SVCD Stills sequences", "7"},
      {8, "DVD MPEG-2 for dvdauthor", "8"},
      {9, "DVD MPEG-2", "9"},
      {0, NULL, NULL},
    };

    mplex_format_type =

```

```

    g_enum_register_static ("GstMplexFormat", mplex_formats);
}

return mplex_format_type;
}

/*
 * Class init functions.
 */

GstMplexJob::GstMplexJob (void):
MultiplexJob ()
{
    /* blabla */
    bufsize = 0;
}

/*
 * GObject properties.
 */

void
GstMplexJob::initProperties (GObjectClass * klass)
{
    /* encoding profile */
    g_object_class_install_property (klass, ARG_FORMAT,
        g_param_spec_enum ("format", "Format", "Encoding profile format",
            GST_TYPE_MPLEX_FORMAT, 0,
            (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));

    /* total stream datarate. Normally, this shouldn't be needed, but
     * some DVD/VCD/SVCD players really need strict values to handle
     * the created files correctly. */
    g_object_class_install_property (klass, ARG_MUX_BITRATE,
        g_param_spec_int ("mux-bitrate", "Mux. bitrate",
            "Bitrate of output stream in kbps (0 = autodetect)",
            0, 15 * 1024, 0,
            (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));

    /* override decode buffer size otherwise determined by format */
    g_object_class_install_property (klass, ARG_BUFSIZE,
        g_param_spec_int ("bufsize", "Decoder buf. size",
            "Target decoders video buffer size (kB) "
            "[default determined by format if not explicitly set]",
            20, 4000, 46,
            (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));

    /* some boolean stuff for headers */

```

```

g_object_class_install_property (klass, ARG_VBR,
    g_param_spec_boolean ("vbr", "VBR",
        "Whether the input video stream is variable bitrate",
        FALSE,
        (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));
g_object_class_install_property (klass, ARG_SYSTEM_HEADERS,
    g_param_spec_boolean ("system-headers", "System headers",
        "Create system header in every pack for generic formats",
        FALSE,
        (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));
#if 0
    /* not supported */
g_object_class_install_property (klass, ARG_SPLIT_SEQUENCE,
    g_param_spec_boolean ("split-sequence", "Split sequence",
        "Simply split a sequence across files "
        "(rather than building run-out/run-in)",
        FALSE,
        (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));

/* size of a segment */
g_object_class_install_property (klass, ARG_SEGMENT_SIZE,
    g_param_spec_int ("max-segment-size", "Max. segment size",
        "Max. size per segment/file in MB (0 = unlimited)",
        0, 10 * 1024, 0,
        (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));
#endif

/* packets per pack (generic formats) */
g_object_class_install_property (klass, ARG_PACKETS_PER_PACK,
    g_param_spec_int ("packets-per-pack", "Packets per pack",
        "Number of packets per pack for generic formats",
        1, 100, 1,
        (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));

/* size of one sector */
g_object_class_install_property (klass, ARG_SECTOR_SIZE,
    g_param_spec_int ("sector-size", "Sector size",
        "Specify sector size in bytes for generic formats",
        256, 16384, 2048,
        (GParamFlags) (G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS)));
}

/*
 * set/get gobject properties.
 */

void
GstMplexJob::getProperty (guint prop_id, GValue * value)
{

```

```

switch (prop_id) {
case ARG_FORMAT:
    g_value_set_enum (value, mux_format);
    break;
case ARG_MUX_BITRATE:
    /* convert from bytes back to bits */
    g_value_set_int (value, (data_rate * 8) / 1000);
    break;
case ARG_VBR:
    g_value_set_boolean (value, VBR);
    break;
case ARG_SYSTEM_HEADERS:
    g_value_set_boolean (value, always_system_headers);
    break;
case ARG_SPLIT_SEQUENCE:
    g_value_set_boolean (value, multifile_segment);
    break;
case ARG_SEGMENT_SIZE:
    g_value_set_int (value, max_segment_size);
    break;
case ARG_PACKETS_PER_PACK:
    g_value_set_int (value, packets_per_pack);
    break;
case ARG_SECTOR_SIZE:
    g_value_set_int (value, sector_size);
    break;
case ARG_BUFSIZE:
    g_value_set_int (value, bufsize);
    break;
default:
    break;
}
}

void
GstMplexJob::setProperty (guint prop_id, const GValue * value)
{
switch (prop_id) {
case ARG_FORMAT:
    mux_format = g_value_get_enum (value);
    break;
case ARG_MUX_BITRATE:
    /* data_rate expects bytes (don't ask me why the property itself is
     * in bits, I'm just staying compatible to mjpegtools options), and
     * rounded up to 50-bytes. */
    data_rate = ((g_value_get_int (value) * 1000 / 8 + 49) / 50) * 50;
    break;
case ARG_VBR:

```

```

    VBR = g_value_get_boolean (value);
    break;
case ARG_SYSTEM_HEADERS:
    always_system_headers = g_value_get_boolean (value);
    break;
case ARG_SPLIT_SEQUENCE:
    multiframe_segment = g_value_get_boolean (value);
    break;
case ARG_SEGMENT_SIZE:
    max_segment_size = g_value_get_int (value);
    break;
case ARG_PACKETS_PER_PACK:
    packets_per_pack = g_value_get_int (value);
    break;
case ARG_SECTOR_SIZE:
    sector_size = g_value_get_int (value);
    break;
case ARG_BUFSIZE:
    bufsize = g_value_get_int (value);
    break;
default:
    break;
}
}
/* GStreamer mplex (mjpegtools) wrapper
 * (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
 *
 * gstmuxjob.hh: gstreamer/mplex multiplex-job wrapper
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public
 * License along with this library; if not, write to the
 * Free Software Foundation, Inc., 59 Temple Place - Suite 330,
 * Boston, MA 02111-1307, USA.
 */

#ifdef __GST_MPLEXJOB_H__
#define __GST_MPLEXJOB_H__

```



```

#include <glib-object.h>
#include <interact.hpp>

class GstMplexJob : public MultiplexJob {
public:
    GstMplexJob (void);

    /* gobject properties */
    static void initProperties (GObjectClass *klass);

    /* set/get gobject properties */
    void getProperty (guint    prop_id,
                     GValue   *value);
    void setProperty (guint    prop_id,
                     const GValue *value);

    int bufsize;
};

#endif /* __GST_MPLEXJOB_H__ */
/* GStreamer mplex (mjpegtools) wrapper
 * (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
 * (c) 2008 Mark Nauwelaerts <mnauw@users.sourceforge.net>
 *
 * gstmplexoutputstream.hh: gstreamer/mplex output stream wrapper
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public
 * License along with this library; if not, write to the
 * Free Software Foundation, Inc., 59 Temple Place - Suite 330,
 * Boston, MA 02111-1307, USA.
 */

#ifdef HAVE_CONFIG_H
#include "config.h"
#endif

#include <string.h>

```

```

#include "gstmux.h"
#include "gstmuxoutputstream.h"

/*
 * Class init functions.
 */

GstMuxOutputStream::GstMuxOutputStream (GstMux * _element, GstPad * _pad):
OutputStream ()
{
    mux = _element;
    pad = _pad;
    size = 0;
}

/*
 * Open/close. Basically 'no-op's (close() sets EOS).
 *
 * Open (): -1 means failure, 0 means success.
 */

int
GstMuxOutputStream::Open (void)
{
    return 0;
}

void
GstMuxOutputStream::Close (void)
{
    GST_MUX_MUTEX_LOCK (mux);
    GST_DEBUG_OBJECT (mux, "closing stream and sending eos");
    gst_pad_push_event (pad, gst_event_new_eos ());
    /* notify chain there is no more need to supply buffers */
    mux->eos = TRUE;
    GST_MUX_SIGNAL_ALL (mux);
    GST_MUX_MUTEX_UNLOCK (mux);
}

/*
 * Get size of current segment.
 */

#if GST_MJPEGTOOLS_API >= 10900
uint64_t
GstMuxOutputStream::SegmentSize (void)
#else
off_t

```

```

GstMplexOutputStream::SegmentSize (void)
#endif
{
    return size;
}

/*
 * Next segment; not really supported.
 */

void
GstMplexOutputStream::NextSegment (void)
{
    size = 0;

    GST_WARNING_OBJECT (mplex, "multiple file output is not supported");
    /* FIXME: no such filesink behaviour to be expected */
}

/*
 * Write data.
 */

void
GstMplexOutputStream::Write (guint8 * data, guint len)
{
    GstBuffer *buf;

    buf = gst_buffer_new_and_alloc (len);
    memcpy (GST_BUFFER_DATA (buf), data, len);

    size += len;
    GST_MPLEX_MUTEX_LOCK (mplex);
    gst_buffer_set_caps (buf, GST_PAD_CAPS (pad));
    mplex->srcresult = gst_pad_push (pad, buf);
    GST_MPLEX_MUTEX_UNLOCK (mplex);
}
/* GStreamer mplex (mjpegtools) wrapper
 * (c) 2003 Ronald Bultje <rbultje@ronald.bitfreak.net>
 * (c) 2008 Mark Nauwelaerts <mnauw@users.sourceforge.net>
 *
 * gstmplexoutputstream.hh: gstreamer/mplex output stream wrapper
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *

```

\* This library is distributed in the hope that it will be useful,  
 \* but WITHOUT ANY WARRANTY; without even the implied warranty of  
 \* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU  
 \* Library General Public License for more details.  
 \*  
 \* You should have received a copy of the GNU Library General Public  
 \* License along with this library; if not, write to the  
 \* Free Software Foundation, Inc., 59 Temple Place - Suite 330,  
 \* Boston, MA 02111-1307, USA.  
 \*/

```
#ifndef __GST_MPLEXOUTPUTSTREAM_H__
#define __GST_MPLEXOUTPUTSTREAM_H__

#include <gst/gst.h>
#include <mjpeg_types.h>
#include <outputstrm.hpp>

#include "gstmux.h"

class GstMplexOutputStream : public OutputStream {
public:
  GstMplexOutputStream (GstMplex *element, GstPad *pad);

  /* open/close. Basically 'no-op's (close() sets EOS). */
  int Open (void);
  void Close (void);

  /* get size of current segment */
  #if GST_MJPEGTOOLS_API >= 10900
  uint64_t SegmentSize (void);
  #else
  off_t SegmentSize (void);
  #endif

  /* next segment */
  void NextSegment (void);

  /* write data */
  void Write (guint8 *data, guint len);

private:
  GstMplex *mux;
  GstPad *pad;
  guint64 size;
};

#endif /* __GST_MPLEXOUTPUTSTREAM_H__ */
```

# 1.10 gstreamer-plugins-base 0.10.35.1

## 1.10.1 Available under license :

GNU LIBRARY GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1991 Free Software Foundation, Inc.

675 Mass Ave, Cambridge, MA 02139, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Library General Public License, applies to some specially designated Free Software Foundation software, and to any other libraries whose authors decide to use it. You can use it for your libraries, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library, or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link a program with the library, you must provide complete object files to the recipients so that they can relink them with the library, after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

Our method of protecting your rights has two steps: (1) copyright the library, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the library.

Also, for each distributor's protection, we want to make certain that everyone understands that there is no warranty for this free library. If the library is modified by someone else and passed on, we want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license.

The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

## GNU LIBRARY GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Library General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an

appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.



Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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 source along with the object code.

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.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the

library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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.

6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your

rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY

AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

#### Appendix: How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Library General Public License for more details.

You should have received a copy of the GNU Library General Public License along with this library; if not, write to the Free Software Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the

library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

#### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

#### GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion



of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
  
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
  
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable

source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or 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 counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying

the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates

the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>

Copyright (C) 19yy <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) 19yy name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
```

`Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

/\* GStreamer

\* Copyright (C) <1999> Erik Walthinsen <omega@cse.ogi.edu>

\*

\* This library is free software; you can redistribute it and/or

\* modify it under the terms of the GNU Library General Public

\* License as published by the Free Software Foundation; either

\* version 2 of the License, or (at your option) any later version.

