



Open Source Used In Cisco Prime Performance Manager 1.5

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: 78EE117C99-48882776

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 78EE117C99-48882776

Contents

1.1 Apache Derby 10.8 :10.8.1.2

1.1.1 Available under license

1.2 Apache Tomcat 7.0

1.2.1 Available under license

1.3 batik 1.7

1.3.1 Available under license

1.4 commons-cli 1.1

1.4.1 Available under license

1.5 commons-codec 1.6

1.5.1 Available under license

1.6 commons-collections 3.1

1.6.1 Available under license

1.7 commons-dbcp 1.2.1

1.7.1 Available under license

1.8 commons-io 1.4

1.8.1 Available under license

1.9 commons-jxpath-1.2.jar 1.2

1.9.1 Available under license

1.10 commons-lang 2.1

1.10.1 Available under license

1.11 commons-lang3 3.1

1.11.1 Available under license

1.12 commons-net 3.1

1.12.1 Available under license

1.13 commons-pool 1.3

1.13.1 Available under license

1.14 cURL 7.27.0

1.14.1 Available under license

1.15 fping 2.4 :b2

1.15.1 Available under license

1.16 fping_script 2.4 :b2

1.16.1 Available under license

1.17 Glazed Lists 1.8.0

1.17.1 Available under license

1.18 gnutls 1.4.1 :2

1.18.1 Available under license

1.19 google-gson 2.2.2

1.19.1 Available under license

1.20 jackson-all 1.8.5

1.20.1 Available under license

1.21 JAX-WS 2.2

1.21.1 Available under license

1.22 JBoss 4.2.2

1.22.1 Available under license

1.23 JBoss Drools 4.0.7

1.23.1 Available under license

1.24 JCraft JSch 0.1.50

1.24.1 Available under license

1.25 JFreeChart 1.0.1

1.25.1 Available under license

1.26 JPam 1.1

1.26.1 Available under license

1.27 jQuery 1.6.2

1.27.1 Available under license

1.28 jquery-ui 1.10.3

1.28.1 Available under license

1.29 jzlib 1.0.7

1.29.1 Available under license

1.30 leveldbjni 1.2

1.30.1 Available under license

1.31 libpcap 1.2.1

1.31.1 Available under license

1.32 libssh2 1.4.0

1.32.1 Available under license

1.33 libvirt 0.8.4

- 1.33.1 Available under license
- 1.34 libxml2 2.9.0 :Fri Jul 10 16:11:34 2009 Daniel Veillard**
 - 1.34.1 Available under license
- 1.35 Net SNMP - net-snmp 5.6.1**
 - 1.35.1 Available under license
- 1.36 OpenForecast 0.4**
 - 1.36.1 Available under license
- 1.37 openssl 0.9.8y :9.0.27.20130304**
 - 1.37.1 Notifications
 - 1.37.2 Available under license
- 1.38 openwsman-core-1.5.9 1.5.9**
 - 1.38.1 Available under license
- 1.39 PAM Radius 1.3.17**
 - 1.39.1 Available under license
- 1.40 PAM Tacplus 1.3.2**
 - 1.40.1 Available under license
- 1.41 pam_radius 1.3.17**
 - 1.41.1 Available under license
- 1.42 perl 5.12.3**
 - 1.42.1 Available under license
- 1.43 phantomjs v1**
 - 1.43.1 Available under license
- 1.44 sbliim-sfcc-2.0.2 2.0.2**
 - 1.44.1 Available under license
- 1.45 tar 1.26**
 - 1.45.1 Available under license
- 1.46 unzip 6.0**
 - 1.46.1 Available under license
- 1.47 velocity 1.6.2**
 - 1.47.1 Available under license
- 1.48 zip 3.0**
 - 1.48.1 Available under license

1.1 Apache Derby 10.8 :10.8.1.2

1.1.1 Available under 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.

=====
== NOTICE file corresponding to section 4(d) of the Apache License, ==
== Version 2.0, in this case for the Apache Derby distribution. ==
=====

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

Portions of Derby were originally developed by
International Business Machines Corporation and are
licensed to the Apache Software Foundation under the
"Software Grant and Corporate Contribution License Agreement",
informally known as the "Derby CLA".

The portion of the functionTests under 'nist' was originally
developed by the National Institute of Standards and Technology (NIST),
an agency of the United States Department of Commerce, and adapted by
International Business Machines Corporation in accordance with the NIST
Software Acknowledgment and Redistribution document at
http://www.itl.nist.gov/div897/ctg/sql_form.htm

The XSL stylesheets in the documentation source directory 'lib'
were originally developed by the DITA Open Toolkit project as part
of DITA-OT 1.1.2.1. These files are copyright 2004, 2005 IBM Corp.
and licensed under the Apache License Version 2.0. See DITA project
page at <http://dita-ot.sourceforge.net/>

=====
== NOTICE file corresponding to section 4(d) of the Apache License,
== Version 2.0, in this case for the Apache Derby distribution.
==
== DO NOT EDIT THIS FILE DIRECTLY. IT IS GENERATED
== BY THE buildnotice TARGET IN THE TOP LEVEL build.xml FILE.
==
=====

Apache Derby
Copyright 2004-2011 The Apache Software Foundation

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

Portions of Derby were originally developed by International Business Machines Corporation and are licensed to the Apache Software Foundation under the "Software Grant and Corporate Contribution License Agreement", informally known as the "Derby CLA".

The following copyright notice(s) were affixed to portions of the code with which this file is now or was at one time distributed and are placed here unaltered.

(C) Copyright 1997,2004 International Business Machines Corporation. All rights reserved.

(C) Copyright IBM Corp. 2003.

=====
The portion of the functionTests under 'nist' was originally developed by the National Institute of Standards and Technology (NIST), an agency of the United States Department of Commerce, and adapted by International Business Machines Corporation in accordance with the NIST Software Acknowledgment and Redistribution document at http://www.itl.nist.gov/div897/ctg/sql_form.htm

=====
The JDBC apis for small devices and JDBC3 (under java/stubs/jsr169 and java/stubs/jdbc3) were produced by trimming sources supplied by the Apache Harmony project. In addition, the Harmony SerialBlob and SerialClob implementations are used. The following notice covers the Harmony sources:

Portions of Harmony were originally developed by Intel Corporation and are licensed to the Apache Software Foundation under the "Software Grant and Corporate Contribution License Agreement", informally known as the "Intel Harmony CLA".

=====
The Derby build relies on source files supplied by the Apache Felix project. The following notice covers the Felix files:

Apache Felix Main

I. Included Software

This product includes software developed at
The Apache Software Foundation (<http://www.apache.org/>).
Licensed under the Apache License 2.0.

This product includes software developed at
The OSGi Alliance (<http://www.osgi.org/>).
Copyright (c) OSGi Alliance (2000, 2007).
Licensed under the Apache License 2.0.

This product includes software from <http://kxml.sourceforge.net>.
Copyright (c) 2002,2003, Stefan Haustein, Oberhausen, Rhld., Germany.
Licensed under BSD License.

II. Used Software

This product uses software developed at
The OSGi Alliance (<http://www.osgi.org/>).
Copyright (c) OSGi Alliance (2000, 2007).
Licensed under the Apache License 2.0.

III. License Summary

- Apache License 2.0
- BSD License

=====

The Derby build relies on jar files supplied by the Apache Xalan project. The following notice covers the Xalan jar files:

=====

== NOTICE file corresponding to section 4(d) of the Apache License, ==

== Version 2.0, in this case for the Apache Xalan Java distribution. ==

=====

Apache Xalan (Xalan XSLT processor)
Copyright 1999-2006 The Apache Software Foundation

Apache Xalan (Xalan serializer)
Copyright 1999-2006 The Apache Software Foundation

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

Portions of this software was originally based on the following:

- software copyright (c) 1999-2002, Lotus Development Corporation.,
<http://www.lotus.com>.
- software copyright (c) 2001-2002, Sun Microsystems.,
<http://www.sun.com>.
- software copyright (c) 2003, IBM Corporation.,
<http://www.ibm.com>.

The binary distribution package (ie. jars, samples and documentation) of
this product includes software developed by the following:

- The Apache Software Foundation
 - Xerces Java - see LICENSE.txt
 - JAXP 1.3 APIs - see LICENSE.txt
 - Bytecode Engineering Library - see LICENSE.txt
 - Regular Expression - see LICENSE.txt
- Scott Hudson, Frank Flannery, C. Scott Ananian
 - CUP Parser Generator runtime (javacup\runtime) - see LICENSE.txt

The source distribution package (ie. all source and tools required to build
Xalan Java) of this product includes software developed by the following:

- The Apache Software Foundation
 - Xerces Java - see LICENSE.txt
 - JAXP 1.3 APIs - see LICENSE.txt
 - Bytecode Engineering Library - see LICENSE.txt
 - Regular Expression - see LICENSE.txt
 - Ant - see LICENSE.txt
 - Stylebook doc tool - see LICENSE.txt
- Elliot Joel Berk and C. Scott Ananian
 - Lexical Analyzer Generator (JLex) - see LICENSE.txt

Apache Xerces Java
Copyright 1999-2006 The Apache Software Foundation

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

Portions of Apache Xerces Java in xercesImpl.jar and xml-apis.jar

were originally based on the following:

- software copyright (c) 1999, IBM Corporation., <http://www.ibm.com>.
- software copyright (c) 1999, Sun Microsystems., <http://www.sun.com>.
- voluntary contributions made by Paul Eng on behalf of the Apache Software Foundation that were originally developed at iClick, Inc., software copyright (c) 1999.

Apache xml-commons xml-apis (redistribution of xml-apis.jar)

Apache XML Commons

Copyright 2001-2003,2006 The Apache Software Foundation.

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

Portions of this software were originally based on the following:

- software copyright (c) 1999, IBM Corporation., <http://www.ibm.com>.
- software copyright (c) 1999, Sun Microsystems., <http://www.sun.com>.
- software copyright (c) 2000 World Wide Web Consortium, <http://www.w3.org>

1.2 Apache Tomcat 7.0

1.2.1 Available under 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 TOMCAT SUBCOMPONENTS:

Apache Tomcat includes a number of subcomponents with separate copyright notices and license terms. Your use of these subcomponents is subject to the terms and conditions of the following licenses.

For the jasper-jdt.jar component:

Eclipse Public License - v 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

1. DEFINITIONS

"Contribution" means:

a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and

b) in the case of each subsequent Contributor:

i) changes to the Program, and

ii) additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents" mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

2. GRANT OF RIGHTS

a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.

b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form.

This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.

c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.

d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a) it complies with the terms and conditions of this Agreement; and
- b) its license agreement:
 - i) effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;
 - ii) effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
 - iii) states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and
 - iv) states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a) it must be made available under this Agreement; and
- b) a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM IS PROVIDED 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. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), 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 OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time.

No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

For the Windows Installer component:

- * All NSIS source code, plug-ins, documentation, examples, header files and graphics, with the exception of the compression modules and where otherwise noted, are licensed under the zlib/libpng license.
- * The zlib compression module for NSIS is licensed under the zlib/libpng license.
- * The bzip2 compression module for NSIS is licensed under the bzip2 license.
- * The lzma compression module for NSIS is licensed under the Common Public License version 1.0.

zlib/libpng license

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.

bzip2 license

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. 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.
3. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
4. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

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.

Julian Seward, Cambridge, UK.

jseward@acm.org

Common Public License version 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS COMMON PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

1. DEFINITIONS

"Contribution" means:

a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and b) in the case of each subsequent Contributor:

i) changes to the Program, and

ii) additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents " mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

2. GRANT OF RIGHTS

a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.

b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.

c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole

responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.

d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

a) it complies with the terms and conditions of this Agreement; and

b) its license agreement:

i) effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;

ii) effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;

iii) states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and

iv) states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

a) it must be made available under this Agreement; and

b) a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM IS PROVIDED 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. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL,

SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), 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 OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against a Contributor with respect to a patent applicable to software (including a cross-claim or counterclaim in a lawsuit), then any patent licenses granted by that Contributor to such Recipient under this Agreement shall terminate as of the date such litigation is filed. In addition, if Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. IBM is the initial Agreement Steward. IBM may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the

intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

Special exception for LZMA compression module

Igor Pavlov and Amir Szekely, the authors of the LZMA compression module for NSIS, expressly permit you to statically or dynamically link your code (or bind by name) to the files from the LZMA compression module for NSIS without subjecting your linked code to the terms of the Common Public license version 1.0. Any modifications or additions to files from the LZMA compression module for NSIS, however, are subject to the terms of the Common Public License version 1.0.

Apache Tomcat

Copyright 1999-2010 The Apache Software Foundation

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

The Windows Installer is built with the Nullsoft
Scriptable Install System (NSIS), which is
open source software. The original software and
related information is available at
<http://nsis.sourceforge.net>.

Java compilation software for JSP pages is provided by Eclipse,
which is open source software. The original software and
related information is available at
<http://www.eclipse.org>.

1.3 batik 1.7

1.3.1 Available under 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 Batik

Copyright 1999-2007 The Apache Software Foundation

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

This software contains code from the World Wide Web Consortium (W3C) for the Document Object Model API (DOM API) and SVG Document Type Definition (DTD).

This software contains code from the International Organisation for Standardization for the definition of character entities used in the software's documentation.

This product includes images from the Tango Desktop Project (<http://tango.freedesktop.org/>).

This product includes images from the Pasodoble Icon Theme (<http://www.jesusda.com/projects/pasodoble>).

1.4 commons-cli 1.1

1.4.1 Available under 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 Commons CLI

Copyright 2001-2007 The Apache Software Foundation

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

1.5 commons-codec 1.6

1.5.1 Available under 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 Commons Codec

Copyright 2002-2011 The Apache Software Foundation

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

src/test/org/apache/commons/codec/language/DoubleMetaphoneTest.java contains
test data from <http://aspell.sourceforge.net/test/batch0.tab>.

Copyright (C) 2002 Kevin Atkinson (kevin@gnu.org). Verbatim copying and distribution of this entire article is permitted in any medium, provided this notice is preserved.

/*
* Licensed to the Apache Software Foundation (ASF) under one or more
* contributor license agreements. See the NOTICE file distributed with
* this work for additional information regarding copyright ownership.
* The ASF licenses this file to You 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.
*/

1.6 commons-collections 3.1

1.6.1 Available under 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.

This product includes software developed by

The Apache Software Foundation (<http://www.apache.org/>).

1.7 commons-dbcp 1.2.1

1.7.1 Available under 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 Jakarta Commons DBCP

Copyright 1999-2007 The Apache Software Foundation

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

1.8 commons-io 1.4

1.8.1 Available under 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 Commons IO

Copyright 2001-2008 The Apache Software Foundation

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

1.9 commons-jxpath-1.2.jar 1.2

1.9.1 Available under 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.

1.10 commons-lang 2.1

1.10.1 Available under 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.

This product includes software developed by

The Apache Software Foundation (<http://www.apache.org/>).

1.11 commons-lang3 3.1

1.11.1 Available under 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 Commons Lang

Copyright 2001-2011 The Apache Software Foundation

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

This product includes software from the Spring Framework,
under the Apache License 2.0 (see: `StringUtils.containsWhitespace()`)

/*

* Licensed to the Apache Software Foundation (ASF) under one or more
* contributor license agreements. See the NOTICE file distributed with
* this work for additional information regarding copyright ownership.
* The ASF licenses this file to You 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.

*/

1.12 commons-net 3.1

1.12.1 Available under 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 Commons Net

Copyright 2001-2012 The Apache Software Foundation

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

1.13 commons-pool 1.3

1.13.1 Available under 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.

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

1.14 cURL 7.27.0

1.14.1 Available under license :

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1996 - 2013, Daniel Stenberg, <daniel@haxx.se>.

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 NON-INFRINGEMENT 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.

```

*
*      _ _ _ _ _
* Project  _||| | _||
*          / _||| | |
*          | ( _|| | _ <| | _

```


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.

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.

1.17 Glazed Lists 1.8.0

1.17.1 Available under license :

Glazed Lists is distributed under your choice of two popular open source licenses, the LGPL and the MPL. You may distribute Glazed Lists free of charge You may use Glazed Lists in a commercial or closed source application You may not create a closed-source fork of Glazed Lists

MOZILLA PUBLIC LICENSE

Version 1.1

1. Definitions.

1.0.1. "Commercial Use" means distribution or otherwise making the Covered Code available to a third party.

1.1. "Contributor" means each entity that creates or contributes to the creation of Modifications.

1.2. "Contributor Version" means the combination of the Original Code, prior Modifications used by a Contributor, and the Modifications made by that particular Contributor.

1.3. "Covered Code" means the Original Code or Modifications or the combination of the Original Code and Modifications, in each case including portions thereof.

1.4. "Electronic Distribution Mechanism" means a mechanism generally accepted in the software development community for the electronic transfer of data.

1.5. "Executable" means Covered Code in any form other than Source Code.

1.6. "Initial Developer" means the individual or entity identified as the Initial Developer in the Source Code notice required by Exhibit A.

1.7. "Larger Work" means a work which combines Covered Code or portions thereof with code not governed by the terms of this License.

1.8. "License" means this document.

1.8.1. "Licensable" means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

1.9. "Modifications" means any addition to or deletion from the substance or structure of either the Original Code or any previous Modifications. When Covered Code is released as a series of files, a Modification is:

A. Any addition to or deletion from the contents of a file containing Original Code or previous Modifications.

B. Any new file that contains any part of the Original Code or previous Modifications.

1.10. "Original Code" means Source Code of computer software code which is described in the Source Code notice required by Exhibit A as Original Code, and which, at the time of its release under this License is not already Covered Code governed by this License.

1.10.1. "Patent Claims" means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

1.11. "Source Code" means the preferred form of the Covered Code for making modifications to it, including all modules it contains, plus any associated interface definition files, scripts used to control compilation and installation of an Executable, or source code differential comparisons against either the Original Code or another well known, available Covered Code of the Contributor's choice. The Source Code can be in a compressed or archival form, provided the appropriate decompression or de-archiving software is widely available for no charge.

1.12. "You" (or "Your") means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License or a future version of this License issued under Section 6.1. For legal entities, "You" includes any entity which controls, is controlled by, or is under common control with You. For purposes of

this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. Source Code License.

2.1. The Initial Developer Grant.

The Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license, subject to third party intellectual property claims:

(a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer to use, reproduce, modify, display, perform, sublicense and distribute the Original Code (or portions thereof) with or without Modifications, and/or as part of a Larger Work; and

(b) under Patents Claims infringed by the making, using or selling of Original Code, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Code (or portions thereof).

(c) the licenses granted in this Section 2.1(a) and (b) are effective on the date Initial Developer first distributes Original Code under the terms of this License.

(d) Notwithstanding Section 2.1(b) above, no patent license is granted: 1) for code that You delete from the Original Code; 2) separate from the Original Code; or 3) for infringements caused by: i) the modification of the Original Code or ii) the combination of the Original Code with other software or devices.

2.2. Contributor Grant.

Subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license

(a) under intellectual property rights (other than patent or trademark) Licensable by Contributor, to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof) either on an unmodified basis, with other Modifications, as Covered Code and/or as part of a Larger Work; and

(b) under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have

made, and/or otherwise dispose of: 1) Modifications made by that Contributor (or portions thereof); and 2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

(c) the licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first makes Commercial Use of the Covered Code.

(d) Notwithstanding Section 2.2(b) above, no patent license is granted: 1) for any code that Contributor has deleted from the Contributor Version; 2) separate from the Contributor Version; 3) for infringements caused by: i) third party modifications of Contributor Version or ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or 4) under Patent Claims infringed by Covered Code in the absence of Modifications made by that Contributor.

3. Distribution Obligations.

3.1. Application of License.

The Modifications which You create or to which You contribute are governed by the terms of this License, including without limitation Section 2.2. The Source Code version of Covered Code may be distributed only under the terms of this License or a future version of this License released under Section 6.1, and You must include a copy of this License with every copy of the Source Code You distribute. You may not offer or impose any terms on any Source Code version that alters or restricts the applicable version of this License or the recipients' rights hereunder. However, You may include an additional document offering the additional rights described in Section 3.5.

3.2. Availability of Source Code.

Any Modification which You create or to which You contribute must be made available in Source Code form under the terms of this License either on the same media as an Executable version or via an accepted Electronic Distribution Mechanism to anyone to whom you made an Executable version available; and if made available via Electronic Distribution Mechanism, must remain available for at least twelve (12) months after the date it initially became available, or at least six (6) months after a subsequent version of that particular Modification has been made available to such recipients. You are responsible for ensuring that the Source Code version remains available even if the Electronic Distribution Mechanism is maintained by a third party.

3.3. Description of Modifications.

You must cause all Covered Code to which You contribute to contain a file documenting the changes You made to create that Covered Code and the date of any change. You must include a prominent statement that the Modification is derived, directly or indirectly, from Original Code provided by the Initial Developer and including the name of the Initial Developer in (a) the Source Code, and (b) in any notice in an Executable version or related documentation in which You describe the origin or ownership of the Covered Code.

3.4. Intellectual Property Matters

(a) Third Party Claims.

If Contributor has knowledge that a license under a third party's intellectual property rights is required to exercise the rights granted by such Contributor under Sections 2.1 or 2.2, Contributor must include a text file with the Source Code distribution titled "LEGAL" which describes the claim and the party making the claim in sufficient detail that a recipient will know whom to contact. If Contributor obtains such knowledge after the Modification is made available as described in Section 3.2, Contributor shall promptly modify the LEGAL file in all copies Contributor makes available thereafter and shall take other steps (such as notifying appropriate mailing lists or newsgroups) reasonably calculated to inform those who received the Covered Code that new knowledge has been obtained.

(b) Contributor APIs.

If Contributor's Modifications include an application programming interface and Contributor has knowledge of patent licenses which are reasonably necessary to implement that API, Contributor must also include this information in the LEGAL file.

(c) Representations.

Contributor represents that, except as disclosed pursuant to Section 3.4(a) above, Contributor believes that Contributor's Modifications are Contributor's original creation(s) and/or Contributor has sufficient rights to grant the rights conveyed by this License.

3.5. Required Notices.

You must duplicate the notice in Exhibit A in each file of the Source Code. If it is not possible to put such notice in a particular Source Code file due to its structure, then You must include such notice in a location (such as a relevant directory) where a user would be likely to look for such a notice. If You created one or more Modification(s) You may add your name as a Contributor to the notice described in Exhibit A. You must also duplicate this License in any documentation for the Source Code where You describe recipients' rights or ownership rights relating to Covered Code. You may choose to offer, and to

charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Code. However, You may do so only on Your own behalf, and not on behalf of the Initial Developer or any Contributor. You must make it absolutely clear than any such warranty, support, indemnity or liability obligation is offered by You alone, and You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

3.6. Distribution of Executable Versions.

You may distribute Covered Code in Executable form only if the requirements of Section 3.1-3.5 have been met for that Covered Code, and if You include a notice stating that the Source Code version of the Covered Code is available under the terms of this License, including a description of how and where You have fulfilled the obligations of Section 3.2. The notice must be conspicuously included in any notice in an Executable version, related documentation or collateral in which You describe recipients' rights relating to the Covered Code. You may distribute the Executable version of Covered Code or ownership rights under a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable version does not attempt to limit or alter the recipient's rights in the Source Code version from the rights set forth in this License. If You distribute the Executable version under a different license You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or any Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

3.7. Larger Works.

You may create a Larger Work by combining Covered Code with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Code.

4. Inability to Comply Due to Statute or Regulation.

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Code due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be included in the LEGAL file described in Section 3.4 and must be included with all distributions of the Source Code. Except to the

extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Application of this License.

This License applies to code to which the Initial Developer has attached the notice in Exhibit A and to related Covered Code.

6. Versions of the License.

6.1. New Versions.

Netscape Communications Corporation ("Netscape") may publish revised and/or new versions of the License from time to time. Each version will be given a distinguishing version number.

6.2. Effect of New Versions.

Once Covered Code has been published under a particular version of the License, You may always continue to use it under the terms of that version. You may also choose to use such Covered Code under the terms of any subsequent version of the License published by Netscape. No one other than Netscape has the right to modify the terms applicable to Covered Code created under this License.

6.3. Derivative Works.

If You create or use a modified version of this License (which you may only do in order to apply it to code which is not already Covered Code governed by this License), You must (a) rename Your license so that the phrases "Mozilla", "MOZILLAPL", "MOZPL", "Netscape", "MPL", "NPL" or any confusingly similar phrase do not appear in your license (except to note that your license differs from this License) and (b) otherwise make it clear that Your version of the license contains terms which differ from the Mozilla Public License and Netscape Public License. (Filling in the name of the Initial Developer, Original Code or Contributor in the notice described in Exhibit A shall not of themselves be deemed to be modifications of this License.)