\*

\* This library is distributed in the hope that it will be useful,

\* but WITHOUT ANY WARRANTY; without even the implied warranty of

\* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU

\* Library General Public License for more details.

\*

\* You should have received a copy of the GNU Library General Public

\* License along with this library; if not, write to the

\* Free Software Foundation, Inc., 59 Temple Place - Suite 330,

\* Boston, MA 02111-1307, USA.

\*/

Disclaimer: The GStreamer team makes a real effort to make sure that the information in this file is as up-to-date and accurate as possible. However, this file may contain errors and omissions. Some dependant libraries change their licensing from version-to-version and some of the libraries listed here as LGPL were under the GPL license in older releases. Distributions which include GStreamer are responsible for ensuring that plugins are used in accordance with licensing terms and other laws.

GStreamer is developed under the terms of the LGPL (see LICENSE file for details).

Some of our plugins however rely on libraries which are available under other licenses. This means that if you are using an application which has a non-GPL compatible license, for instance a closed-source application with GStreamer you have to make sure not to use GPL linked or derived plugins. When using GPL linked plugins GStreamer is for all practical reasons under the GPL itself.

The plugins which use a GPL library are as follows:

a52dec      liba52      (<http://liba52.sourceforge.net/>)

aasink aalib (<http://sourceforge.net/projects/aa-project/>)  
 cdparanoia libcdparanoia (<http://www.xiph.org/paranoia/>)  
 dtsdec libdts (<http://www.videolan.org/dtsdec.html>)  
 dvdnavsrc libdvdnav (<http://dvd.sourceforge.net/>)  
 dxr3 (<http://dxr3.sourceforge.net/>)  
 icecastsend libshout (<http://www.icecast.org>)  
 mad libmad (<http://www.mars.org/home/rob/proj/mpeg/>)  
 mpeg2dec libmpeg2 (<http://libmpeg2.sourceforge.net/>)  
 mpeg2enc libmpeg2enc (<http://mjpeg.sourceforge.net/>)  
 mplex libmplex (<http://mjpeg.sourceforge.net/>)  
 siddec libsidplay 1.36 (<http://www.geocities.com/SiliconValley/Lakes/5147/sidplay/>,  
<http://sourceforge.net/projects/sidplay2/>)  
 trm libmusicbrainz (<http://www.musicbrainz.org/>)  
 xine libxine (<http://xinehq.de/>)  
 xvid libxvidcore (<http://www.xvid.org/>)

Plugins derived from GPL code are as follows:

dvdreadsrc libdvdread (<http://www.dtek.chalmers.se/groups/dvd/>)  
 jack libjack (<http://jackit.sourceforge.net/>)  
 Note libjack is LGPL, but plugin is GPL.  
 monoscope None (Algorithm by Ralph Loader, Joerg Walter,  
 Richard Boulton, and Andy Lo A Foe)  
 rtjpeg None (Erik Walthinsen's algorithm)  
 rtp None (<http://www.linphone.org/ortp/>)  
 synaesthesia (<http://www.logarithmic.net/pfh/synaesthesia>)  
 system\_encode None (Algorithm by Chrisoph Moar, Wim Tayman's and  
 Erik Walthinsen)  
 vbidec None (Algorithm by Billy Biggs, Doug Bell,  
 Erik Walthinsen and David I. Lehn)

Plugins which use a LGPL library are as follows:

alsa alsa (<http://alsa-project.org/>)  
 artsdsink aRts (<http://arts-project.org/>)  
 cacasink libcaca (<http://sam.zoy.org/projects/libcaca/>)  
 colorspace libcolorspace  
 dvdec libdv (<http://libdv.sourceforge.net/>)  
 esdmon,esdsink libesd (<ftp.gnome.org/pub/GNOME/stable/sources/esound/>)  
 faac libfaac (<http://www.audiocoding.com/modules/mydownloads/>)  
 fameenc libfame (<http://fame.sourceforge.net/>)  
 ffmpeg libffmpeg (<http://ffmpeg.sourceforge.net/>)  
 gdkpixbuf GTK+ (<http://www.gtk.org/>)  
 gnomevfs gnome-vfs (<ftp.gnome.org/pub/GNOME/stable/sources/gnome-vfs/>)  
 gst\_arts aRts (<http://arts-project.org/>)  
 gst1394 libraw1394 (<http://www.linux1394.org/>)  
 gstaf libaudiofile (<http://www.68k.org/~michael/audiofile/>)  
 gstsf libsndfile (<http://www.mega-nerd.com/libsndfile/>)

hermescolorspace Hermes (<http://www.clanlib.org/hermes/>)  
kio KDE (<http://www.kde.org/>)  
ladspa (<http://www.ladspa.org/>)  
lame libmp3lame (<http://lame.sourceforge.net/>)  
libvisual libvisual (<http://libvisual.sourceforge.net/>)  
matroska (<http://www.matroska.org/>)  
mikmod libmikmod (<http://mikmod.raphnet.net/>)  
ossaudio (<http://www.opensound.com/>)  
qcamsrc  
rfbenc librfb  
sdlvideosink libsdl (<http://www.libsdl.org/>)  
shout2send libshout2 (<http://www.icecast.org>)  
smoothwave  
swfdec (<http://swfdec.sourceforge.net/>)  
tarkin (<http://svn.xiph.org/trunk/tarkin/>)  
textoverlay pango (<http://www.pango.org/>)  
dirac (<http://www.bbc.co.uk/rd/projects/dirac/>)  
effectv (Our ports was relicensed)(<http://effectv.sourceforge.net/>)  
musepack (<http://www.musepack.net/>)

Plugins which use a BSD covered library are as follows:

ogg libogg/libvorbis (<http://www.xiph.org/ogg/vorbis/>)  
vorbis libogg/libvorbis (<http://www.xiph.org/ogg/vorbis/>)  
gsttheora libtheora (<http://www.theora.org/>)  
speex (<http://www.speex.org/>)  
flac libFLAC (<http://flac.sourceforge.net/>)

Plugins based on libraries with other free licenses:

ximagesink libXv  
xvimagesink libXv  
- license: MIT X11 / X Consortium license

gsm libgsm  
- license MIT license <http://kbs.cs.tu-berlin.de/~jutta/toast.html>

festival (<http://www.cstr.ed.ac.uk/projects/festival/>)  
- license: <http://www.cstr.ed.ac.uk/projects/festival/freecopyright.shtml>

jpeg (<http://www.ijg.org/>)  
- license: IJG license

nas (<http://radscan.com/nas.html>)  
- license: NAS license

snapshot libpng (<http://www.libpng.org/pub/png/>)  
- license: PNG license



mngdec/mngenc libmng (<http://gjuyn.xs4all.nl/libmng>)

- license PNG license

Plugins using non-free libraries:

divxdec, divxenc (<http://www.divx.com/>)

osxaudio (<http://www.apple.com/macosx/>)

sunaudiosink (<http://www.sun.com/>)

Unsure:

faad libfaad (<http://www.audiocoding.com/>)

faad's license depends on its major version :

- for FAAD1 : it is LGPL

- for FAAD2 : it is GPL

look at these pages for more information on licenses :

<http://www.audiocoding.com/modules/wiki/?page=FAAD2>

<http://www.audiocoding.com/modules/wiki/?page=FAAC>

by default, GStreamer faad plugin would compile against FAAD2 if available.

it falls back to FAAD1 if not.

## 1.11 gstreamer-plugins-good 0.10.30.1

### 1.11.1 Available under license :

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.

51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You

can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those

libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

#### GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other

program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
  
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
  
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
  
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2,

instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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 source along with the object code.

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.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or



distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

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

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the

original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF

SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## END OF TERMS AND CONDITIONS

### How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>

Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

```
/* GStreamer
 * Copyright (C) <1999> Erik Walthinsen <omega@cse.ogi.edu>
 *
 * EffecTV:
 * Copyright (C) 2001 FUKUCHI Kentarou
 *
 * EffecTV is free software. We release this product under the terms of the
 * GNU General Public License version 2. The license is included in the file
 * COPYING.
 *
 * This program is distributed in the hope that it will be useful, but WITHOUT ANY
 * WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR
 * A PARTICULAR PURPOSE. See the GNU General Public License for more details.
 */
```

This is a demuxer supporting a subset of the Quicktime video container format developed by Apple. Apple and others have some patents on some features of the Quicktime container format in regards to technologies such as QuicktimeVR and RTP hinting. Due to that be aware that if ever such features are added to this demuxer it would need to be moved to the -ugly module or those features need to come as add-in functionality stored in another module.

As the plugin is as of today's date (19th of June 2007) it does not violate any software patents we know of.

```
/*
 * Unless otherwise indicated, Source Code is licensed under MIT license.
 *
 * Permission is hereby granted, free of charge, to any person obtaining a copy of
 * this software and associated documentation files (the "Software"), to deal in
 * the Software without restriction, including without limitation the rights to
 * use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
 * of the Software, and to permit persons to whom the Software is furnished to do
 * so, subject to the following conditions:
 *
 * The above copyright notice and this permission notice shall be included in all
 * copies or substantial portions of the Software.
 *
 * THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
 * IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
 * FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
 * AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
 * LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
 * OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
 * SOFTWARE.
 */
```

Disclaimer: The GStreamer team makes a real effort to make sure that the information in this file is as up-to-date and accurate as possible.

However, this file may contain errors and omissions. Some dependant libraries change their licensing from version-to-version and some of the libraries listed here as LGPL were under the GPL license in older releases. Distributions which include GStreamer are responsible for ensuring that plugins are used in accordance with licensing terms and other laws.