7. DISCLAIMER OF WARRANTY.

COVERED CODE IS PROVIDED UNDER THIS LICENSE ON AN "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED CODE IS FREE OF DEFECTS, MERCHANTABILITY, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED CODE IS WITH YOU. SHOULD ANY COVERED CODE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER OR ANY OTHER CONTRIBUTOR) ASSUME THE COST OF ANY NECESSARY SERVICING, REPAIR OR CORRECTION. THIS DISCLAIMER

OF WARRANTY CONSTITUTES AN ESSENTIAL PART OF THIS LICENSE. NO USE OF ANY COVERED CODE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

8. TERMINATION.

8.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. All sublicenses to the Covered Code which are properly granted shall survive any termination of this License. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.

8.2. If You initiate litigation by asserting a patent infringement claim (excluding declaratory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You file such action is referred to as "Participant") alleging that:

(a) such Participant's Contributor Version directly or indirectly infringes any patent, then any and all rights granted by such Participant to You under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively, unless if within 60 days after receipt of notice You either: (i) agree in writing to pay Participant a mutually agreeable reasonable royalty for Your past and future use of Modifications made by such Participant, or (ii) withdraw Your litigation claim with respect to the Contributor Version against such Participant. If within 60 days of notice, a reasonable royalty and payment arrangement are not mutually agreed upon in writing by the parties or the litigation claim is not withdrawn, the rights granted by Participant to You under Sections 2.1 and/or 2.2 automatically terminate at the expiration of the 60 day notice period specified above.

(b) any software, hardware, or device, other than such Participant's Contributor Version, directly or indirectly infringes any patent, then any rights granted to You by such Participant under Sections 2.1(b) and 2.2(b) are revoked effective as of the date You first made, used, sold, distributed, or had made, Modifications made by that Participant.

8.3. If You assert a patent infringement claim against Participant alleging that such Participant's Contributor Version directly or indirectly infringes any patent where such claim is resolved (such as by license or settlement) prior to the initiation of patent infringement litigation, then the reasonable value of the licenses granted by such Participant under Sections 2.1 or 2.2 shall be taken into account in determining the amount or value of any payment or license.

8.4. In the event of termination under Sections 8.1 or 8.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or any distributor hereunder prior to termination shall survive termination.

9. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED CODE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTY'S NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU.

10. U.S. GOVERNMENT END USERS.

The Covered Code is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Code with only those rights set forth herein.

11. MISCELLANEOUS.

This License represents the complete agreement concerning subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. This License shall be governed by California law provisions (except to the extent applicable law, if any, provides otherwise), excluding its conflict-of-law provisions. With respect to disputes in which at least one party is a citizen of, or an entity chartered or registered to do business in the United States of America, any litigation relating to this License shall be subject to the jurisdiction of the Federal Courts of the Northern District of California, with venue lying in Santa Clara County, California, with the losing party responsible for costs, including without limitation, court costs and reasonable attorneys' fees and

expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License.

12. RESPONSIBILITY FOR CLAIMS.

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

13. MULTIPLE-LICENSED CODE.

Initial Developer may designate portions of the Covered Code as "Multiple-Licensed". "Multiple-Licensed" means that the Initial Developer permits you to utilize portions of the Covered Code under Your choice of the NPL or the alternative licenses, if any, specified by the Initial Developer in the file described in Exhibit A.

EXHIBIT A -Mozilla Public License.

"The contents of this file are subject to the Mozilla Public License Version 1.1 (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.mozilla.org/MPL/>

Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License for the specific language governing rights and limitations under the License.

The Original Code is _____.

The Initial Developer of the Original Code is _____.
Portions created by _____ are Copyright (C) _____
_____. All Rights Reserved.

Contributor(s): _____.

Alternatively, the contents of this file may be used under the terms of the _____ license (the "[_____] License"), in which case the provisions of [_____] License are applicable instead of those above. If you wish to allow use of your version of this file only under the terms of the [_____] License and not to allow others to use

your version of this file under the MPL, indicate your decision by deleting the provisions above and replace them with the notice and other provisions required by the [____] License. If you do not delete the provisions above, a recipient may use your version of this file under either the MPL or the [____] License."

[NOTE: The text of this Exhibit A may differ slightly from the text of the notices in the Source Code files of the Original Code. You should use the text of this Exhibit A rather than the text found in the Original Code Source Code for Your Modifications.]

1.18 gnutls 1.4.1 :2

1.18.1 Available under license :

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.

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 an 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!

1.19 google-gson 2.2.2

1.19.1 Available under license :

Google Gson

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 2008-2011 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.

1.20 jackson-all 1.8.5

1.20.1 Available under license :

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!

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.

This copy of Jackson JSON processor is licensed under the Apache (Software) License, version 2.0 ("the License"). See the License for details about distribution rights, and the specific rights regarding derivate works.

You may obtain a copy of the License at:

<http://www.apache.org/licenses/>

A copy is also included with both the the downloadable source code package and jar that contains class bytecodes, as file "ASL 2.0". In both cases, that file should be located next to this file: in source distribution the location should be "release-notes/asl"; and in jar "META-INF/"
GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 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 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., 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 copy of Jackson JSON processor is licensed under the Lesser General Public License (LGPL), version 2.1 ("the License"). See the License for details about distribution rights, and the specific rights regarding derivate works.

You may obtain a copy of the License at:

<http://www.gnu.org/licenses/licenses.html>

A copy is also included with both the the downloadable source code package and jar that contains class bytecodes, as file "LGPL 2.1". In both cases, that file should be located next to this file: in source distribution the location should be "release-notes/lgpl"; and in jar "META-INF/" This product currently only contains code developed by authors of specific components, as identified by the source code files; if such notes are missing files have been created by Tatu Saloranta.

For additional credits (generally to people who reported problems) see CREDITS file.

1.21 JAX-WS 2.2

1.21.1 Available under license :

COMMON DEVELOPMENT AND DISTRIBUTION LICENSE (CDDL) Version 1.0

*

1. Definitions.

o

1.1. Contributor means each individual or entity that creates or contributes to the creation of Modifications.

o

1.2. Contributor Version means the combination of the Original Software, prior Modifications used by a Contributor (if any), and the Modifications made by that particular Contributor.

o

1.3. Covered Software means (a) the Original Software, or (b) Modifications, or (c) the combination of files containing Original Software with files containing Modifications, in each case including portions thereof.

o

1.4. Executable means the Covered Software in any form other than Source Code.

o

1.5. Initial Developer means the individual or entity that first makes Original Software available under this License.

o

1.6. Larger Work means a work which combines Covered Software or portions thereof with code not governed by the terms of this License.

o

1.7. License means this document.

o

1.8. Licensable means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

o

1.9. Modifications means the Source Code and Executable form of any of the following:

+

A. Any file that results from an addition to, deletion from or modification of the contents of a file containing Original Software or previous Modifications;

+

B. Any new file that contains any part of the Original Software or previous Modification; or

+

C. Any new file that is contributed or otherwise made available under the terms of this License.

o

1.10. Original Software means the Source Code and Executable form of computer software code that is originally released under this License.

o

1.11. Patent Claims means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

o

1.12. Source Code means (a) the common form of computer software code in which modifications are made

and (b) associated documentation included in or with such code.

o

1.13. You (or Your) means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License. For legal entities, You includes any entity which controls, is controlled by, or is under common control with You. For purposes of this definition, control means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

*

2. License Grants.

o

2.1. The Initial Developer Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, the Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license:

+

(a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer, to use, reproduce, modify, display, perform, sublicense and distribute the Original Software (or portions thereof), with or without Modifications, and/or as part of a Larger Work; and

+

(b) under Patent Claims infringed by the making, using or selling of Original Software, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Software (or portions thereof).

+

(c) The licenses granted in Sections 2.1(a) and (b) are effective on the date Initial Developer first distributes or otherwise makes the Original Software available to a third party under the terms of this License.

+

(d) Notwithstanding Section 2.1(b) above, no patent license is granted: (1) for code that You delete from the Original Software, or (2) for infringements caused by: (i) the modification of the Original Software, or (ii) the combination of the Original Software with other software or devices.

o

2.2. Contributor Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

+

(a) under intellectual property rights (other than patent or trademark) Licensable by Contributor to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof), either on an unmodified basis, with other Modifications, as Covered Software and/or as part of a Larger Work; and

+

(b) under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have made, and/or otherwise dispose of: (1) Modifications made by that Contributor (or portions thereof); and (2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

+

(c) The licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first distributes or otherwise makes the Modifications available to a third party.

+

(d) Notwithstanding Section 2.2(b) above, no patent license is granted: (1) for any code that Contributor has deleted from the Contributor Version; (2) for infringements caused by: (i) third party modifications of Contributor Version, or (ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or (3) under Patent Claims infringed by Covered Software in the absence of Modifications made by that Contributor.

*

3. Distribution Obligations.

o

3.1. Availability of Source Code.

Any Covered Software that You distribute or otherwise make available in Executable form must also be made available in Source Code form and that Source Code form must be distributed only under the terms of this License. You must include a copy of this License with every copy of the Source Code form of the Covered Software You distribute or otherwise make available. You must inform recipients of any such Covered Software in Executable form as to how they can obtain such Covered Software in Source Code form in a reasonable manner on or through a medium customarily used for software exchange.

o

3.2. Modifications.

The Modifications that You create or to which You contribute are governed by the terms of this License. You represent that You believe Your Modifications are Your original creation(s) and/or You have sufficient rights to grant the rights conveyed by this License.

o

3.3. Required Notices.

You must include a notice in each of Your Modifications that identifies You as the Contributor of the Modification. You may not remove or alter any copyright, patent or trademark notices contained within the Covered Software, or any notices of licensing or any descriptive text giving attribution to any Contributor or the Initial Developer.

o

3.4. Application of Additional Terms.

You may not offer or impose any terms on any Covered Software in Source Code form that alters or restricts the applicable version of this License or the recipients rights hereunder. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, you may do so only on Your own behalf, and not on behalf of the Initial Developer or any Contributor. You must make it absolutely clear that any such warranty, support, indemnity or liability obligation is offered by You alone, and You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

o

3.5. Distribution of Executable Versions.

You may distribute the Executable form of the Covered Software under the terms of this License or under the terms of a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable form does not attempt to limit or alter the recipients rights in the Source Code form from the rights set forth in this License. If You distribute the Covered Software in Executable form under a different license, You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

o

3.6. Larger Works.

You may create a Larger Work by combining Covered Software with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Software.

*

4. Versions of the License.

o

4.1. New Versions.

Sun Microsystems, Inc. is the initial license steward and may publish revised and/or new versions of this License from time to time. Each version will be given a distinguishing version number. Except as provided in Section 4.3, no one other than the license steward has the right to modify this License.

o

4.2. Effect of New Versions.

You may always continue to use, distribute or otherwise make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. If the Initial Developer includes a notice in the Original Software prohibiting it from being distributed or otherwise made available under any subsequent version of the License, You must distribute and make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. Otherwise, You may also choose to use, distribute or otherwise make the Covered Software available under the terms of any subsequent version of the License published by the license steward.

o

4.3. Modified Versions.

When You are an Initial Developer and You want to create a new license for Your Original Software, You may create and use a modified version of this License if You: (a) rename the license and remove any references to the name of the license steward (except to note that the license differs from this License); and (b) otherwise make it clear that the license contains terms which differ from this License.

*

5. DISCLAIMER OF WARRANTY.

COVERED SOFTWARE IS PROVIDED UNDER THIS LICENSE ON AN AS IS BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED SOFTWARE IS FREE OF DEFECTS, MERCHANTABILITY, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED SOFTWARE IS WITH YOU. SHOULD ANY COVERED SOFTWARE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER OR ANY OTHER CONTRIBUTOR) ASSUME THE COST OF ANY NECESSARY SERVICING, REPAIR OR CORRECTION. THIS DISCLAIMER OF WARRANTY CONSTITUTES AN ESSENTIAL PART OF THIS LICENSE. NO USE OF ANY COVERED SOFTWARE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

*

6. TERMINATION.

o

6.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.

o

6.2. If You assert a patent infringement claim (excluding declaratory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You assert such claim is referred to as Participant) alleging that the Participant Software (meaning the Contributor Version where the Participant is a Contributor or the Original Software where the Participant is the Initial Developer) directly or indirectly infringes any patent, then any and all rights granted directly or indirectly to You by such Participant, the Initial Developer (if the Initial Developer is not the Participant) and all Contributors under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively and automatically at the expiration of such 60 day notice period, unless if within such 60 day period You withdraw Your claim with respect to the Participant Software against such Participant either unilaterally or pursuant to a written agreement with Participant.

o

6.3. In the event of termination under Sections 6.1 or 6.2 above, all end user licenses that have been validly granted by You or any distributor hereunder prior to termination (excluding licenses granted to You by any distributor) shall survive termination.