GStreamer is developed under the terms of the LGPL (see LICENSE file for details). Some of our plugins however rely on libraries which are available under other licenses. This means that if you are using an application which has a non-GPL compatible license, for instance a closed-source application with GStreamer you have to make sure not to use GPL linked or derived plugins. When using GPL linked plugins GStreamer is for all practical reasons under the GPL itself.

The plugins which use a GPL library are as follows:

|             |                 |                                                                                                                                                                                                                                                |
|-------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a52dec      | liba52          | ( <a href="http://liba52.sourceforge.net/">http://liba52.sourceforge.net/</a> )                                                                                                                                                                |
| aasink      | aalib           | ( <a href="http://sourceforge.net/projects/aa-project/">http://sourceforge.net/projects/aa-project/</a> )                                                                                                                                      |
| cdparanoia  | libcdparanoia   | ( <a href="http://www.xiph.org/paranoia/">http://www.xiph.org/paranoia/</a> )                                                                                                                                                                  |
| dtsdec      | libdts          | ( <a href="http://www.videolan.org/dtsdec.html">http://www.videolan.org/dtsdec.html</a> )                                                                                                                                                      |
| dvdnavsrc   | libdvdnav       | ( <a href="http://dvd.sourceforge.net/">http://dvd.sourceforge.net/</a> )                                                                                                                                                                      |
| dxr3        |                 | ( <a href="http://dxr3.sourceforge.net/">http://dxr3.sourceforge.net/</a> )                                                                                                                                                                    |
| icecastsend | libshout        | ( <a href="http://www.icecast.org">http://www.icecast.org</a> )                                                                                                                                                                                |
| mad         | libmad          | ( <a href="http://www.mars.org/home/rob/proj/mpeg/">http://www.mars.org/home/rob/proj/mpeg/</a> )                                                                                                                                              |
| mpeg2dec    | libmpeg2        | ( <a href="http://libmpeg2.sourceforge.net/">http://libmpeg2.sourceforge.net/</a> )                                                                                                                                                            |
| mpeg2enc    | libmpeg2enc     | ( <a href="http://mjpeg.sourceforge.net/">http://mjpeg.sourceforge.net/</a> )                                                                                                                                                                  |
| mplex       | libmplex        | ( <a href="http://mjpeg.sourceforge.net/">http://mjpeg.sourceforge.net/</a> )                                                                                                                                                                  |
| siddec      | libsidplay 1.36 | ( <a href="http://www.geocities.com/SiliconValley/Lakes/5147/sidplay/">http://www.geocities.com/SiliconValley/Lakes/5147/sidplay/</a> ,<br><a href="http://sourceforge.net/projects/sidplay2/">http://sourceforge.net/projects/sidplay2/</a> ) |
| trm         | libmusicbrainz  | ( <a href="http://www.musicbrainz.org/">http://www.musicbrainz.org/</a> )                                                                                                                                                                      |
| xine        | libxine         | ( <a href="http://xinehq.de/">http://xinehq.de/</a> )                                                                                                                                                                                          |
| xvid        | libxvidcore     | ( <a href="http://www.xvid.org/">http://www.xvid.org/</a> )                                                                                                                                                                                    |

Plugins derived from GPL code are as follows:

|               |            |                                                                                                                             |
|---------------|------------|-----------------------------------------------------------------------------------------------------------------------------|
| dvdreadsrc    | libdvdread | ( <a href="http://www.dtek.chalmers.se/groups/dvd/">http://www.dtek.chalmers.se/groups/dvd/</a> )                           |
| jack          | libjack    | ( <a href="http://jackit.sourceforge.net/">http://jackit.sourceforge.net/</a> )<br>Note libjack is LGPL, but plugin is GPL. |
| monoscope     | None       | (Algorithm by Ralph Loader, Joerg Walter,<br>Richard Boulton, and Andy Lo A Foe)                                            |
| rtjpeg        | None       | (Erik Walthinsen's algorithm)                                                                                               |
| rtp           | None       | ( <a href="http://www.linphone.org/ortp/">http://www.linphone.org/ortp/</a> )                                               |
| synaesthesia  |            | ( <a href="http://www.logarithmic.net/pfh/synaesthesia">http://www.logarithmic.net/pfh/synaesthesia</a> )                   |
| system_encode | None       | (Algorithm by Chrisoph Moar, Wim Tayman's and<br>Erik Walthinsen)                                                           |
| vbidec        | None       | (Algorithm by Billy Biggs, Doug Bell,<br>Erik Walthinsen and David I. Lehn)                                                 |

Plugins which use a LGPL library are as follows:

alsa       alsa       (<http://alsa-project.org/>)  
artsdsink   aRts       (<http://arts-project.org/>)  
cacasink   libcaca    (<http://sam.zoy.org/projects/libcaca/>)  
colorspacecs libcolorspace  
dvdec       libdv       (<http://libdv.sourceforge.net/>)  
esdmon,esdsink libesd     (<ftp.gnome.org/pub/GNOME/stable/sources/esound/>)  
faac       libfaac    (<http://www.audiocoding.com/modules/mydownloads/>)  
fameenc     libfame    (<http://fame.sourceforge.net/>)  
ffmpeg     ffmpeg     (<http://ffmpeg.sourceforge.net/>)  
gdkpixbuf   GTK+       (<http://www.gtk.org/>)  
gnomevfs    gnome-vfs  (<ftp.gnome.org/pub/GNOME/stable/sources/gnome-vfs/>)  
gst\_arts    aRts       (<http://arts-project.org/>)  
gst1394     libraw1394 (<http://www.linux1394.org/>)  
gstaf       libaudiofile (<http://www.68k.org/~michael/audiofile/>)  
gstsf       libsndfile (<http://www.mega-nerd.com/libsndfile/>)  
hermescolorspace Hermes     (<http://www.clanlib.org/hermes/>)  
kio         KDE        (<http://www.kde.org/>)  
ladspa                   (<http://www.ladspa.org/>)  
lame        libmp3lame (<http://lame.sourceforge.net/>)  
libvisual   libvisual   (<http://libvisual.sourceforge.net/>)  
matroska                 (<http://www.matroska.org/>)  
mikmod      libmikmod   (<http://mikmod.raphnet.net/>)  
ossaudio                 (<http://www.opensound.com/>)  
qcamsrc  
rfbenc      librfb  
sdlvideosink libSDL     (<http://www.libsdl.org/>)  
shout2send   libshout2   (<http://www.icecast.org/>)  
smoothwave  
swfdec                   (<http://swfdec.sourceforge.net/>)  
tarkin                   (<http://svn.xiph.org/trunk/tarkin/>)  
textoverlay   pango       (<http://www.pango.org/>)  
dirac                    (<http://www.bbc.co.uk/rd/projects/dirac/>)  
effectv (Our ports was relicensed)(<http://effectv.sourceforge.net/>)  
musepack    (<http://www.musepack.net/>)

Plugins which use a BSD covered library are as follows:

ogg         libogg/libvorbis (<http://www.xiph.org/ogg/vorbis/>)  
vorbis      libogg/libvorbis (<http://www.xiph.org/ogg/vorbis/>)  
gsttheora   libtheora   (<http://www.theora.org/>)  
speex                    (<http://www.speex.org/>)  
flac        libFLAC    (<http://flac.sourceforge.net/>)

Plugins based on libraries with other free licenses:

ximagesink   libXv

xvimagesink libXv  
 - license: MIT X11 / X Consortium license

gsm libgsm  
 - license MIT license <http://kbs.cs.tu-berlin.de/~jutta/toast.html>

festival (<http://www.cstr.ed.ac.uk/projects/festival/>)  
 - license: <http://www.cstr.ed.ac.uk/projects/festival/freecopyright.shtml>

jpeg (<http://www.ijg.org/>)  
 - license: IJG license

nas (<http://radscan.com/nas.html>)  
 - license: NAS license

snapshot libpng (<http://www.libpng.org/pub/png/>)  
 - license: PNG license

mngdec/mngenc libmng (<http://gjuyn.xs4all.nl/libmng>)  
 - license PNG license

Plugins using non-free libraries:

divxdec, divxenc (<http://www.divx.com/>)  
 osxaudio (<http://www.apple.com/macosx/>)  
 sunaudiosink (<http://www.sun.com/>)

Unsure:

faad libfaad (<http://www.audiocoding.com/>)

faad's license depends on its major version :

- for FAAD1 : it is LGPL
- for FAAD2 : it is GPL

look at these pages for more information on licenses :

<http://www.audiocoding.com/modules/wiki/?page=FAAD2>

<http://www.audiocoding.com/modules/wiki/?page=FAAC>

by default, GStreamer faad plugin would compile against FAAD2 if available.

it falls back to FAAD1 if not.

/\*

- \* GStreamer
- \* Copyright (C) 2007 Sebastian Drge <slomo@circular-chaos.org>
- \* Copyright (C) 2006 Stefan Kost <ensonic@users.sf.net>
- \*
- \* This library is free software; you can redistribute it and/or
- \* modify it under the terms of the GNU Library General Public
- \* License as published by the Free Software Foundation; either
- \* version 2 of the License, or (at your option) any later version.
- \*

```

* This library is distributed in the hope that it will be useful,
* but WITHOUT ANY WARRANTY; without even the implied warranty of
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
* Library General Public License for more details.
*
* You should have received a copy of the GNU Library General Public
* License along with this library; if not, write to the
* Free Software Foundation, Inc., 59 Temple Place - Suite 330,
* Boston, MA 02111-1307, USA.
*/

/**
* SECTION:element-audioamplify
*
* Amplifies an audio stream by a given factor and allows the selection of different clipping modes.
* The difference between the clipping modes is best evaluated by testing.
*
* <refsect2>
* <title>Example launch line</title>
* [[
* gst-launch audiotestsrc wave=saw ! audioamplify amplification=1.5 ! alsasink
* gst-launch filesrc location="melo1.ogg" ! oggdemux ! vorbisdec ! audioconvert ! audioamplify amplification=1.5
method=wrap-negative ! alsasink
* gst-launch audiotestsrc wave=saw ! audioconvert ! audioamplify amplification=1.5 method=wrap-positive !
audioconvert ! alsasink
* ]]
* </refsect2>
*/

#ifdef HAVE_CONFIG_H
#include "config.h"
#endif

#include <gst/gst.h>
#include <gst/base/gstbasetransform.h>
#include <gst/audio/audio.h>
#include <gst/audio/gstaudiofilter.h>
#include <gst/controller/gstcontroller.h>

#include "audioamplify.h"

#define GST_CAT_DEFAULT gst_audio_amplify_debug
GST_DEBUG_CATEGORY_STATIC (GST_CAT_DEFAULT);

/* Filter signals and args */
enum
{
/* FILL ME */

```



```

LAST_SIGNAL
};

enum
{
PROP_0,
PROP_AMPLIFICATION,
PROP_CLIPPING_METHOD
};

enum
{
METHOD_CLIP = 0,
METHOD_WRAP_NEGATIVE,
METHOD_WRAP_POSITIVE,
METHOD_NOCLIP,
NUM_METHODS
};

#define GST_TYPE_AUDIO_AMPLIFY_CLIPPING_METHOD (gst_audio_amplify_clipping_method_get_type
())
static GType
gst_audio_amplify_clipping_method_get_type (void)
{
static GType gtype = 0;

if (gtype == 0) {
static const GEnumValue values[] = {
{METHOD_CLIP, "Normal clipping (default)", "clip"},
{METHOD_WRAP_NEGATIVE,
"Push overdriven values back from the opposite side",
"wrap-negative"},
{METHOD_WRAP_POSITIVE, "Push overdriven values back from the same side",
"wrap-positive"},
{METHOD_NOCLIP, "No clipping", "none"},
{0, NULL, NULL}
};

/* FIXME 0.11: rename to GstAudioAmplifyClippingMethod */
gtype = g_enum_register_static ("GstAudioPanoramaClippingMethod", values);
}
return gtype;
}

#define ALLOWED_CAPS \
"audio/x-raw-int," \
" depth=(int)8," \
" width=(int)8," \

```

```

" endianness=(int)BYTE_ORDER,"
" signed=(bool)TRUE,"
" rate=(int)[1,MAX],"
" channels=(int)[1,MAX]; "
"audio/x-raw-int,"
" depth=(int)16,"
" width=(int)16,"
" endianness=(int)BYTE_ORDER,"
" signed=(bool)TRUE,"
" rate=(int)[1,MAX],"
" channels=(int)[1,MAX]; "
"audio/x-raw-int,"
" depth=(int)32,"
" width=(int)32,"
" endianness=(int)BYTE_ORDER,"
" signed=(bool)TRUE,"
" rate=(int)[1,MAX],"
" channels=(int)[1,MAX]; "
"audio/x-raw-float,"
" width=(int){32,64},"
" endianness=(int)BYTE_ORDER,"
" rate=(int)[1,MAX],"
" channels=(int)[1,MAX]"

#define DEBUG_INIT(bla) \
GST_DEBUG_CATEGORY_INIT (gst_audio_amplify_debug, "audioamplify", 0, "audioamplify element");

GST_BOILERPLATE_FULL (GstAudioAmplify, gst_audio_amplify, GstAudioFilter,
    GST_TYPE_AUDIO_FILTER, DEBUG_INIT);

static gboolean gst_audio_amplify_set_process_function (GstAudioAmplify *
    filter, gint clipping, gint format, gint width);
static void gst_audio_amplify_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec);
static void gst_audio_amplify_get_property (GObject * object, guint prop_id,
    GValue * value, GParamSpec * pspec);

static gboolean gst_audio_amplify_setup (GstAudioFilter * filter,
    GstRingBufferSpec * format);
static GstFlowReturn gst_audio_amplify_transform_ip (GstBaseTransform * base,
    GstBuffer * buf);

#define MIN_gint8 G_MININT8
#define MAX_gint8 G_MAXINT8
#define MIN_gint16 G_MININT16
#define MAX_gint16 G_MAXINT16
#define MIN_gint32 G_MININT32
#define MAX_gint32 G_MAXINT32

```

```

#define MAKE_INT_FUNCS(type, targettype) \
static void \
gst_audio_amplify_transform_##type##_clip (GstAudioAmplify * filter, \
void * data, guint num_samples) \
{ \
type *d = data; \
\
while (num_samples--) { \
targettype val = *d * filter->amplification; \
*d++ = CLAMP (val, MIN_##type, MAX_##type); \
} \
} \
static void \
gst_audio_amplify_transform_##type##_wrap_negative (GstAudioAmplify * filter, \
void * data, guint num_samples) \
{ \
type *d = data; \
\
while (num_samples--) { \
targettype val = *d * filter->amplification; \
if (val > MAX_##type) \
val = MIN_##type + (val - MIN_##type) % ((targettype) MAX_##type + 1 - \
MIN_##type); \
else if (val < MIN_##type) \
val = MAX_##type - (MAX_##type - val) % ((targettype) MAX_##type + 1 - \
MIN_##type); \
*d++ = val; \
} \
} \
static void \
gst_audio_amplify_transform_##type##_wrap_positive (GstAudioAmplify * filter, \
void * data, guint num_samples) \
{ \
type *d = data; \
\
while (num_samples--) { \
targettype val = *d * filter->amplification; \
do { \
if (val > MAX_##type) \
val = MAX_##type - (val - MAX_##type); \
else if (val < MIN_##type) \
val = MIN_##type + (MIN_##type - val); \
else \
break; \
} while (1); \
*d++ = val; \
} \
}

```

```

}
static void
gst_audio_amplify_transform_##type##_noclip (GstAudioAmplify * filter,
void * data, guint num_samples)
{
type *d = data;

while (num_samples--)
*d++ *= filter->amplification;
}

#define MAKE_FLOAT_FUNCS(type)
static void
gst_audio_amplify_transform_##type##_clip (GstAudioAmplify * filter,
void * data, guint num_samples)
{
type *d = data;

while (num_samples--) {
type val = *d* filter->amplification;
*d++ = CLAMP (val, -1.0, +1.0);
}
}
static void
gst_audio_amplify_transform_##type##_wrap_negative (GstAudioAmplify *
filter, void * data, guint num_samples)
{
type *d = data;

while (num_samples--) {
type val = *d * filter->amplification;
do {
if (val > 1.0)
val = -1.0 + (val - 1.0);
else if (val < -1.0)
val = 1.0 - (1.0 - val);
else
break;
} while (1);
*d++ = val;
}
}
static void
gst_audio_amplify_transform_##type##_wrap_positive (GstAudioAmplify * filter,
void * data, guint num_samples)
{
type *d = data;

```

```

while (num_samples--) {
    type val = *d* filter->amplification;
    do {
        if (val > 1.0)
            val = 1.0 - (val - 1.0);
        else if (val < -1.0)
            val = -1.0 + (-1.0 - val);
        else
            break;
    } while (1);
    *d++ = val;
}
}
static void
gst_audio_amplify_transform_###type##_noclip (GstAudioAmplify * filter,
    void * data, guint num_samples)
{
    type *d = data;

    while (num_samples--)
        *d++ *= filter->amplification;
}

/* *INDENT-OFF* */
MAKE_INT_FUNCS (gint8,gint)
MAKE_INT_FUNCS (gint16,gint)
MAKE_INT_FUNCS (gint32,gint64)
MAKE_FLOAT_FUNCS (gfloat)
MAKE_FLOAT_FUNCS (gdouble)
/* *INDENT-ON* */

/* GObject vmethod implementations */

static void
gst_audio_amplify_base_init (gpointer klass)
{
    GstElementClass *element_class = GST_ELEMENT_CLASS (klass);
    GstCaps *caps;

    gst_element_class_set_details_simple (element_class, "Audio amplifier",
        "Filter/Effect/Audio",
        "Amplifies an audio stream by a given factor",
        "Sebastian Drge <slomo@circular-chaos.org>");

    caps = gst_caps_from_string (ALLOWED_CAPS);
    gst_audio_filter_class_add_pad_templates (GST_AUDIO_FILTER_CLASS (klass),
        caps);
    gst_caps_unref (caps);
}

```

```

}

static void
gst_audio_amplify_class_init (GstAudioAmplifyClass * klass)
{
    GObjectClass *gobject_class;

    gobject_class = (GObjectClass *) klass;
    gobject_class->set_property = gst_audio_amplify_set_property;
    gobject_class->get_property = gst_audio_amplify_get_property;

    g_object_class_install_property (gobject_class, PROP_AMPLIFICATION,
        g_param_spec_float ("amplification", "Amplification",
            "Factor of amplification", -G_MAXFLOAT, G_MAXFLOAT,
            1.0,
            G_PARAM_READWRITE | GST_PARAM_CONTROLLABLE | G_PARAM_STATIC_STRINGS));

    /**
     * GstAudioAmplify:clipping-method
     *
     * Clipping method: clip mode set values higher than the maximum to the
     * maximum. The wrap-negative mode pushes those values back from the
     * opposite side, wrap-positive pushes them back from the same side.
     */
    g_object_class_install_property (gobject_class, PROP_CLIPPING_METHOD,
        g_param_spec_enum ("clipping-method", "Clipping method",
            "Selects how to handle values higher than the maximum",
            GST_TYPE_AUDIO_AMPLIFY_CLIPPING_METHOD, METHOD_CLIP,
            G_PARAM_READWRITE | G_PARAM_STATIC_STRINGS));

    GST_AUDIO_FILTER_CLASS (klass)->setup =
        GST_DEBUG_FUNCPTR (gst_audio_amplify_setup);
    GST_BASE_TRANSFORM_CLASS (klass)->transform_ip =
        GST_DEBUG_FUNCPTR (gst_audio_amplify_transform_ip);
}

static void
gst_audio_amplify_init (GstAudioAmplify * filter, GstAudioAmplifyClass * klass)
{
    filter->amplification = 1.0;
    gst_audio_amplify_set_process_function (filter, METHOD_CLIP,
        GST_BUFTYPE_LINEAR, 16);
    gst_base_transform_set_in_place (GST_BASE_TRANSFORM (filter), TRUE);
    gst_base_transform_set_gap_aware (GST_BASE_TRANSFORM (filter), TRUE);
}

static GstAudioAmplifyProcessFunc