*

7. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED SOFTWARE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOST PROFITS, LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTYS NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU.

*

8. U.S. GOVERNMENT END USERS.

The Covered Software is a commercial item, as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of commercial computer software (as that term is defined at 48 C.F.R. 252.227-7014(a)(1)) and commercial computer software documentation as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Software with only those rights set forth herein. This U.S. Government Rights clause is in lieu of, and supersedes, any other FAR, DFAR, or other clause or provision that addresses Government rights in computer software under this License.

*

9. MISCELLANEOUS.

This License represents the complete agreement concerning subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. This License shall be governed by the law of the jurisdiction specified in a notice contained within the Original Software (except to the extent applicable law, if any, provides otherwise), excluding such jurisdictions conflict-of-law provisions. Any litigation relating to this License shall be subject to the jurisdiction of the courts located in the jurisdiction and venue specified in a notice contained within the Original Software, with the losing party responsible for costs, including, without limitation, court costs and reasonable attorneys fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License. You agree that You alone are responsible for compliance with the United States export administration regulations (and the export control laws and regulation of any other countries) when You use, distribute or otherwise make available any Covered Software.

*

10. RESPONSIBILITY FOR CLAIMS.

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be

deemed to constitute any admission of liability.

*

NOTICE PURSUANT TO SECTION 9 OF THE COMMON DEVELOPMENT AND DISTRIBUTION LICENSE (CDDL)

The code released under the CDDL shall be governed by the laws of the State of California (excluding conflict-of-law provisions). Any litigation relating to this License shall be subject to the jurisdiction of the Federal Courts of the Northern District of California and the state courts of the State of California, with venue lying in Santa Clara County, California.

The GNU General Public License (GPL) 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.

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:

o

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

o

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.

o

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:

o

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,

o

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,

o

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.

o

One line to give the program's name and a brief idea of what it does.

o

Copyright (C)

o

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.

o

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.

o

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:

o

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:

o

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.

*

"CLASSPATH" EXCEPTION TO THE GPL VERSION 2

Certain source files distributed by Sun Microsystems, Inc. are subject to the following clarification and special exception to the GPL Version 2, but only where Sun has expressly included in the particular source file's header the words

"Sun designates this particular file as subject to the "Classpath" exception as provided by Sun in the License file that accompanied this code."

Linking this library statically or dynamically with other modules is making a combined work based on this library. Thus, the terms and conditions of the GNU General Public License Version 2 cover the whole combination.

As a special exception, the copyright holders of this library give you permission to link this library with independent modules to produce an executable, regardless of the license terms of these independent modules, and to copy and distribute the resulting executable under terms of your choice, provided that you also meet, for each linked independent module, the terms and conditions of the license of that module.? An independent module is a module which is not derived from or based on this library.? If you modify this library, you may extend this exception to your version of the library, but you are not obligated to do so.? If you do not wish to do so, delete this exception statement from your version.

Joint licensing with CDDL and GPLv2

1.22 JBoss 4.2.2

1.22.1 Available under license :

LICENSE AGREEMENT

JBOSS(r)

This License Agreement governs the use of the Software Packages and any updates to the Software

Packages, regardless of the delivery mechanism. Each Software Package is a collective work

under U.S. Copyright Law. Subject to the following terms, Red Hat, Inc. ("Red Hat") grants to

the user ("Client") a license to the applicable collective work(s) pursuant to the

GNU Lesser General Public License v. 2.1 except for the following Software Packages:

(a) JBoss Portal Forums and JBoss Transactions JTS, each of which is licensed pursuant to the

GNU General Public License v.2;

(b) JBoss Rules, which is licensed pursuant to the Apache License v.2.0;

(c) an optional download for JBoss Cache for the Berkeley DB for Java database, which is licensed under the (open source) Sleepycat License (if Client does not wish to use the open source version of this database, it may purchase a license from Sleepycat Software);

and (d) the BPEL extension for JBoss jBPM, which is licensed under the Common Public License v.1, and, pursuant to the OASIS BPEL4WS standard, requires parties wishing to redistribute to enter various royalty-free patent licenses.

Each of the foregoing licenses is available at <http://www.opensource.org/licenses/index.php>.

1. The Software. "Software Packages" refer to the various software modules that are created and made available for distribution by the JBoss.org open source community at <http://www.jboss.org>. Each of the Software Packages may be comprised of hundreds of software components. The end user license agreement for each component is located in the component's source code. With the exception of certain image files identified in Section 2 below, the license terms for the components permit Client to copy, modify, and redistribute the component, in both source code and binary code forms. This agreement does not limit Client's rights under, or grant Client rights that supersede, the license terms of any particular component.

2. Intellectual Property Rights. The Software Packages are owned by Red Hat and others and are protected under copyright

and other laws. Title to the Software Packages and any component, or to any copy, modification, or merged portion shall

remain with the aforementioned, subject to the applicable license. The "JBoss" trademark, "Red Hat" trademark, the

individual Software Package trademarks, and the "Shadowman" logo are registered trademarks of Red Hat and its affiliates

in the U.S. and other countries. This agreement permits Client to distribute unmodified copies of the Software Packages

using the Red Hat trademarks that Red Hat has inserted in the Software Packages on the condition that Client follows Red Hat's

trademark guidelines for those trademarks located at <http://www.redhat.com/about/corporate/trademark/>. Client must abide by

these trademark guidelines when distributing the Software Packages, regardless of whether the Software Packages have been modified.

If Client modifies the Software Packages, then Client must replace all Red Hat trademarks and logos identified at

<http://www.jboss.com/company/logos> unless a separate agreement with Red Hat is executed or other permission granted.

Merely deleting the files containing the Red Hat trademarks may corrupt the Software Packages.

3. Limited Warranty. Except as specifically stated in this Paragraph 3 or a license for a particular component, to the maximum extent permitted under applicable law, the Software Packages and the components are provided and licensed "as is" without warranty of any kind, expressed or implied, including the implied warranties of merchantability, non-infringement or fitness for a particular purpose.

Red Hat warrants that the media on which Software Packages may be furnished will be free from defects in materials and manufacture under normal use for a period of 30 days from the date of delivery to Client.

Red Hat does not warrant that the functions contained in the Software Packages will meet Client's requirements or that the operation of the Software Packages will be entirely error free or appear precisely as described in the accompanying documentation. This warranty extends only to the party that purchases the Services

pertaining to the Software Packages from Red Hat or a Red Hat authorized distributor.

4. **Limitation of Remedies and Liability.** To the maximum extent permitted by applicable law, the remedies described below are accepted by Client as its only remedies. Red Hat's entire liability, and Client's exclusive remedies, shall be: If the Software media is defective, Client may return it within 30 days of delivery along with a copy of Client's payment receipt and Red Hat, at its option, will replace it or refund the money paid by Client for the Software. To the maximum extent permitted by applicable law, Red Hat or any Red Hat authorized dealer will not be liable to Client for any incidental or consequential damages, including lost profits or lost savings arising out of the use or inability to use the Software, even if Red Hat or such dealer has been advised of the possibility of such damages. In no event shall Red Hat's liability under this agreement exceed the amount that Client paid to Red Hat under this Agreement during the twelve months preceding the action.

5. **Export Control.** As required by U.S. law, Client represents and warrants that it:

(a) understands that the Software Packages are subject to export controls under the U.S. Commerce Department's Export Administration Regulations ("EAR");

(b) is not located in a prohibited destination country under the EAR or U.S. sanctions regulations (currently Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria);

(c) will not export, re-export, or transfer the Software Packages to any prohibited destination, entity, or individual without the necessary export license(s) or authorizations(s) from the U.S. Government;

(d) will not use or transfer the Software Packages for use in any sensitive nuclear, chemical or

biological weapons, or missile technology end-uses unless authorized by the U.S. Government by regulation or specific license;

(e) understands and agrees that if it is in the United States and exports or transfers the Software Packages to eligible end users, it will, as required by EAR Section 740.17(e), submit semi-annual reports to the Commerce Department's Bureau of Industry & Security (BIS), which include the name and address (including country) of each transferee;

and (f) understands that countries other than the United States may restrict the import, use, or export of encryption products and that it shall be solely responsible for compliance with any such import, use, or export restrictions.

6. Third Party Programs. Red Hat may distribute third party software programs with the Software Packages that are not part of the Software Packages and which Client must install separately. These third party programs are subject to their own license terms. The license terms either accompany the programs or can be viewed at <http://www.redhat.com/licenses/>. If Client does not agree to abide by the applicable license terms for such programs, then Client may not install them. If Client wishes to install the programs on more than one system or transfer the programs to another party, then Client must contact the licensor of the programs.

7. General. If any provision of this agreement is held to be unenforceable, that shall not affect the enforceability of the remaining provisions. This License Agreement shall be governed by the laws of the State of North Carolina and of the United States, without regard to any conflict of laws provisions, except that the United Nations Convention on the International Sale of Goods shall not apply.

Copyright 2006-2007 Red Hat, Inc. All rights reserved.

"JBoss" and the JBoss logo are registered trademarks of Red Hat, Inc.

All other trademarks are the property of their respective owners.

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 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 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

1.23 JBoss Drools 4.0.7

1.23.1 Available under 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.

1.24 JCraft JSch 0.1.50

1.24.1 Available under license :

```
/* -*-mode:java; c-basic-offset:2; indent-tabs-mode:nil -*- */  
/*
```

Copyright (c) 2002-2012 ymnk, JCraft,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. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED "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 JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE 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.

```
*/
```

```
package com.jcraft.jsch;
```

```
public class Buffer{  
    final byte[] tmp=new byte[4];  
    byte[] buffer;  
    int index;  
    int s;  
    public Buffer(int size){  
        buffer=new byte[size];  
        index=0;  
        s=0;  
    }  
    public Buffer(byte[] buffer){  
        this.buffer=buffer;
```

```

    index=0;
    s=0;
}
public Buffer(){ this(1024*10*2); }
public void putByte(byte foo){
    buffer[index++]=foo;
}
public void putByte(byte[] foo) {
    putByte(foo, 0, foo.length);
}
public void putByte(byte[] foo, int begin, int length) {
    System.arraycopy(foo, begin, buffer, index, length);
    index+=length;
}
public void putString(byte[] foo){
    putString(foo, 0, foo.length);
}
public void putString(byte[] foo, int begin, int length) {
    putInt(length);
    putByte(foo, begin, length);
}
public void putInt(int val) {
    tmp[0]=(byte)(val >>> 24);
    tmp[1]=(byte)(val >>> 16);
    tmp[2]=(byte)(val >>> 8);
    tmp[3]=(byte)(val);
    System.arraycopy(tmp, 0, buffer, index, 4);
    index+=4;
}
public void putLong(long val) {
    tmp[0]=(byte)(val >>> 56);
    tmp[1]=(byte)(val >>> 48);
    tmp[2]=(byte)(val >>> 40);
    tmp[3]=(byte)(val >>> 32);
    System.arraycopy(tmp, 0, buffer, index, 4);
    tmp[0]=(byte)(val >>> 24);
    tmp[1]=(byte)(val >>> 16);
    tmp[2]=(byte)(val >>> 8);
    tmp[3]=(byte)(val);
    System.arraycopy(tmp, 0, buffer, index+4, 4);
    index+=8;
}
void skip(int n) {
    index+=n;
}
void putPad(int n) {
    while(n>0){
        buffer[index++]=(byte)0;
    }
}

```

```

    n--;
}
}
public void putMPInt(byte[] foo){
    int i=foo.length;
    if((foo[0]&0x80)!=0){
        i++;
        putInt(i);
        putByte((byte)0);
    }
    else{
        putInt(i);
    }
    putByte(foo);
}
public int getLength(){
    return index-s;
}
public int getOffset(){
    return s;
}
public void setOffset(int s){
    this.s=s;
}
public long getLong(){
    long foo = getInt()&0xffffffffL;
    foo = ((foo<<32) | (getInt()&0xffffffffL));
    return foo;
}
public int getInt(){
    int foo = getShort();
    foo = ((foo<<16)&0xffff0000) | (getShort()&0xffff);
    return foo;
}
public long getUInt(){
    long foo = 0L;
    long bar = 0L;
    foo = getByte();
    foo = ((foo<<8)&0xff00)|(getByte()&0xff);
    bar = getByte();
    bar = ((bar<<8)&0xff00)|(getByte()&0xff);
    foo = ((foo<<16)&0xffff0000) | (bar&0xffff);
    return foo;
}
int getShort() {
    int foo = getByte();
    foo = ((foo<<8)&0xff00)|(getByte()&0xff);
    return foo;
}