```

```

gst_audio_amplify_process_function (gint clipping, gint format, gint width)
{
static const struct process
{
gint format;
gint width;
gint clipping;
GstAudioAmplifyProcessFunc func;
} process[] = {
{
GST_BUFTYPE_FLOAT, 32, METHOD_CLIP,
gst_audio_amplify_transform_gfloat_clip}, {
GST_BUFTYPE_FLOAT, 32, METHOD_WRAP_NEGATIVE,
gst_audio_amplify_transform_gfloat_wrap_negative}, {
GST_BUFTYPE_FLOAT, 32, METHOD_WRAP_POSITIVE,
gst_audio_amplify_transform_gfloat_wrap_positive}, {
GST_BUFTYPE_FLOAT, 32, METHOD_NOCLIP,
gst_audio_amplify_transform_gfloat_noclip}, {
GST_BUFTYPE_FLOAT, 64, METHOD_CLIP,
gst_audio_amplify_transform_gdouble_clip}, {
GST_BUFTYPE_FLOAT, 64, METHOD_WRAP_NEGATIVE,
gst_audio_amplify_transform_gdouble_wrap_negative}, {
GST_BUFTYPE_FLOAT, 64, METHOD_WRAP_POSITIVE,
gst_audio_amplify_transform_gdouble_wrap_positive}, {
GST_BUFTYPE_FLOAT, 64, METHOD_NOCLIP,
gst_audio_amplify_transform_gdouble_noclip}, {
GST_BUFTYPE_LINEAR, 8, METHOD_CLIP, gst_audio_amplify_transform_gint8_clip}, {
GST_BUFTYPE_LINEAR, 8, METHOD_WRAP_NEGATIVE,
gst_audio_amplify_transform_gint8_wrap_negative}, {
GST_BUFTYPE_LINEAR, 8, METHOD_WRAP_POSITIVE,
gst_audio_amplify_transform_gint8_wrap_positive}, {
GST_BUFTYPE_LINEAR, 8, METHOD_NOCLIP,
gst_audio_amplify_transform_gint8_noclip}, {
GST_BUFTYPE_LINEAR, 16, METHOD_CLIP,
gst_audio_amplify_transform_gint16_clip}, {
GST_BUFTYPE_LINEAR, 16, METHOD_WRAP_NEGATIVE,
gst_audio_amplify_transform_gint16_wrap_negative}, {
GST_BUFTYPE_LINEAR, 16, METHOD_WRAP_POSITIVE,
gst_audio_amplify_transform_gint16_wrap_positive}, {
GST_BUFTYPE_LINEAR, 16, METHOD_NOCLIP,
gst_audio_amplify_transform_gint16_noclip}, {
GST_BUFTYPE_LINEAR, 32, METHOD_CLIP,
gst_audio_amplify_transform_gint32_clip}, {
GST_BUFTYPE_LINEAR, 32, METHOD_WRAP_NEGATIVE,
gst_audio_amplify_transform_gint32_wrap_negative}, {
GST_BUFTYPE_LINEAR, 32, METHOD_WRAP_POSITIVE,
gst_audio_amplify_transform_gint32_wrap_positive}, {
GST_BUFTYPE_LINEAR, 32, METHOD_NOCLIP,

```

```

    gst_audio_amplify_transform_gint32_noclip}, {
    0, 0, 0, NULL}
};
const struct process *p;

for (p = process; p->func; p++)
    if (p->format == format && p->width == width && p->clipping == clipping)
        return p->func;
return NULL;
}

static gboolean
gst_audio_amplify_set_process_function (GstAudioAmplify * filter, gint
    clipping_method, gint format, gint width)
{
    GstAudioAmplifyProcessFunc process;

    /* set processing function */

    process = gst_audio_amplify_process_function (clipping_method, format, width);
    if (!process) {
        GST_DEBUG ("wrong format");
        return FALSE;
    }

    filter->process = process;
    filter->clipping_method = clipping_method;
    filter->format = format;
    filter->width = width;

    return TRUE;
}

static void
gst_audio_amplify_set_property (GObject * object, guint prop_id,
    const GValue * value, GParamSpec * pspec)
{
    GstAudioAmplify *filter = GST_AUDIO_AMPLIFY (object);

    switch (prop_id) {
        case PROP_AMPLIFICATION:
            filter->amplification = g_value_get_float (value);
            gst_base_transform_set_passthrough (GST_BASE_TRANSFORM (filter),
                filter->amplification == 1.0);
            break;
        case PROP_CLIPPING_METHOD:
            gst_audio_amplify_set_process_function (filter, g_value_get_enum (value),
                filter->format, filter->width);
    }
}

```



```

        break;
    default:
        G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
        break;
    }
}

static void
gst_audio_amplify_get_property (GObject * object, guint prop_id,
    GValue * value, GParamSpec * pspec)
{
    GstAudioAmplify *filter = GST_AUDIO_AMPLIFY (object);

    switch (prop_id) {
        case PROP_AMPLIFICATION:
            g_value_set_float (value, filter->amplification);
            break;
        case PROP_CLIPPING_METHOD:
            g_value_set_enum (value, filter->clipping_method);
            break;
        default:
            G_OBJECT_WARN_INVALID_PROPERTY_ID (object, prop_id, pspec);
            break;
    }
}

/* GstAudioFilter vmethod implementations */
static gboolean
gst_audio_amplify_setup (GstAudioFilter * base, GstRingBufferSpec * format)
{
    GstAudioAmplify *filter = GST_AUDIO_AMPLIFY (base);

    return gst_audio_amplify_set_process_function (filter,
        filter->clipping_method, format->type, format->width);
}

/* GstBaseTransform vmethod implementations */
static GstFlowReturn
gst_audio_amplify_transform_ip (GstBaseTransform * base, GstBuffer * buf)
{
    GstAudioAmplify *filter = GST_AUDIO_AMPLIFY (base);
    guint num_samples;
    GstClockTime timestamp, stream_time;

    timestamp = GST_BUFFER_TIMESTAMP (buf);
    stream_time =
        gst_segment_to_stream_time (&base->segment, GST_FORMAT_TIME, timestamp);
}

```

```

GST_DEBUG_OBJECT (filter, "sync to %" GST_TIME_FORMAT,
    GST_TIME_ARGS (timestamp));

if (GST_CLOCK_TIME_IS_VALID (stream_time))
    gst_object_sync_values (G_OBJECT (filter), stream_time);

num_samples =
    GST_BUFFER_SIZE (buf) / (GST_AUDIO_FILTER (filter)->format.width / 8);

if (gst_base_transform_is_passthrough (base) ||
    G_UNLIKELY (GST_BUFFER_FLAG_IS_SET (buf, GST_BUFFER_FLAG_GAP)))
    return GST_FLOW_OK;

filter->process (filter, GST_BUFFER_DATA (buf), num_samples);

return GST_FLOW_OK;
}
/*
 * GStreamer
 * Copyright (C) 2007 Sebastian Drge <slomo@circular-chaos.org>
 * Copyright (C) 2006 Stefan Kost <ensonic@users.sf.net>
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Library General Public
 * License as published by the Free Software Foundation; either
 * version 2 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Library General Public License for more details.
 *
 * You should have received a copy of the GNU Library General Public
 * License along with this library; if not, write to the
 * Free Software Foundation, Inc., 59 Temple Place - Suite 330,
 * Boston, MA 02111-1307, USA.
 */

#ifndef __GST_AUDIO_AMPLIFY_H__
#define __GST_AUDIO_AMPLIFY_H__

#include <gst/gst.h>
#include <gst/base/gstbasetransform.h>
#include <gst/audio/audio.h>
#include <gst/audio/gstaudiofilter.h>

G_BEGIN_DECLS
#define GST_TYPE_AUDIO_AMPLIFY      (gst_audio_amplify_get_type())

```

```

#define GST_AUDIO_AMPLIFY(obj)
(G_TYPE_CHECK_INSTANCE_CAST((obj),GST_TYPE_AUDIO_AMPLIFY,GstAudioAmplify))
#define GST_IS_AUDIO_AMPLIFY(obj)
(G_TYPE_CHECK_INSTANCE_TYPE((obj),GST_TYPE_AUDIO_AMPLIFY))
#define GST_AUDIO_AMPLIFY_CLASS(klass) (G_TYPE_CHECK_CLASS_CAST((klass)
,GST_TYPE_AUDIO_AMPLIFY,GstAudioAmplifyClass))
#define GST_IS_AUDIO_AMPLIFY_CLASS(klass) (G_TYPE_CHECK_CLASS_TYPE((klass)
,GST_TYPE_AUDIO_AMPLIFY))
#define GST_AUDIO_AMPLIFY_GET_CLASS(obj) (G_TYPE_INSTANCE_GET_CLASS((obj)
,GST_TYPE_AUDIO_AMPLIFY,GstAudioAmplifyClass))
typedef struct _GstAudioAmplify GstAudioAmplify;
typedef struct _GstAudioAmplifyClass GstAudioAmplifyClass;

typedef void (*GstAudioAmplifyProcessFunc) (GstAudioAmplify *, void *, guint);

struct _GstAudioAmplify
{
    GstAudioFilter audiofilter;

    gfloat amplification;

    /* < private > */
    GstAudioAmplifyProcessFunc process;
    gint clipping_method;
    gint format;
    gint width;
};

struct _GstAudioAmplifyClass
{
    GstAudioFilterClass parent;
};

GType gst_audio_amplify_get_type (void);

G_END_DECLS
#endif /* __GST_AUDIO_AMPLIFY_H__ */

```

## 1.12 icu4c 56.1

### 1.12.1 Available under license :

ICU License - ICU 1.8.1 and later

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2012 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

All trademarks and registered trademarks mentioned herein are the property of their respective owners.  
UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

Unicode Data Files include all data files under the directories <http://www.unicode.org/Public/>, <http://www.unicode.org/reports/>, and <http://www.unicode.org/cldr/data/>. Unicode Data Files do not include PDF online code charts under the directory <http://www.unicode.org/Public/>. Software includes any source code published in the Unicode Standard or under the directories <http://www.unicode.org/Public/>, <http://www.unicode.org/reports/>, and <http://www.unicode.org/cldr/data/>.

NOTICE TO USER: Carefully read the following legal agreement. BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"), YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE THE DATA FILES OR SOFTWARE.

#### COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2012 Unicode, Inc. All rights reserved. Distributed under the Terms of Use in <http://www.unicode.org/copyright.html>.

Permission is hereby granted, free of charge, to any person obtaining a copy of the Unicode data files and any associated documentation (the "Data Files") or Unicode software and any associated documentation (the "Software") to deal in the Data Files or Software without restriction, including without

limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Data Files or Software, and to permit persons to whom the Data Files or Software are furnished to do so, provided that (a) the above copyright notice(s) and this permission notice appear with all copies of the Data Files or Software, (b) both the above copyright notice(s) and this permission notice appear in associated documentation, and (c) there is clear notice in each modified Data File or in the Software as well as in the documentation associated with the Data File(s) or Software that the data or software has been modified.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in these Data Files or Software without prior written authorization of the copyright holder.

## 1.13 jansson 2.7

### 1.13.1 Available under license :

Copyright (c) 2009-2014 Petri Lehtinen <petri@digip.org>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

# 1.14 json-c 0.12

## 1.14.1 Available under license :

Copyright (c) 2009-2012 Eric Haszlakiewicz

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

-----  
Copyright (c) 2004, 2005 Metaparadigm Pte Ltd

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

# 1.15 json-c/test-driver 0.12

## 1.15.1 Available under license :

```
#!/bin/sh
# test-driver - basic testsuite driver script.

scriptversion=2012-06-27.10; # UTC

# Copyright (C) 2011-2013 Free Software Foundation, Inc.
#
# This program is free software; you can redistribute it and/or modify
# it under the terms of the GNU General Public License as published by
# the Free Software Foundation; either version 2, or (at your option)
# any later version.
#
# This program is distributed in the hope that it will be useful,
# but WITHOUT ANY WARRANTY; without even the implied warranty of
# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
# GNU General Public License for more details.
#
# You should have received a copy of the GNU General Public License
# along with this program. If not, see <http://www.gnu.org/licenses/>.

# As a special exception to the GNU General Public License, if you
# distribute this file as part of a program that contains a
# configuration script generated by Autoconf, you may include it under
# the same distribution terms that you use for the rest of that program.

# This file is maintained in Automake, please report
# bugs to <bug-automake@gnu.org> or send patches to
# <automake-patches@gnu.org>.

# Make unconditional expansion of undefined variables an error. This
# helps a lot in preventing typo-related bugs.
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
```

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public

License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE  
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION



0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under

these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source

code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or 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 counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent

license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free

Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

##### How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along  
with this program; if not, write to the Free Software Foundation, Inc.,  
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this  
when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type 'show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type 'show c' for details.
```

The hypothetical commands 'show w' and 'show c' should show the appropriate  
parts of the General Public License. Of course, the commands you use may  
be called something other than 'show w' and 'show c'; they could even be  
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your  
school, if any, to sign a "copyright disclaimer" for the program, if  
necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program  
'Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989  
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into  
proprietary programs. If your program is a subroutine library, you may  
consider it more useful to permit linking proprietary applications with the  
library. If this is what you want to do, use the GNU Lesser General  
Public License instead of this License.

## 1.16 libcurl 7.65.0

## 1.16.1 Available under license :

License Mixing

=====

libcurl can be built to use a fair amount of various third party libraries, libraries that are written and provided by other parties that are distributed using their own licenses. Even libcurl itself contains code that may cause problems to some. This document attempts to describe what licenses libcurl and the other libraries use and what possible dilemmas linking and mixing them all can lead to for end users.

I am not a lawyer and this is not legal advice!

One common dilemma is that [GPL](<https://www.gnu.org/licenses/gpl.html>) licensed code is not allowed to be linked with code licensed under the [Original BSD license](<https://spdx.org/licenses/BSD-4-Clause.html>) (with the announcement clause). You may still build your own copies that use them all, but distributing them as binaries would be to violate the GPL license - unless you accompany your license with an [exception](<https://www.gnu.org/licenses/gpl-faq.html#GPLIncompatibleLibs>). This particular problem was addressed when the [Modified BSD license](<https://opensource.org/licenses/BSD-3-Clause>) was created, which does not have the announcement clause that collides with GPL.

## libcurl

Uses an [MIT style license](<https://curl.haxx.se/docs/copyright.html>) that is very liberal.

## OpenSSL

(May be used for SSL/TLS support) Uses an Original BSD-style license with an announcement clause that makes it "incompatible" with GPL. You are not allowed to ship binaries that link with OpenSSL that includes GPL code (unless that specific GPL code includes an exception for OpenSSL - a habit that is growing more and more common). If OpenSSL's licensing is a problem for you, consider using another TLS library.

## GnuTLS

(May be used for SSL/TLS support) Uses the [LGPL](<https://www.gnu.org/licenses/lgpl.html>) license. If this is a problem for you, consider using another TLS library. Also note that GnuTLS itself depends on and uses other libs (libcrypt and libgpg-error) and they too are LGPL- or GPL-licensed.

## WolfSSL

(May be used for SSL/TLS support) Uses the GPL license or a proprietary license. If this is a problem for you, consider using another TLS library.

#### ## NSS

(May be used for SSL/TLS support) Is covered by the [MPL](<https://www.mozilla.org/MPL/>) license, the GPL license and the LGPL license. You may choose to license the code under MPL terms, GPL terms, or LGPL terms. These licenses grant you different permissions and impose different obligations. You should select the license that best meets your needs.

#### ## mbedTLS

(May be used for SSL/TLS support) Uses the [Apache 2.0 license](<https://opensource.org/licenses/Apache-2.0>) or the GPL license. You may choose to license the code under Apache 2.0 terms or GPL terms. These licenses grant you different permissions and impose different obligations. You should select the license that best meets your needs.

#### ## BoringSSL

(May be used for SSL/TLS support) As an OpenSSL fork, it has the same license as that.

#### ## libressl

(May be used for SSL/TLS support) As an OpenSSL fork, it has the same license as that.

#### ## c-ares

(Used for asynchronous name resolves) Uses an MIT license that is very liberal and imposes no restrictions on any other library or part you may link with.

#### ## zlib

(Used for compressed Transfer-Encoding support) Uses an MIT-style license that shouldn't collide with any other library.

#### ## MIT Kerberos

(May be used for GSS support) MIT licensed, that shouldn't collide with any other parts.

#### ## Heimdal



(May be used for GSS support) Heimdal is Original BSD licensed with the announcement clause.

## GNU GSS

(May be used for GSS support) GNU GSS is GPL licensed. Note that you may not distribute binary curl packages that uses this if you build curl to also link and use any Original BSD licensed libraries!

## libidn

(Used for IDNA support) Uses the GNU Lesser General Public License [3]. LGPL is a variation of GPL with slightly less aggressive "copyleft". This license requires more requirements to be met when distributing binaries, see the license for details. Also note that if you distribute a binary that includes this library, you must also include the full LGPL license text. Please properly point out what parts of the distributed package that the license addresses.

## OpenLDAP

(Used for LDAP support) Uses a Modified BSD-style license. Since libcurl uses OpenLDAP as a shared library only, I have not heard of anyone that ships OpenLDAP linked with libcurl in an app.

## libssh2

(Used for scp and sftp support) libssh2 uses a Modified BSD-style license.  
COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1996 - 2019, Daniel Stenberg, <daniel@haxx.se>, and many contributors, see the THANKS file.

All rights reserved.

Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

## 1.17 libjpeg 9b

## 1.18 liboil 0.3.16.1

### 1.18.1 Available under license :

The majority of the source code and the collective work is subject to the following license:

Copyright 2002,2003,2004,2005 David A. Schleef <ds@schleef.org>  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

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

The source code in the liboil/motovec directory is subject to the following license:

Copyright Motorola, Inc. 2003  
ALL RIGHTS RESERVED

You are hereby granted a copyright license to use, modify, and

distribute the SOFTWARE so long as this entire notice is retained without alteration in any modified and/or redistributed versions, and that such modified versions are clearly identified as such. No licenses are granted by implication, estoppel or otherwise under any patents or trademarks of Motorola, Inc.

The SOFTWARE is provided on an "AS IS" basis and without warranty. To the maximum extent permitted by applicable law, MOTOROLA DISCLAIMS ALL WARRANTIES WHETHER EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY AGAINST INFRINGEMENT WITH REGARD TO THE SOFTWARE (INCLUDING ANY MODIFIED VERSIONS THEREOF) AND ANY ACCOMPANYING WRITTEN MATERIALS.

To the maximum extent permitted by applicable law, IN NO EVENT SHALL MOTOROLA BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR OTHER PECUNIARY LOSS) ARISING OF THE USE OR INABILITY TO USE THE SOFTWARE. Motorola assumes no responsibility for the maintenance and support of the SOFTWARE.

The source code implementing the Mersenne Twister algorithm is subject to the following license:

Copyright (C) 1997 - 2002, Makoto Matsumoto and Takuji Nishimura,  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The names of its contributors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR

CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

/\*

\* LIBOIL - Library of Optimized Inner Loops

\* Copyright (c) 2006 David A. Schleefer <ds@schleefer.org>

\* All rights reserved.

\*

\* Redistribution and use in source and binary forms, with or without

\* modification, are permitted provided that the following conditions

\* are met:

\* 1. Redistributions of source code must retain the above copyright

\* notice, this list of conditions and the following disclaimer.

\* 2. Redistributions in binary form must reproduce the above copyright

\* notice, this list of conditions and the following disclaimer in the

\* documentation and/or other materials provided with the distribution.

\*

\* THIS SOFTWARE IS PROVIDED BY THE AUTHOR "AS IS" AND ANY EXPRESS OR

\* IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED

\* WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

\* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT,

\* INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES

\* (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR

\* SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

\* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,

\* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING

\* IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE

\* POSSIBILITY OF SUCH DAMAGE.

\*/

## 1.19 libSRTCP 2.2.0

### 1.19.1 Available under license :

/\*

\*

\* Copyright (c) 2001-2017 Cisco Systems, Inc.

\* All rights reserved.

\*

\* Redistribution and use in source and binary forms, with or without

\* modification, are permitted provided that the following conditions

\* are met:

\*

\* Redistributions of source code must retain the above copyright

\* notice, this list of conditions and the following disclaimer.

\*

\* Redistributions in binary form must reproduce the above

\* copyright notice, this list of conditions and the following

\* disclaimer in the documentation and/or other materials provided

\* with the distribution.

\*

\* Neither the name of the Cisco Systems, Inc. nor the names of its

\* contributors may be used to endorse or promote products derived

\* from this software without specific prior written permission.

\*

\* THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS

\* "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

\* LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS

\* FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE

\* COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,

\* INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES

\* (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR

\* SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

\* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,

\* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)

\* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED

\* OF THE POSSIBILITY OF SUCH DAMAGE.

\*

\*/

## 1.20 libxml2 2.9.9

### 1.20.1 Available under license :

Except where otherwise noted in the source code (e.g. the files hash.c, list.c and the trio files, which are covered by a similar licence but with different Copyright notices) all the files are:

Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FIT-

NESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## 1.21 OpenSSL 1.0.2r :1.0.2r

### 1.21.1 Notifications :

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)

This product includes cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).

This product includes software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).

### 1.21.2 Available under license :

Copyright (C) 1995-1997 Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com))

All rights reserved.

This package is an Blowfish implementation written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution.

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

This product includes software developed by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com))

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)

HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The license and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution license [including the GNU Public License.]

The reason behind this being stated in this direct manner is past experience in code simply being copied and the attribution removed from it and then being distributed as part of other packages. This implementation was a non-trivial and unpaid effort.

Copyright (C) 1995-1997 Eric Young (eay@cryptsoft.com)

All rights reserved.

This package is an DES implementation written by Eric Young (eay@cryptsoft.com). The implementation was written so as to conform with MIT's libdes.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution.

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed.

If this package is used in a product, Eric Young should be given attribution as the author of that the SSL library. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:  
This product includes software developed by Eric Young (eay@cryptsoft.com)

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL

DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The license and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution license [including the GNU Public License.]

The reason behind this being stated in this direct manner is past experience in code simply being copied and the attribution removed from it and then being distributed as part of other packages. This implementation was a non-trivial and unpaid effort.

## LICENSE ISSUES

=====

The OpenSSL toolkit stays under a double license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).

## OpenSSL License

-----