```

```

}
public int getByte() {
    return (buffer[s++]&0xff);
}
public void getByte(byte[] foo) {
    getByte(foo, 0, foo.length);
}
void getByte(byte[] foo, int start, int len) {
    System.arraycopy(buffer, s, foo, start, len);
    s+=len;
}
public int getByte(int len) {
    int foo=s;
    s+=len;
    return foo;
}
public byte[] getMPIInt() {
    int i=getInt(); // uint32
    if(i<0 || // bigger than 0x7fffffff
        i>8*1024){
        // TODO: an exception should be thrown.
        i = 8*1024; // the session will be broken, but working around OOME.
    }
    byte[] foo=new byte[i];
    getByte(foo, 0, i);
    return foo;
}
public byte[] getMPIIntBits() {
    int bits=getInt();
    int bytes=(bits+7)/8;
    byte[] foo=new byte[bytes];
    getByte(foo, 0, bytes);
    if((foo[0]&0x80)!=0){
        byte[] bar=new byte[foo.length+1];
        bar[0]=0; // ??
        System.arraycopy(foo, 0, bar, 1, foo.length);
        foo=bar;
    }
    return foo;
}
public byte[] getString() {
    int i = getInt(); // uint32
    if(i<0 || // bigger than 0x7fffffff
        i>256*1024){
        // TODO: an exception should be thrown.
        i = 256*1024; // the session will be broken, but working around OOME.
    }
    byte[] foo=new byte[i];

```

```

    getByte(foo, 0, i);
    return foo;
}
byte[] getString(int[]start, int[]len) {
    int i=getInt();
    start[0]=getByte(i);
    len[0]=i;
    return buffer;
}
public void reset(){
    index=0;
    s=0;
}
public void shift(){
    if(s==0)return;
    System.arraycopy(buffer, s, buffer, 0, index-s);
    index=index-s;
    s=0;
}
void rewind(){
    s=0;
}

byte getCommand(){
    return buffer[5];
}

void checkFreeSize(int n){
    if(buffer.length<index+n){
        byte[] tmp = new byte[buffer.length*2];
        System.arraycopy(buffer, 0, tmp, 0, index);
        buffer = tmp;
    }
}

byte[][] getBytes(int n, String msg) throws JSchException {
    byte[][] tmp = new byte[n][];
    for(int i = 0; i < n; i++){
        int j = getInt();
        if(getLength() < j){
            throw new JSchException(msg);
        }
        tmp[i] = new byte[j];
        getByte(tmp[i]);
    }
    return tmp;
}

```

```

/*
static Buffer fromBytes(byte[]... args){
    int length = args.length*4;
    for(int i = 0; i < args.length; i++){
        length += args[i].length;
    }
    Buffer buf = new Buffer(length);
    for(int i = 0; i < args.length; i++){
        buf.putString(args[i]);
    }
    return buf;
}
*/

static Buffer fromBytes(byte[][] args){
    int length = args.length*4;
    for(int i = 0; i < args.length; i++){
        length += args[i].length;
    }
    Buffer buf = new Buffer(length);
    for(int i = 0; i < args.length; i++){
        buf.putString(args[i]);
    }
    return buf;
}

/*
static String[] chars={
    "0","1","2","3","4","5","6","7","8","9", "a","b","c","d","e","f"
};
static void dump_buffer(){
    int foo;
    for(int i=0; i<tmp_buffer_index; i++){
        foo=tmp_buffer[i]&0xff;
        System.err.print(chars[(foo>>>4)&0xf]);
        System.err.print(chars[foo&0xf]);
        if(i%16==15){
            System.err.println("");
            continue;
        }
        if(i>0 && i%2==1){
            System.err.print(" ");
        }
    }
    System.err.println("");
}
static void dump(byte[] b){

```

```

    dump(b, 0, b.length);
}
static void dump(byte[] b, int s, int l){
    for(int i=s; i<s+l; i++){
        System.err.print(Integer.toHexString(b[i]&0xff)+":");
    }
    System.err.println("");
}
*/
}

```

1.25 JFreeChart 1.0.1

1.25.1 Available under license :

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 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 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., 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!

1.26 JPam 1.1

1.26.1 Available under license :

```
/** * Copyright 2003-2006 Greg Luck * * 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:

You must give any other recipients of the Work or Derivative Works a copy of this License; and

You must cause any modified files to carry prominent notices stating that You changed the files; and

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

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.

1.27 jQuery 1.6.2

1.27.1 Available under license :

```
/*!
 * jQuery JavaScript Library v1.6.2
 * http://jquery.com/
 *
 * Copyright 2011, John Resig
 * Dual licensed under the MIT or GPL Version 2 licenses.
 * http://jquery.org/license
 *
 * Includes Sizzle.js
 * http://sizzlejs.com/
 * Copyright 2011, The Dojo Foundation
 * Released under the MIT, BSD, and GPL Licenses.
 *
 * Date: Thu Jun 30 14:16:56 2011 -0400
 */
Copyright (c) 2011 John Resig, http://jquery.com/
```

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.

1.28 jquery-ui 1.10.3

1.28.1 Available under license :

Copyright 2013 jQuery Foundation and other contributors
<http://jquery.com/>

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.

1.29 jzlib 1.0.7

1.29.1 Available under license :

```
/* -*-mode:java; c-basic-offset:2; -*- */  
/*
```

Copyright (c) 2000,2001,2002,2003 ymnk, JCraft,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. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED "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 JCRAFT,

INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE 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 program is based on zlib-1.1.3, so all credit should go authors

* Jean-loup Gailly(jloup@gzip.org) and Mark Adler(madler@alumni.caltech.edu)

* and contributors of zlib.

*/

```
package com.jcraft.jzlib;
```

```
final class Adler32{
```

```
    // largest prime smaller than 65536
```

```
    static final private int BASE=65521;
```

```
    // NMAX is the largest n such that 255n(n+1)/2 + (n+1)(BASE-1) <= 2^32-1
```

```
    static final private int NMAX=5552;
```

```
    long Adler32(long Adler, byte[] buf, int index, int len){
```

```
        if(buf == null){ return 1L; }
```

```
        long s1=Adler&0xffff;
```

```
        long s2=(Adler>>16)&0xffff;
```

```
        int k;
```

```
        while(len > 0) {
```

```
            k=len<NMAX?len:NMAX;
```

```
            len-=k;
```

```
            while(k>=16){
```

```
                s1+=buf[index++]&0xff; s2+=s1;
```

```

    s1+=buf[index++]&0xff; s2+=s1;
    s1+=buf[index++]&0xff; s2+=s1;
    k-=16;
}
if(k!=0){
    do{
        s1+=buf[index++]&0xff; s2+=s1;
    }
    while(--k!=0);
}
s1%=BASE;
s2%=BASE;
}
return (s2<<16)|s1;
}

/*
private java.util.zip.Adler32 adler=new java.util.zip.Adler32();
long Adler32(long value, byte[] buf, int index, int len){
    if(value==1) { adler.reset();}
    if(buf==null) { adler.reset();}
    else{adler.update(buf, index, len);}
    return adler.getValue();
}
*/
}

```

1.30 leveldbjni 1.2

1.30.1 Available under license :

```

/*
* Copyright (C) 2011, FuseSource Corp. All rights reserved.
*
* http://fusesource.com
*
* 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 FuseSource Corp. 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.
*/

1.31 libpcap 1.2.1

1.31.1 Available under license :

License: BSD

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 the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

1.32 libssh2 1.4.0

1.32.1 Available under license :

/* Copyright (c) 2004-2007 Sara Golemon <sarag@libssh2.org>
* Copyright (c) 2005,2006 Mikhail Gusarov <dottedmag@dottedmag.net>
* Copyright (c) 2006-2007 The Written Word, Inc.
* Copyright (c) 2007 Eli Fant <elifantu@mail.ru>
* Copyright (c) 2009 Daniel Stenberg

- * Copyright (C) 2008, 2009 Simon Josefsson
- * 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 copyright holder nor the names
- * of any other 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.
- */

1.33 libvirt 0.8.4

1.33.1 Available under license :

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 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 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.

^L

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.

^L

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.

^L

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.

^L

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.

^L

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.

^L

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.

^L

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

^L

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., 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!

1.34 libxml2 2.9.0 :Fri Jul 10 16:11:34 2009

Daniel Veillard

1.34.1 Available under license :

```
/*
 * hash.c: chained hash tables
 *
 * Reference: Your favorite introductory book on algorithms
 *
 * Copyright (C) 2000,2012 Bjorn Reese and Daniel Veillard.
 *
 * 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.
 *
 * THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED
 * WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF
 * MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE AUTHORS AND
 * CONTRIBUTORS ACCEPT NO RESPONSIBILITY IN ANY CONCEIVABLE MANNER.
 *
 * Author: breese@users.sourceforge.net
 */

#define IN_LIBXML
```

```

#include "libxml.h"

#include <string.h>
#ifdef HAVE_STDLIB_H
#include <stdlib.h>
#endif
#ifdef HAVE_TIME_H
#include <time.h>
#endif

/*
 * Following http://www.ocert.org/advisories/ocert-2011-003.html
 * it seems that having hash randomization might be a good idea
 * when using XML with untrusted data
 */
#if defined(HAVE_RAND) && defined(HAVE_SRAND) && defined(HAVE_TIME)
#define HASH_RANDOMIZATION
#endif

#include <libxml/parser.h>
#include <libxml/hash.h>
#include <libxml/xmlmemory.h>
#include <libxml/xmlerror.h>
#include <libxml/globals.h>

#define MAX_HASH_LEN 8

/* #define DEBUG_GROW */

/*
 * A single entry in the hash table
 */
typedef struct _xmlHashEntry xmlHashEntry;
typedef xmlHashEntry *xmlHashEntryPtr;
struct _xmlHashEntry {
    struct _xmlHashEntry *next;
    xmlChar *name;
    xmlChar *name2;
    xmlChar *name3;
    void *payload;
    int valid;
};

/*
 * The entire hash table
 */
struct _xmlHashTable {
    struct _xmlHashEntry *table;

```

```

int size;
int nbElems;
xmlDictPtr dict;
#ifdef HASH_RANDOMIZATION
    int random_seed;
#endif
};

/*
 * xmlHashComputeKey:
 * Calculate the hash key
 */
static unsigned long
xmlHashComputeKey(xmlHashTablePtr table, const xmlChar *name,
                  const xmlChar *name2, const xmlChar *name3) {
    unsigned long value = 0L;
    char ch;

#ifdef HASH_RANDOMIZATION
    value = table->random_seed;
#endif
    if (name != NULL) {
        value += 30 * (*name);
        while ((ch = *name++) != 0) {
            value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
        }
    }
    if (name2 != NULL) {
        while ((ch = *name2++) != 0) {
            value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
        }
    }
    if (name3 != NULL) {
        while ((ch = *name3++) != 0) {
            value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
        }
    }
    return (value % table->size);
}

static unsigned long
xmlHashComputeQKey(xmlHashTablePtr table,
                  const xmlChar *prefix, const xmlChar *name,
                  const xmlChar *prefix2, const xmlChar *name2,
                  const xmlChar *prefix3, const xmlChar *name3) {
    unsigned long value = 0L;
    char ch;

```

```

#ifdef HASH_RANDOMIZATION
    value = table->random_seed;
#endif
    if (prefix != NULL)
value += 30 * (*prefix);
    else
value += 30 * (*name);

    if (prefix != NULL) {
while ((ch = *prefix++) != 0) {
    value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
}
value = value ^ ((value << 5) + (value >> 3) + (unsigned long)!');
}
    if (name != NULL) {
while ((ch = *name++) != 0) {
    value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
}
}
    if (prefix2 != NULL) {
while ((ch = *prefix2++) != 0) {
    value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
}
}
value = value ^ ((value << 5) + (value >> 3) + (unsigned long)!');
}
    if (name2 != NULL) {
while ((ch = *name2++) != 0) {
    value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
}
}
    if (prefix3 != NULL) {
while ((ch = *prefix3++) != 0) {
    value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
}
}
value = value ^ ((value << 5) + (value >> 3) + (unsigned long)!');
}
    if (name3 != NULL) {
while ((ch = *name3++) != 0) {
    value = value ^ ((value << 5) + (value >> 3) + (unsigned long)ch);
}
}
    return (value % table->size);
}

/**
 * xmlHashCreate:
 * @size: the size of the hash table
 */

```

```

* Create a new xmlHashTablePtr.
*
* Returns the newly created object, or NULL if an error occurred.
*/
xmlHashTablePtr
xmlHashCreate(int size) {
    xmlHashTablePtr table;

    if (size <= 0)
        size = 256;

    table = xmlMalloc(sizeof(xmlHashTable));
    if (table) {
        table->dict = NULL;
        table->size = size;
    table->nbElems = 0;
        table->table = xmlMalloc(size * sizeof(xmlHashEntry));
        if (table->table) {
            memset(table->table, 0, size * sizeof(xmlHashEntry));
#ifdef HASH_RANDOMIZATION
            table->random_seed = __xmlRandom();
#endif
        return(table);
        }
        xmlFree(table);
    }
    return(NULL);
}

/**
* xmlHashCreateDict:
* @size: the size of the hash table
* @dict: a dictionary to use for the hash
*
* Create a new xmlHashTablePtr which will use @dict as the internal dictionary
*
* Returns the newly created object, or NULL if an error occurred.
*/
xmlHashTablePtr
xmlHashCreateDict(int size, xmlDictPtr dict) {
    xmlHashTablePtr table;

    table = xmlHashCreate(size);
    if (table != NULL) {
        table->dict = dict;
    xmlDictReference(dict);
    }
    return(table);
}

```

```

}

/**
 * xmlHashGrow:
 * @table: the hash table
 * @size: the new size of the hash table
 *
 * resize the hash table
 *
 * Returns 0 in case of success, -1 in case of failure
 */
static int
xmlHashGrow(xmlHashTablePtr table, int size) {
    unsigned long key;
    int oldsize, i;
    xmlHashEntryPtr iter, next;
    struct _xmlHashEntry *oldtable;
#ifdef DEBUG_GROW
    unsigned long nbElem = 0;
#endif

    if (table == NULL)
return(-1);
    if (size < 8)
        return(-1);
    if (size > 8 * 2048)
return(-1);

    oldsize = table->size;
    oldtable = table->table;
    if (oldtable == NULL)
        return(-1);

    table->table = xmlMalloc(size * sizeof(xmlHashEntry));
    if (table->table == NULL) {
table->table = oldtable;
return(-1);
    }
    memset(table->table, 0, size * sizeof(xmlHashEntry));
    table->size = size;

    /* If the two loops are merged, there would be situations where
    a new entry needs to be allocated and data copied into it from
    the main table. So instead, we run through the array twice, first
    copying all the elements in the main array (where we can't get
    conflicts) and then the rest, so we only free (and don't allocate)
    */
    for (i = 0; i < oldsize; i++) {

```

```

if (oldtable[i].valid == 0)
    continue;
key = xmlHashComputeKey(table, oldtable[i].name, oldtable[i].name2,
    oldtable[i].name3);
memcpy(&(table->table[key]), &(oldtable[i]), sizeof(xmlHashEntry));
table->table[key].next = NULL;
}

for (i = 0; i < oldsize; i++) {
iter = oldtable[i].next;
while (iter) {
    next = iter->next;

    /*
    * put back the entry in the new table
    */

    key = xmlHashComputeKey(table, iter->name, iter->name2,
        iter->name3);
    if (table->table[key].valid == 0) {
memcpy(&(table->table[key]), iter, sizeof(xmlHashEntry));
table->table[key].next = NULL;
xmlFree(iter);
    } else {
iter->next = table->table[key].next;
table->table[key].next = iter;
    }

#ifdef DEBUG_GROW
    nbElem++;
#endif

    iter = next;
}
}

xmlFree(oldtable);

#ifdef DEBUG_GROW
xmlGenericError(xmlGenericErrorContext,
    "xmlHashGrow : from %d to %d, %d elems\n", oldsize, size, nbElem);
#endif

return(0);
}

/**
 * xmlHashFree:

```

```

* @table: the hash table
* @f: the deallocator function for items in the hash
*
* Free the hash @table and its contents. The userdata is
* deallocated with @f if provided.
*/
void
xmlHashFree(xmlHashTablePtr table, xmlHashDeallocator f) {
    int i;
    xmlHashEntryPtr iter;
    xmlHashEntryPtr next;
    int inside_table = 0;
    int nbElems;

    if (table == NULL)
return;
    if (table->table) {
nbElems = table->nbElems;
for(i = 0; (i < table->size) && (nbElems > 0); i++) {
    iter = &(table->table[i]);
    if (iter->valid == 0)
continue;
    inside_table = 1;
    while (iter) {
next = iter->next;
if ((f != NULL) && (iter->payload != NULL))
    f(iter->payload, iter->name);
if (table->dict == NULL) {
    if (iter->name)
xmlFree(iter->name);
    if (iter->name2)
xmlFree(iter->name2);
    if (iter->name3)
xmlFree(iter->name3);
}
iter->payload = NULL;
if (!inside_table)
    xmlFree(iter);
nbElems--;
inside_table = 0;
iter = next;
    }
}
xmlFree(table->table);
}
if (table->dict)
    xmlDictFree(table->dict);
xmlFree(table);

```

```

}

/**
 * xmlHashAddEntry:
 * @table: the hash table
 * @name: the name of the userdata
 * @userdata: a pointer to the userdata
 *
 * Add the @userdata to the hash @table. This can later be retrieved
 * by using the @name. Duplicate names generate errors.
 *
 * Returns 0 the addition succeeded and -1 in case of error.
 */
int
xmlHashAddEntry(xmlHashTablePtr table, const xmlChar *name, void *userdata) {
    return(xmlHashAddEntry3(table, name, NULL, NULL, userdata));
}

/**
 * xmlHashAddEntry2:
 * @table: the hash table
 * @name: the name of the userdata
 * @name2: a second name of the userdata
 * @userdata: a pointer to the userdata
 *
 * Add the @userdata to the hash @table. This can later be retrieved
 * by using the (@name, @name2) tuple. Duplicate tuples generate errors.
 *
 * Returns 0 the addition succeeded and -1 in case of error.
 */
int
xmlHashAddEntry2(xmlHashTablePtr table, const xmlChar *name,
    const xmlChar *name2, void *userdata) {
    return(xmlHashAddEntry3(table, name, name2, NULL, userdata));
}

/**
 * xmlHashUpdateEntry:
 * @table: the hash table
 * @name: the name of the userdata
 * @userdata: a pointer to the userdata
 * @f: the deallocator function for replaced item (if any)
 *
 * Add the @userdata to the hash @table. This can later be retrieved
 * by using the @name. Existing entry for this @name will be removed
 * and freed with @f if found.
 *
 * Returns 0 the addition succeeded and -1 in case of error.

```

```

*/
int
xmlHashUpdateEntry(xmlHashTablePtr table, const xmlChar *name,
    void *userdata, xmlHashDeallocator f) {
    return(xmlHashUpdateEntry3(table, name, NULL, NULL, userdata, f));
}

/**
 * xmlHashUpdateEntry2:
 * @table: the hash table
 * @name: the name of the userdata
 * @name2: a second name of the userdata
 * @userdata: a pointer to the userdata
 * @f: the deallocator function for replaced item (if any)
 *
 * Add the @userdata to the hash @table. This can later be retrieved
 * by using the (@name, @name2) tuple. Existing entry for this tuple will
 * be removed and freed with @f if found.
 *
 * Returns 0 the addition succeeded and -1 in case of error.
 */
int
xmlHashUpdateEntry2(xmlHashTablePtr table, const xmlChar *name,
    const xmlChar *name2, void *userdata,
    xmlHashDeallocator f) {
    return(xmlHashUpdateEntry3(table, name, name2, NULL, userdata, f));
}

/**
 * xmlHashLookup:
 * @table: the hash table
 * @name: the name of the userdata
 *
 * Find the userdata specified by the @name.
 *
 * Returns the pointer to the userdata
 */
void *
xmlHashLookup(xmlHashTablePtr table, const xmlChar *name) {
    return(xmlHashLookup3(table, name, NULL, NULL));
}

/**
 * xmlHashLookup2:
 * @table: the hash table
 * @name: the name of the userdata
 * @name2: a second name of the userdata
 *

```

```

* Find the userdata specified by the (@name, @name2) tuple.
*
* Returns the pointer to the userdata
*/
void *
xmlHashLookup2(xmlHashTablePtr table, const xmlChar *name,
               const xmlChar *name2) {
    return(xmlHashLookup3(table, name, name2, NULL));
}

/**
* xmlHashQLookup:
* @table: the hash table
* @prefix: the prefix of the userdata
* @name: the name of the userdata
*
* Find the userdata specified by the QName @prefix:@name/@name.
*
* Returns the pointer to the userdata
*/
void *
xmlHashQLookup(xmlHashTablePtr table, const xmlChar *prefix,
               const xmlChar *name) {
    return(xmlHashQLookup3(table, prefix, name, NULL, NULL, NULL, NULL));
}

/**
* xmlHashQLookup2:
* @table: the hash table
* @prefix: the prefix of the userdata
* @name: the name of the userdata
* @prefix2: the second prefix of the userdata
* @name2: a second name of the userdata
*
* Find the userdata specified by the QNames tuple
*
* Returns the pointer to the userdata
*/
void *
xmlHashQLookup2(xmlHashTablePtr table, const xmlChar *prefix,
                const xmlChar *name, const xmlChar *prefix2,
                const xmlChar *name2) {
    return(xmlHashQLookup3(table, prefix, name, prefix2, name2, NULL, NULL));
}

/**
* xmlHashAddEntry3:
* @table: the hash table

```

```

* @name: the name of the userdata
* @name2: a second name of the userdata
* @name3: a third name of the userdata
* @userdata: a pointer to the userdata
*
* Add the @userdata to the hash @table. This can later be retrieved
* by using the tuple (@name, @name2, @name3). Duplicate entries generate
* errors.
*
* Returns 0 the addition succeeded and -1 in case of error.
*/
int
xmlHashAddEntry3(xmlHashTablePtr table, const xmlChar *name,
                 const xmlChar *name2, const xmlChar *name3,
                 void *userdata) {
    unsigned long key, len = 0;
    xmlHashEntryPtr entry;
    xmlHashEntryPtr insert;

    if ((table == NULL) || (name == NULL))
return(-1);

    /*
     * If using a dict internalize if needed
     */
    if (table->dict) {
        if (!xmlDictOwns(table->dict, name)) {
            name = xmlDictLookup(table->dict, name, -1);
            if (name == NULL)
                return(-1);
        }
        if ((name2 != NULL) && (!xmlDictOwns(table->dict, name2))) {
            name2 = xmlDictLookup(table->dict, name2, -1);
            if (name2 == NULL)
                return(-1);
        }
        if ((name3 != NULL) && (!xmlDictOwns(table->dict, name3))) {
            name3 = xmlDictLookup(table->dict, name3, -1);
            if (name3 == NULL)
                return(-1);
        }
    }

    /*
     * Check for duplicate and insertion location.
     */
    key = xmlHashComputeKey(table, name, name2, name3);
    if (table->table[key].valid == 0) {

```

```

insert = NULL;
} else {
    if (table->dict) {
        for (insert = &(table->table[key]); insert->next != NULL;
insert = insert->next) {
if ((insert->name == name) &&
    (insert->name2 == name2) &&
    (insert->name3 == name3))
    return(-1);
len++;
    }
    if ((insert->name == name) &&
(insert->name2 == name2) &&
(insert->name3 == name3))
return(-1);
} else {
    for (insert = &(table->table[key]); insert->next != NULL;
insert = insert->next) {
if ((xmlStrEqual(insert->name, name)) &&
    (xmlStrEqual(insert->name2, name2)) &&
    (xmlStrEqual(insert->name3, name3)))
    return(-1);
len++;
    }
    if ((xmlStrEqual(insert->name, name)) &&
(xmlStrEqual(insert->name2, name2)) &&
(xmlStrEqual(insert->name3, name3)))
return(-1);
}
}

if (insert == NULL) {
entry = &(table->table[key]);
} else {
entry = xmlMalloc(sizeof(xmlHashEntry));
if (entry == NULL)
    return(-1);
}

if (table->dict != NULL) {
    entry->name = (xmlChar *) name;
    entry->name2 = (xmlChar *) name2;
    entry->name3 = (xmlChar *) name3;
} else {
entry->name = xmlStrdup(name);
entry->name2 = xmlStrdup(name2);
entry->name3 = xmlStrdup(name3);
}