```
/* =====
```

```
* Copyright (c) 1998-2018 The OpenSSL Project. All rights reserved.
```

```
*
```

```
* Redistribution and use in source and binary forms, with or without  
* modification, are permitted provided that the following conditions  
* are met:
```

```
*
```

```
* 1. Redistributions of source code must retain the above copyright  
* notice, this list of conditions and the following disclaimer.
```

```
*
```

```
* 2. Redistributions in binary form must reproduce the above copyright  
* notice, this list of conditions and the following disclaimer in  
* the documentation and/or other materials provided with the  
* distribution.
```

```
*
```

```
* 3. All advertising materials mentioning features or use of this  
* software must display the following acknowledgment:  
* "This product includes software developed by the OpenSSL Project  
* for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
```



\*  
 \* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to  
 \* endorse or promote products derived from this software without  
 \* prior written permission. For written permission, please contact  
 \* openssl-core@openssl.org.  
 \*  
 \* 5. Products derived from this software may not be called "OpenSSL"  
 \* nor may "OpenSSL" appear in their names without prior written  
 \* permission of the OpenSSL Project.  
 \*  
 \* 6. Redistributions of any form whatsoever must retain the following  
 \* acknowledgment:  
 \* "This product includes software developed by the OpenSSL Project  
 \* for use in the OpenSSL Toolkit (<http://www.openssl.org/>)"  
 \*  
 \* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY  
 \* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE  
 \* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR  
 \* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR  
 \* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,  
 \* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT  
 \* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;  
 \* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)  
 \* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,  
 \* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)  
 \* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED  
 \* OF THE POSSIBILITY OF SUCH DAMAGE.  
 \* =====  
 \*  
 \* This product includes cryptographic software written by Eric Young  
 \* (eay@cryptsoft.com). This product includes software written by Tim  
 \* Hudson (tjh@cryptsoft.com).  
 \*  
 \*/

Original SSLeay License

-----  
 /\* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)  
 \* All rights reserved.  
 \*  
 \* This package is an SSL implementation written  
 \* by Eric Young (eay@cryptsoft.com).  
 \* The implementation was written so as to conform with Netscapes SSL.  
 \*  
 \* This library is free for commercial and non-commercial use as long as  
 \* the following conditions are aheared to. The following conditions  
 \* apply to all code found in this distribution, be it the RC4, RSA,

\* lhash, DES, etc., code; not just the SSL code. The SSL documentation  
 \* included with this distribution is covered by the same copyright terms  
 \* except that the holder is Tim Hudson (tjh@cryptsoft.com).  
 \*  
 \* Copyright remains Eric Young's, and as such any Copyright notices in  
 \* the code are not to be removed.  
 \* If this package is used in a product, Eric Young should be given attribution  
 \* as the author of the parts of the library used.  
 \* This can be in the form of a textual message at program startup or  
 \* in documentation (online or textual) provided with the package.  
 \*  
 \* Redistribution and use in source and binary forms, with or without  
 \* modification, are permitted provided that the following conditions  
 \* are met:  
 \* 1. Redistributions of source code must retain the copyright  
 \* notice, this list of conditions and the following disclaimer.  
 \* 2. Redistributions in binary form must reproduce the above copyright  
 \* notice, this list of conditions and the following disclaimer in the  
 \* documentation and/or other materials provided with the distribution.  
 \* 3. All advertising materials mentioning features or use of this software  
 \* must display the following acknowledgement:  
 \* "This product includes cryptographic software written by  
 \* Eric Young (eay@cryptsoft.com)"  
 \* The word 'cryptographic' can be left out if the routines from the library  
 \* being used are not cryptographic related :-).  
 \* 4. If you include any Windows specific code (or a derivative thereof) from  
 \* the apps directory (application code) you must include an acknowledgement:  
 \* "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"  
 \*  
 \* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS" AND  
 \* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE  
 \* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE  
 \* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE  
 \* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL  
 \* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
 \* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)  
 \* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT  
 \* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY  
 \* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF  
 \* SUCH DAMAGE.  
 \*  
 \* The licence and distribution terms for any publically available version or  
 \* derivative of this code cannot be changed. i.e. this code cannot simply be  
 \* copied and put under another distribution licence  
 \* [including the GNU Public Licence.]  
 \*/

LICENSE ISSUES

=====  
The OpenSSL toolkit stays under a double license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

#### OpenSSL License

-----  
/\* =====  
\* Copyright (c) 1998-2018 The OpenSSL Project. All rights reserved.  
\*  
\* Redistribution and use in source and binary forms, with or without  
\* modification, are permitted provided that the following conditions  
\* are met:  
\*  
\* 1. Redistributions of source code must retain the above copyright  
\* notice, this list of conditions and the following disclaimer.  
\*  
\* 2. Redistributions in binary form must reproduce the above copyright  
\* notice, this list of conditions and the following disclaimer in  
\* the documentation and/or other materials provided with the  
\* distribution.  
\*  
\* 3. All advertising materials mentioning features or use of this  
\* software must display the following acknowledgment:  
\* "This product includes software developed by the OpenSSL Project  
\* for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)"  
\*  
\* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to  
\* endorse or promote products derived from this software without  
\* prior written permission. For written permission, please contact  
\* openssl-core@openssl.org.  
\*  
\* 5. Products derived from this software may not be called "OpenSSL"  
\* nor may "OpenSSL" appear in their names without prior written  
\* permission of the OpenSSL Project.  
\*  
\* 6. Redistributions of any form whatsoever must retain the following  
\* acknowledgment:  
\* "This product includes software developed by the OpenSSL Project  
\* for use in the OpenSSL Toolkit (<http://www.openssl.org/>)"  
\*  
\* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY  
\* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE  
\* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR

\* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR  
\* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,  
\* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT  
\* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;  
\* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)  
\* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,  
\* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)  
\* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED  
\* OF THE POSSIBILITY OF SUCH DAMAGE.

\* =====

\*

\* This product includes cryptographic software written by Eric Young  
\* (eay@cryptsoft.com). This product includes software written by Tim  
\* Hudson (tjh@cryptsoft.com).

\*

\*/

#### Original SSLeay License

-----

/\* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

\* All rights reserved.

\*

\* This package is an SSL implementation written

\* by Eric Young (eay@cryptsoft.com).

\* The implementation was written so as to conform with Netscapes SSL.

\*

\* This library is free for commercial and non-commercial use as long as

\* the following conditions are aheared to. The following conditions

\* apply to all code found in this distribution, be it the RC4, RSA,

\* lhash, DES, etc., code; not just the SSL code. The SSL documentation

\* included with this distribution is covered by the same copyright terms

\* except that the holder is Tim Hudson (tjh@cryptsoft.com).

\*

\* Copyright remains Eric Young's, and as such any Copyright notices in

\* the code are not to be removed.

\* If this package is used in a product, Eric Young should be given attribution

\* as the author of the parts of the library used.

\* This can be in the form of a textual message at program startup or

\* in documentation (online or textual) provided with the package.

\*

\* Redistribution and use in source and binary forms, with or without

\* modification, are permitted provided that the following conditions

\* are met:

\* 1. Redistributions of source code must retain the copyright

\* notice, this list of conditions and the following disclaimer.

\* 2. Redistributions in binary form must reproduce the above copyright

\* notice, this list of conditions and the following disclaimer in the

- \* documentation and/or other materials provided with the distribution.
- \* 3. All advertising materials mentioning features or use of this software
- \* must display the following acknowledgement:
- \* "This product includes cryptographic software written by
- \* Eric Young (eay@cryptsoft.com)"
- \* The word 'cryptographic' can be left out if the routines from the library
- \* being used are not cryptographic related :-).
- \* 4. If you include any Windows specific code (or a derivative thereof) from
- \* the apps directory (application code) you must include an acknowledgement:
- \* "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
- \*
- \* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
- \* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
- \* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
- \* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
- \* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
- \* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
- \* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
- \* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
- \* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
- \* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
- \* SUCH DAMAGE.
- \*
- \* The licence and distribution terms for any publically available version or
- \* derivative of this code cannot be changed. i.e. this code cannot simply be
- \* copied and put under another distribution licence
- \* [including the GNU Public Licence.]
- \*/

## 1.22 opus 1.1

### 1.22.1 Available under license :

Copyright 2001-2011 Xiph.Org, Skype Limited, Octasic,  
 Jean-Marc Valin, Timothy B. Terriberry,  
 CSIRO, Gregory Maxwell, Mark Borgerding,  
 Erik de Castro Lopo

Redistribution and use in source and binary forms, with or without  
 modification, are permitted provided that the following conditions  
 are met:

- Redistributions of source code must retain the above copyright  
 notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright  
 notice, this list of conditions and the following disclaimer in the

documentation and/or other materials provided with the distribution.

- Neither the name of Internet Society, IETF or IETF Trust, nor the names of specific contributors, may be used to endorse or promote products derived from this software without specific prior written permission.

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

Opus is subject to the royalty-free patent licenses which are specified at:

Xiph.Org Foundation:  
<https://datatracker.ietf.org/ipr/1524/>

Microsoft Corporation:  
<https://datatracker.ietf.org/ipr/1914/>

Broadcom Corporation:  
<https://datatracker.ietf.org/ipr/1526/>

## 1.23 protobuf-cpp 3.7.1

### 1.23.1 Available under license :

Copyright 2008 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- \* Neither the name of Google Inc. nor the names of its

contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

Code generated by the Protocol Buffer compiler is owned by the owner of the input file used when generating it. This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license. This file contains a list of people who have made large contributions to the public version of Protocol Buffers.

Original Protocol Buffers design and implementation:

Sanjay Ghemawat <sanjay@google.com>

Jeff Dean <jeff@google.com>

Daniel Dulitz <daniel@google.com>

Craig Silverstein

Paul Haahr <haahr@google.com>

Corey Anderson <corin@google.com>

(and many others)

Proto2 C++ and Java primary author:

Kenton Varda <kenton@google.com>

Proto2 Python primary authors:

Will Robinson <robinson@google.com>

Petar Petrov <petar@google.com>

Java Nano primary authors:

Brian Duff <bduff@google.com>

Tom Chao <chaot@google.com>

Max Cai <maxtroy@google.com>

Ulas Kirazci <ulas@google.com>

Large code contributions:

Jason Hsueh <jasonh@google.com>

Joseph Schorr <jschorr@google.com>

Wenbo Zhu <wenboz@google.com>

Large quantity of code reviews:

Scott Bruce <sbruce@google.com>  
Frank Yellin  
Neal Norwitz <nnorwitz@google.com>  
Jeffrey Yasskin <jyasskin@google.com>  
Ambrose Feinstein <ambrose@google.com>

Documentation:

Lisa Carey <lcarey@google.com>

Maven packaging:

Gregory Kick <gak@google.com>

Patch contributors:

Kevin Ko <kevin.s.ko@gmail.com>  
\* Small patch to handle trailing slashes in --proto\_path flag.

Johan Euphrosine <proppy@aminche.com>  
\* Small patch to fix Python CallMethod().

Ulrich Kunitz <kune@deine-taler.de>  
\* Small optimizations to Python serialization.

Leandro Lucarella <llucax@gmail.com>  
\* VI syntax highlighting tweaks.  
\* Fix compiler to not make output executable.

Dilip Joseph <dilip.antony.joseph@gmail.com>  
\* Heuristic detection of sub-messages when printing unknown fields in text format.

Brian Atkinson <nairb774@gmail.com>  
\* Added @Override annotation to generated Java code where appropriate.

Vincent Choinire <Choiniere.Vincent@hydro.qc.ca>  
\* Tru64 support.

Monty Taylor <monty.taylor@gmail.com>  
\* Solaris 10 + Sun Studio fixes.

Alek Storm <alek.storm@gmail.com>  
\* Slicing support for repeated scalar fields for the Python API.

Oleg Smolsky <oleg.smolsky@gmail.com>  
\* MS Visual Studio error format option.  
\* Detect unordered\_map in stl\_hash.m4.

Brian Olson <brianolson@google.com>  
\* gzip/zlib I/O support.

Michael Poole <mdpoole@troilus.org>  
\* Fixed warnings about generated constructors not explicitly initializing all fields (only present with certain compiler settings).  
\* Added generation of field number constants.

Wink Saville <wink@google.com>  
\* Fixed initialization ordering problem in logging code.

Will Pierce <willp@nuclei.com>  
\* Small patch improving performance of in Python serialization.



Alexandre Vassalotti <alexandre@peadrop.com>

- \* Emacs mode for Protocol Buffers (editors/protobuf-mode.el).

Scott Stafford <scott.stafford@gmail.com>

- \* Added Swap(), SwapElements(), and RemoveLast() to Reflection interface.

Alexander Melnikov <alm@sibmail.ru>

- \* HPUX support.

Oliver Jowett <oliver.jowett@gmail.com>

- \* Detect whether zlib is new enough in configure script.
- \* Fixes for Solaris 10 32/64-bit confusion.

Evan Jones <evanj@mit.edu>

- \* Optimize Java serialization code when writing a small message to a stream.
- \* Optimize Java serialization of strings so that UTF-8 encoding happens only once per string per serialization call.
- \* Clean up some Java warnings.
- \* Fix bug with permanent callbacks that delete themselves when run.

Michael Kucharski <m.kucharski@gmail.com>

- \* Added CodedInputStream.getTotalBytesRead().

Kacper Kowalik <xarthisius.kk@gmail.com>

- \* Fixed m4/acx\_pthread.m4 problem for some Linux distributions.

William Orr <will@worrbase.com>

- \* Fixed detection of sched\_yield on Solaris.
- \* Added atomicops for Solaris

Andrew Paprocki <andrew@ishiboo.com>

- \* Fixed minor IBM xLC compiler build issues
- \* Added atomicops for AIX (POWER)

Copyright 2008, Google Inc.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT

LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License  
Version 2.0, January 2004  
<http://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications

represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.
3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without

modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade

names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.
  
8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
  
9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[ ]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier

identification within third-party archives.

Copyright [2007] Neal Norwitz  
Portions Copyright [2007] Google Inc.

Licensed under the Apache License, Version 2.0 (the "License");  
you may not use this file except in compliance with the License.  
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software  
distributed under the License is distributed on an "AS IS" BASIS,  
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.  
See the License for the specific language governing permissions and  
limitations under the License.

# This file contains a list of people who've made non-trivial  
# contribution to the Google C++ Mocking Framework project. People  
# who commit code to the project are encouraged to add their names  
# here. Please keep the list sorted by first names.

Benoit Sigoure <tsuna@google.com>  
Bogdan Pilocu <boo@google.com>  
Chandler Carruth <chandlerc@google.com>  
Dave MacLachlan <dmaclach@gmail.com>  
David Anderson <danderson@google.com>  
Dean Sturtevant  
Gene Volovich <gv@cite.com>  
Hal Burch <gmock@hburch.com>  
Jeffrey Yasskin <jyasskin@google.com>  
Jim Keller <jimkeller@google.com>  
Joe Walnes <joe@truemesh.com>  
Jon Wray <jwray@google.com>  
Keir Mierle <mierle@gmail.com>  
Keith Ray <keith.ray@gmail.com>  
Kostya Serebryany <kcc@google.com>  
Lev Makhlis  
Manuel Klimek <klimek@google.com>  
Mario Tanev <radix@google.com>  
Mark Paskin  
Markus Heule <markus.heule@gmail.com>  
Matthew Simmons <simmonmt@acm.org>  
Mike Bland <mbland@google.com>  
Neal Norwitz <nnorwitz@gmail.com>  
Nermin Ozkiranartli <nermin@google.com>  
Owen Carlsen <ocarlsen@google.com>  
Paneendra Ba <paneendra@google.com>  
Paul Menage <menage@google.com>

Piotr Kaminski <piotr@google.com>  
Russ Rufer <russ@pentad.com>  
Sverre Sundsdal <sundsda@gmail.com>  
Takeshi Yoshino <tyoshino@google.com>  
Vadim Berman <vadimb@google.com>  
Vlad Losev <vladl@google.com>  
Wolfgang Klier <wklier@google.com>  
Zhanyong Wan <wan@google.com>  
# This file contains a list of people who've made non-trivial  
# contribution to the Google C++ Testing Framework project. People  
# who commit code to the project are encouraged to add their names  
# here. Please keep the list sorted by first names.

Ajay Joshi <jaj@google.com>  
Balzs Dn <balazs.dan@gmail.com>  
Bharat Mediratta <bharat@menalto.com>  
Chandler Carruth <chandlerc@google.com>  
Chris Prince <cprince@google.com>  
Chris Taylor <taylorc@google.com>  
Dan Egnor <egnor@google.com>  
Eric Roman <eroman@chromium.org>  
Hady Zalek <hady.zalek@gmail.com>  
Jeffrey Yasskin <jyasskin@google.com>  
Ji Sigursson <joi@google.com>  
Keir Mierle <mierle@gmail.com>  
Keith Ray <keith.ray@gmail.com>  
Kenton Varda <kenton@google.com>  
Manuel Klimek <klimek@google.com>  
Markus Heule <markus.heule@gmail.com>  
Mika Raento <mikie@iki.fi>  
Mikls Fazekas <mfazekas@szemafor.com>  
Pasi Valminen <pasi.valminen@gmail.com>  
Patrick Hanna <phanna@google.com>  
Patrick Riley <pfr@google.com>  
Peter Kaminski <piotr@google.com>  
Preston Jackson <preston.a.jackson@gmail.com>  
Rainer Klaffenboeck <rainer.klaffenboeck@dynatrace.com>  
Russ Cox <rsc@google.com>  
Russ Rufer <russ@pentad.com>  
Sean McAfee <eefacm@gmail.com>  
Sigurur sgeirsson <siggi@google.com>  
Tracy Bialik <tracy@pentad.com>  
Vadim Berman <vadimb@google.com>  
Vlad Losev <vladl@google.com>  
Zhanyong Wan <wan@google.com>  
Copyright 2008 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without

modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

- \* Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

Code generated by the Protocol Buffer compiler is owned by the owner of the input file used when generating it. This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

## 1.24 sqlcipher 3.4

### 1.24.1 Available under license :

The author disclaims copyright to this source code. In place of a legal notice, here is a blessing:

May you do good and not evil.

May you find forgiveness for yourself and forgive others.

May you share freely, never taking more than you give.

Copyright (c) 2008, ZETETIC LLC

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

- \* Redistributions in binary form must reproduce the above copyright



notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

\* Neither the name of the ZETETIC LLC nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

## 1.25 sqlite 3.28.0

### 1.25.1 Available under license :

The author disclaims copyright to this source code. In place of a legal notice, here is a blessing:

May you do good and not evil.  
May you find forgiveness for yourself and forgive others.  
May you share freely, never taking more than you give.

## 1.26 tinyxml 2.6.2

### 1.26.1 Available under license :