```

```

entry->payload = userdata;
entry->next = NULL;
entry->valid = 1;

if (insert != NULL)
insert->next = entry;

table->nbElems++;

if (len > MAX_HASH_LEN)
xmlHashGrow(table, MAX_HASH_LEN * table->size);

return(0);
}

/**
 * xmlHashUpdateEntry3:
 * @table: the hash table
 * @name: the name of the userdata
 * @name2: a second name of the userdata
 * @name3: a third name of the userdata
 * @userdata: a pointer to the userdata
 * @f: the deallocator function for replaced item (if any)
 *
 * Add the @userdata to the hash @table. This can later be retrieved
 * by using the tuple (@name, @name2, @name3). Existing entry for this tuple
 * will be removed and freed with @f if found.
 *
 * Returns 0 the addition succeeded and -1 in case of error.
 */
int
xmlHashUpdateEntry3(xmlHashTablePtr table, const xmlChar *name,
                    const xmlChar *name2, const xmlChar *name3,
                    void *userdata, xmlHashDeallocator f) {
    unsigned long key;
    xmlHashEntryPtr entry;
    xmlHashEntryPtr insert;

    if ((table == NULL) || name == NULL)
return(-1);

    /*
     * If using a dict internalize if needed
     */
    if (table->dict) {
        if (!xmlDictOwns(table->dict, name)) {
            name = xmlDictLookup(table->dict, name, -1);

```

```

    if (name == NULL)
        return(-1);
}
    if ((name2 != NULL) && (!xmlDictOwns(table->dict, name2))) {
name2 = xmlDictLookup(table->dict, name2, -1);
    if (name2 == NULL)
        return(-1);
}
    if ((name3 != NULL) && (!xmlDictOwns(table->dict, name3))) {
name3 = xmlDictLookup(table->dict, name3, -1);
    if (name3 == NULL)
        return(-1);
}
}
}

/*
 * Check for duplicate and insertion location.
 */
key = xmlHashComputeKey(table, name, name2, name3);
if (table->table[key].valid == 0) {
insert = NULL;
} else {
    if (table ->dict) {
        for (insert = &(table->table[key]); insert->next != NULL;
insert = insert->next) {
if ((insert->name == name) &&
    (insert->name2 == name2) &&
    (insert->name3 == name3)) {
    if (f)
f(insert->payload, insert->name);
        insert->payload = userdata;
        return(0);
    }
}
    if ((insert->name == name) &&
(insert->name2 == name2) &&
(insert->name3 == name3)) {
if (f)
    f(insert->payload, insert->name);
insert->payload = userdata;
return(0);
    }
} else {
    for (insert = &(table->table[key]); insert->next != NULL;
insert = insert->next) {
if ((xmlStrEqual(insert->name, name)) &&
    (xmlStrEqual(insert->name2, name2)) &&
    (xmlStrEqual(insert->name3, name3))) {

```

```

    if (f)
f(insert->payload, insert->name);
    insert->payload = userdata;
    return(0);
}
}
    if ((xmlStrEqual(insert->name, name) &&
(xmlStrEqual(insert->name2, name2) &&
(xmlStrEqual(insert->name3, name3))) {
if (f)
    f(insert->payload, insert->name);
insert->payload = userdata;
return(0);
}
}
}

```

```

    if (insert == NULL) {
entry = &(amp;table->table[key]);
    } else {
entry = xmlMalloc(sizeof(xmlHashEntry));
if (entry == NULL)
    return(-1);
}

```

```

if (table->dict != NULL) {
    entry->name = (xmlChar *) name;
    entry->name2 = (xmlChar *) name2;
    entry->name3 = (xmlChar *) name3;
} else {
entry->name = xmlStrdup(name);
entry->name2 = xmlStrdup(name2);
entry->name3 = xmlStrdup(name3);
}
entry->payload = userdata;
entry->next = NULL;
entry->valid = 1;
table->nbElems++;

```

```

if (insert != NULL) {
insert->next = entry;
}
return(0);
}

```

```
/**
```

```
* xmlHashLookup3:
```

```

* @table: the hash table
* @name: the name of the userdata
* @name2: a second name of the userdata
* @name3: a third name of the userdata
*
* Find the userdata specified by the (@name, @name2, @name3) tuple.
*
* Returns the a pointer to the userdata
*/
void *
xmlHashLookup3(xmlHashTablePtr table, const xmlChar *name,
               const xmlChar *name2, const xmlChar *name3) {
    unsigned long key;
    xmlHashEntryPtr entry;

    if (table == NULL)
        return(NULL);
    if (name == NULL)
        return(NULL);
    key = xmlHashComputeKey(table, name, name2, name3);
    if (table->table[key].valid == 0)
        return(NULL);
    if (table->dict) {
        for (entry = &(table->table[key]); entry != NULL; entry = entry->next) {
            if ((entry->name == name) &&
                (entry->name2 == name2) &&
                (entry->name3 == name3))
                return(entry->payload);
        }
    }
    for (entry = &(table->table[key]); entry != NULL; entry = entry->next) {
        if ((xmlStrEqual(entry->name, name)) &&
            (xmlStrEqual(entry->name2, name2)) &&
            (xmlStrEqual(entry->name3, name3)))
            return(entry->payload);
    }
    return(NULL);
}

/**
* xmlHashQLookup3:
* @table: the hash table
* @prefix: the prefix of the userdata
* @name: the name of the userdata
* @prefix2: the second prefix of the userdata
* @name2: a second name of the userdata
* @prefix3: the third prefix of the userdata
* @name3: a third name of the userdata

```

```

*
* Find the userdata specified by the (@name, @name2, @name3) tuple.
*
* Returns the a pointer to the userdata
*/
void *
xmlHashQLookup3(xmlHashTablePtr table,
                const xmlChar *prefix, const xmlChar *name,
                const xmlChar *prefix2, const xmlChar *name2,
                const xmlChar *prefix3, const xmlChar *name3) {
    unsigned long key;
    xmlHashEntryPtr entry;

    if (table == NULL)
        return(NULL);
    if (name == NULL)
        return(NULL);
    key = xmlHashComputeQKey(table, prefix, name, prefix2,
                            name2, prefix3, name3);
    if (table->table[key].valid == 0)
        return(NULL);
    for (entry = &(table->table[key]); entry != NULL; entry = entry->next) {
        if ((xmlStrQEqual(prefix, name, entry->name)) &&
            (xmlStrQEqual(prefix2, name2, entry->name2)) &&
            (xmlStrQEqual(prefix3, name3, entry->name3)))
            return(entry->payload);
    }
    return(NULL);
}

typedef struct {
    xmlHashScanner hashscanner;
    void *data;
} stubData;

static void
stubHashScannerFull (void *payload, void *data, const xmlChar *name,
                    const xmlChar *name2 ATTRIBUTE_UNUSED,
                    const xmlChar *name3 ATTRIBUTE_UNUSED) {
    stubData *stubdata = (stubData *) data;
    stubdata->hashscanner (payload, stubdata->data, (xmlChar *) name);
}

/**
 * xmlHashScan:
 * @table: the hash table
 * @f: the scanner function for items in the hash
 * @data: extra data passed to f

```

```

*
* Scan the hash @table and applied @f to each value.
*/
void
xmlHashScan(xmlHashTablePtr table, xmlHashScanner f, void *data) {
    stubData stubdata;
    stubdata.data = data;
    stubdata.hashscanner = f;
    xmlHashScanFull (table, stubHashScannerFull, &stubdata);
}

/**
* xmlHashScanFull:
* @table: the hash table
* @f: the scanner function for items in the hash
* @data: extra data passed to f
*
* Scan the hash @table and applied @f to each value.
*/
void
xmlHashScanFull(xmlHashTablePtr table, xmlHashScannerFull f, void *data) {
    int i, nb;
    xmlHashEntryPtr iter;
    xmlHashEntryPtr next;

    if (table == NULL)
return;
    if (f == NULL)
return;

    if (table->table) {
for(i = 0; i < table->size; i++) {
    if (table->table[i].valid == 0)
continue;
    iter = &(table->table[i]);
    while (iter) {
next = iter->next;
        nb = table->nbElems;
if ((f != NULL) && (iter->payload != NULL))
f(iter->payload, data, iter->name,
    iter->name2, iter->name3);
        if (nb != table->nbElems) {
            /* table was modified by the callback, be careful */
            if (iter == &(table->table[i])) {
                if (table->table[i].valid == 0)
                    iter = NULL;
                if (table->table[i].next != next)
                    iter = &(table->table[i]);
            }
        }
    }
}
}

```

```

        } else
        iter = next;
        } else
        iter = next;
    }
}
}
}

/**
 * xmlHashScan3:
 * @table: the hash table
 * @name: the name of the userdata or NULL
 * @name2: a second name of the userdata or NULL
 * @name3: a third name of the userdata or NULL
 * @f: the scanner function for items in the hash
 * @data: extra data passed to f
 *
 * Scan the hash @table and applied @f to each value matching
 * (@name, @name2, @name3) tuple. If one of the names is null,
 * the comparison is considered to match.
 */
void
xmlHashScan3(xmlHashTablePtr table, const xmlChar *name,
             const xmlChar *name2, const xmlChar *name3,
             xmlHashScanner f, void *data) {
    xmlHashScanFull3 (table, name, name2, name3,
                     (xmlHashScannerFull) f, data);
}

/**
 * xmlHashScanFull3:
 * @table: the hash table
 * @name: the name of the userdata or NULL
 * @name2: a second name of the userdata or NULL
 * @name3: a third name of the userdata or NULL
 * @f: the scanner function for items in the hash
 * @data: extra data passed to f
 *
 * Scan the hash @table and applied @f to each value matching
 * (@name, @name2, @name3) tuple. If one of the names is null,
 * the comparison is considered to match.
 */
void
xmlHashScanFull3(xmlHashTablePtr table, const xmlChar *name,
                const xmlChar *name2, const xmlChar *name3,
                xmlHashScannerFull f, void *data) {
    int i;

```

```

xmlHashEntryPtr iter;
xmlHashEntryPtr next;

if (table == NULL)
return;
if (f == NULL)
return;

if (table->table) {
for(i = 0; i < table->size; i++) {
if (table->table[i].valid == 0)
continue;
iter = &(table->table[i]);
while (iter) {
next = iter->next;
if (((name == NULL) || (xmlStrEqual(name, iter->name))) &&
((name2 == NULL) || (xmlStrEqual(name2, iter->name2))) &&
((name3 == NULL) || (xmlStrEqual(name3, iter->name3))) &&
(iter->payload != NULL)) {
f(iter->payload, data, iter->name,
iter->name2, iter->name3);
}
iter = next;
}
}
}
}

/**
* xmlHashCopy:
* @table: the hash table
* @f: the copier function for items in the hash
*
* Scan the hash @table and applied @f to each value.
*
* Returns the new table or NULL in case of error.
*/
xmlHashTablePtr
xmlHashCopy(xmlHashTablePtr table, xmlHashCopier f) {
int i;
xmlHashEntryPtr iter;
xmlHashEntryPtr next;
xmlHashTablePtr ret;

if (table == NULL)
return(NULL);
if (f == NULL)
return(NULL);

```

```

    ret = xmlHashCreate(table->size);
    if (table->table) {
for(i = 0; i < table->size; i++) {
    if (table->table[i].valid == 0)
continue;
    iter = &(table->table[i]);
    while (iter) {
next = iter->next;
xmlHashAddEntry3(ret, iter->name, iter->name2,
    iter->name3, f(iter->payload, iter->name));
iter = next;
    }
    }
    ret->nbElems = table->nbElems;
    return(ret);
}

/**
 * xmlHashSize:
 * @table: the hash table
 *
 * Query the number of elements installed in the hash @table.
 *
 * Returns the number of elements in the hash table or
 * -1 in case of error
 */
int
xmlHashSize(xmlHashTablePtr table) {
    if (table == NULL)
return(-1);
    return(table->nbElems);
}

/**
 * xmlHashRemoveEntry:
 * @table: the hash table
 * @name: the name of the userdata
 * @f: the deallocator function for removed item (if any)
 *
 * Find the userdata specified by the @name and remove
 * it from the hash @table. Existing userdata for this tuple will be removed
 * and freed with @f.
 *
 * Returns 0 if the removal succeeded and -1 in case of error or not found.
 */
int xmlHashRemoveEntry(xmlHashTablePtr table, const xmlChar *name,