```
/*  
www.sourceforge.net/projects/tinyxml  
Original code (2.0 and earlier )copyright (c) 2000-2006 Lee Thomason (www.grinninglizard.com)
```

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.

2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.

3. This notice may not be removed or altered from any source distribution.

\*/

## 1.27 Zlib 1.2.3

### 1.27.1 Available under license :

Copyright (C) 1995-2005 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly      Mark Adler  
jloup@gzip.org      madler@alumni.caltech.edu

## 1.28 zlib 1.2.8

### 1.28.1 Available under license :

/\* zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.8, April 28th, 2013

Copyright (C) 1995-2013 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it

freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly      Mark Adler  
jloup@gzip.org      madler@alumni.caltech.edu

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950> (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

\*/

Boost Software License - Version 1.0 - August 17th, 2003

Permission is hereby granted, free of charge, to any person or organization obtaining a copy of the software and accompanying documentation covered by this license (the "Software") to use, reproduce, display, distribute, execute, and transmit the Software, and to prepare derivative works of the Software, and to permit third-parties to whom the Software is furnished to do so, all subject to the following:

The copyright notices in the Software and this entire statement, including the above license grant, this restriction and the following disclaimer, must be included in all copies of the Software, in whole or in part, and all derivative works of the Software, unless such copies or derivative works are solely in the form of machine-executable object code generated by a source language processor.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR ANYONE DISTRIBUTING THE SOFTWARE BE LIABLE FOR ANY DAMAGES OR OTHER LIABILITY, WHETHER IN CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

```
-----  
--          ZLib for Ada thick binding.          --  
--                                           --  
--          Copyright (C) 2002-2004 Dmitriy Anisimkov      --  
--                                           --  
-- This library is free software; you can redistribute it and/or modify  --  
-- it under the terms of the GNU General Public License as published by  --
```

-- the Free Software Foundation; either version 2 of the License, or (at --  
-- your option) any later version. --  
--  
-- This library is distributed in the hope that it will be useful, but --  
-- WITHOUT ANY WARRANTY; without even the implied warranty of --  
-- MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU --  
-- General Public License for more details. --  
--  
-- You should have received a copy of the GNU General Public License --  
-- along with this library; if not, write to the Free Software Foundation, --  
-- Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA. --  
--  
-- As a special exception, if other files instantiate generics from this --  
-- unit, or you link this unit with other files to produce an executable, --  
-- this unit does not by itself cause the resulting executable to be --  
-- covered by the GNU General Public License. This exception does not --  
-- however invalidate any other reasons why the executable file might be --  
-- covered by the GNU Public License. --

-----

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: [www.cisco.com/go/trademarks](http://www.cisco.com/go/trademarks). Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

©2019 Cisco Systems, Inc. All rights reserved.