```

```

    xmlHashDeallocator f) {
    return(xmlHashRemoveEntry3(table, name, NULL, NULL, f));
}

/**
 * xmlHashRemoveEntry2:
 * @table: the hash table
 * @name: the name of the userdata
 * @name2: a second name of the userdata
 * @f: the deallocator function for removed item (if any)
 *
 * Find the userdata specified by the (@name, @name2) tuple and remove
 * it from the hash @table. Existing userdata for this tuple will be removed
 * and freed with @f.
 *
 * Returns 0 if the removal succeeded and -1 in case of error or not found.
 */
int
xmlHashRemoveEntry2(xmlHashTablePtr table, const xmlChar *name,
    const xmlChar *name2, xmlHashDeallocator f) {
    return(xmlHashRemoveEntry3(table, name, name2, NULL, f));
}

/**
 * xmlHashRemoveEntry3:
 * @table: the hash table
 * @name: the name of the userdata
 * @name2: a second name of the userdata
 * @name3: a third name of the userdata
 * @f: the deallocator function for removed item (if any)
 *
 * Find the userdata specified by the (@name, @name2, @name3) tuple and remove
 * it from the hash @table. Existing userdata for this tuple will be removed
 * and freed with @f.
 *
 * Returns 0 if the removal succeeded and -1 in case of error or not found.
 */
int
xmlHashRemoveEntry3(xmlHashTablePtr table, const xmlChar *name,
    const xmlChar *name2, const xmlChar *name3, xmlHashDeallocator f) {
    unsigned long key;
    xmlHashEntryPtr entry;
    xmlHashEntryPtr prev = NULL;

    if (table == NULL || name == NULL)
        return(-1);

    key = xmlHashComputeKey(table, name, name2, name3);

```

```

if (table->table[key].valid == 0) {
    return(-1);
} else {
    for (entry = &(amp;table->table[key]); entry != NULL; entry = entry->next) {
        if (xmlStrEqual(entry->name, name) &&
            xmlStrEqual(entry->name2, name2) &&
            xmlStrEqual(entry->name3, name3)) {
            if ((f != NULL) && (entry->payload != NULL))
                f(entry->payload, entry->name);
            entry->payload = NULL;
        }
        if (table->dict == NULL) {
            if(entry->name)
                xmlFree(entry->name);
            if(entry->name2)
                xmlFree(entry->name2);
            if(entry->name3)
                xmlFree(entry->name3);
        }
        if(prev) {
            prev->next = entry->next;
            xmlFree(entry);
        } else {
            if (entry->next == NULL) {
                entry->valid = 0;
            } else {
                entry = entry->next;
                memcpy(&(table->table[key]), entry, sizeof(xmlHashEntry));
                xmlFree(entry);
            }
        }
        table->nbElems--;
        return(0);
    }
    prev = entry;
}
return(-1);
}
}

```

```

#define bottom_hash
#include "elfgcchack.h"
/*
 * list.c: lists handling implementation
 *
 * Copyright (C) 2000 Gary Pennington and Daniel Veillard.
 *
 * 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.
*
* THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED
* WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF
* MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE AUTHORS AND
* CONTRIBUTORS ACCEPT NO RESPONSIBILITY IN ANY CONCEIVABLE MANNER.
*
* Author: Gary.Pennington@uk.sun.com
*/

```

```

#define IN_LIBXML
#include "libxml.h"

```

```

#include <stdlib.h>
#include <string.h>
#include <libxml/xmlmemory.h>
#include <libxml/list.h>
#include <libxml/globals.h>

```

```

/*
* Type definition are kept internal
*/

```

```

struct _xmlLink
{
    struct _xmlLink *next;
    struct _xmlLink *prev;
    void *data;
};

```

```

struct _xmlList
{
    xmlLinkPtr sentinel;
    void (*linkDeallocator)(xmlLinkPtr );
    int (*linkCompare)(const void *, const void*);
};

```

```

/*****
*
* Interfaces
*
*****/

```

```

/**
* xmlLinkDeallocator:
* @l: a list
* @lk: a link
*

```

```

* Unlink and deallocate @lk from list @l
*/
static void
xmlLinkDeallocator(xmlListPtr l, xmlLinkPtr lk)
{
    (lk->prev)->next = lk->next;
    (lk->next)->prev = lk->prev;
    if(l->linkDeallocator)
        l->linkDeallocator(lk);
    xmlFree(lk);
}

/**
* xmlLinkCompare:
* @data0: first data
* @data1: second data
*
* Compares two arbitrary data
*
* Returns -1, 0 or 1 depending on whether data1 is greater equal or smaller
* than data0
*/
static int
xmlLinkCompare(const void *data0, const void *data1)
{
    if (data0 < data1)
        return (-1);
    else if (data0 == data1)
        return (0);
    return (1);
}

/**
* xmlListLowerSearch:
* @l: a list
* @data: a data
*
* Search data in the ordered list walking from the beginning
*
* Returns the link containing the data or NULL
*/
static xmlLinkPtr
xmlListLowerSearch(xmlListPtr l, void *data)
{
    xmlLinkPtr lk;

    if (l == NULL)
        return(NULL);

```

```

    for(lk = l->sentinel->next;lk != l->sentinel && l->linkCompare(lk->data, data) <0 ;lk = lk->next);
    return lk;
}

/**
 * xmlListHigherSearch:
 * @l: a list
 * @data: a data
 *
 * Search data in the ordered list walking backward from the end
 *
 * Returns the link containing the data or NULL
 */
static xmlLinkPtr
xmlListHigherSearch(xmlListPtr l, void *data)
{
    xmlLinkPtr lk;

    if (l == NULL)
        return(NULL);
    for(lk = l->sentinel->prev;lk != l->sentinel && l->linkCompare(lk->data, data) >0 ;lk = lk->prev);
    return lk;
}

/**
 * xmlListSearch:
 * @l: a list
 * @data: a data
 *
 * Search data in the list
 *
 * Returns the link containing the data or NULL
 */
static xmlLinkPtr
xmlListLinkSearch(xmlListPtr l, void *data)
{
    xmlLinkPtr lk;
    if (l == NULL)
        return(NULL);
    lk = xmlListLowerSearch(l, data);
    if (lk == l->sentinel)
        return NULL;
    else {
        if (l->linkCompare(lk->data, data) ==0)
            return lk;
        return NULL;
    }
}
}

```

```

/**
 * xmlListLinkReverseSearch:
 * @l: a list
 * @data: a data
 *
 * Search data in the list processing backward
 *
 * Returns the link containing the data or NULL
 */
static xmlLinkPtr
xmlListLinkReverseSearch(xmlListPtr l, void *data)
{
    xmlLinkPtr lk;
    if (l == NULL)
        return(NULL);
    lk = xmlListHigherSearch(l, data);
    if (lk == l->sentinel)
        return NULL;
    else {
        if (l->linkCompare(lk->data, data) ==0)
            return lk;
        return NULL;
    }
}

/**
 * xmlListCreate:
 * @dealloc: an optional deallocator function
 * @compare: an optional comparison function
 *
 * Create a new list
 *
 * Returns the new list or NULL in case of error
 */
xmlListPtr
xmlListCreate(xmlListDeallocator deallocator, xmlListDataCompare compare)
{
    xmlListPtr l;
    if (NULL == (l = (xmlListPtr)xmlMalloc( sizeof(xmlList)))) {
        xmlGenericError(xmlGenericErrorContext,
            "Cannot initialize memory for list");
        return (NULL);
    }
    /* Initialize the list to NULL */
    memset(l, 0, sizeof(xmlList));

    /* Add the sentinel */

```

```

if (NULL == (l->sentinel = (xmlLinkPtr)xmlMalloc(sizeof(xmlLink)))) {
    xmlGenericError(xmlGenericErrorContext,
        "Cannot initialize memory for sentinel");
xmlFree(l);
    return (NULL);
}
l->sentinel->next = l->sentinel;
l->sentinel->prev = l->sentinel;
l->sentinel->data = NULL;

/* If there is a link deallocator, use it */
if (deallocater != NULL)
    l->linkDeallocator = deallocater;
/* If there is a link comparator, use it */
if (compare != NULL)
    l->linkCompare = compare;
else /* Use our own */
    l->linkCompare = xmlLinkCompare;
return l;
}

/**
 * xmlListSearch:
 * @l: a list
 * @data: a search value
 *
 * Search the list for an existing value of @data
 *
 * Returns the value associated to @data or NULL in case of error
 */
void *
xmlListSearch(xmlListPtr l, void *data)
{
    xmlLinkPtr lk;
    if (l == NULL)
        return(NULL);
    lk = xmlListLinkSearch(l, data);
    if (lk)
        return (lk->data);
    return NULL;
}

/**
 * xmlListReverseSearch:
 * @l: a list
 * @data: a search value
 *
 * Search the list in reverse order for an existing value of @data

```

```

*
* Returns the value associated to @data or NULL in case of error
*/
void *
xmlListReverseSearch(xmlListPtr l, void *data)
{
    xmlLinkPtr lk;
    if (l == NULL)
        return(NULL);
    lk = xmlListLinkReverseSearch(l, data);
    if (lk)
        return (lk->data);
    return NULL;
}

/**
* xmlListInsert:
* @l: a list
* @data: the data
*
* Insert data in the ordered list at the beginning for this value
*
* Returns 0 in case of success, 1 in case of failure
*/
int
xmlListInsert(xmlListPtr l, void *data)
{
    xmlLinkPtr lkPlace, lkNew;

    if (l == NULL)
        return(1);
    lkPlace = xmlListLowerSearch(l, data);
    /* Add the new link */
    lkNew = (xmlLinkPtr) xmlMalloc(sizeof(xmlLink));
    if (lkNew == NULL) {
        xmlGenericError(xmlGenericErrorContext,
            "Cannot initialize memory for new link");
        return (1);
    }
    lkNew->data = data;
    lkPlace = lkPlace->prev;
    lkNew->next = lkPlace->next;
    (lkPlace->next)->prev = lkNew;
    lkPlace->next = lkNew;
    lkNew->prev = lkPlace;
    return 0;
}

```

```

/**
 * xmlListAppend:
 * @l: a list
 * @data: the data
 *
 * Insert data in the ordered list at the end for this value
 *
 * Returns 0 in case of success, 1 in case of failure
 */
int xmlListAppend(xmlListPtr l, void *data)
{
    xmlLinkPtr lkPlace, lkNew;

    if (l == NULL)
        return(1);
    lkPlace = xmlListHigherSearch(l, data);
    /* Add the new link */
    lkNew = (xmlLinkPtr) xmlMalloc(sizeof(xmlLink));
    if (lkNew == NULL) {
        xmlGenericError(xmlGenericErrorContext,
            "Cannot initialize memory for new link");
        return (1);
    }
    lkNew->data = data;
    lkNew->next = lkPlace->next;
    (lkPlace->next)->prev = lkNew;
    lkPlace->next = lkNew;
    lkNew->prev = lkPlace;
    return 0;
}

/**
 * xmlListDelete:
 * @l: a list
 *
 * Deletes the list and its associated data
 */
void xmlListDelete(xmlListPtr l)
{
    if (l == NULL)
        return;

    xmlListClear(l);
    xmlFree(l->sentinel);
    xmlFree(l);
}

/**

```

```

* xmlListRemoveFirst:
* @l: a list
* @data: list data
*
* Remove the first instance associated to data in the list
*
* Returns 1 if a deallocation occurred, or 0 if not found
*/

```

```

int
xmlListRemoveFirst(xmlListPtr l, void *data)

```

```

{
    xmlLinkPtr lk;

    if (l == NULL)
        return(0);
    /*Find the first instance of this data */
    lk = xmlListLinkSearch(l, data);
    if (lk != NULL) {
        xmlLinkDeallocator(l, lk);
        return 1;
    }
    return 0;
}

```

```

/**
* xmlListRemoveLast:
* @l: a list
* @data: list data
*
* Remove the last instance associated to data in the list
*
* Returns 1 if a deallocation occurred, or 0 if not found
*/

```

```

int
xmlListRemoveLast(xmlListPtr l, void *data)

```

```

{
    xmlLinkPtr lk;

    if (l == NULL)
        return(0);
    /*Find the last instance of this data */
    lk = xmlListLinkReverseSearch(l, data);
    if (lk != NULL) {
        xmlLinkDeallocator(l, lk);
        return 1;
    }
    return 0;
}

```

```

/**
 * xmlListRemoveAll:
 * @l: a list
 * @data: list data
 *
 * Remove the all instance associated to data in the list
 *
 * Returns the number of deallocation, or 0 if not found
 */
int
xmlListRemoveAll(xmlListPtr l, void *data)
{
    int count=0;

    if (l == NULL)
        return(0);

    while(xmlListRemoveFirst(l, data))
        count++;
    return count;
}

/**
 * xmlListClear:
 * @l: a list
 *
 * Remove the all data in the list
 */
void
xmlListClear(xmlListPtr l)
{
    xmlLinkPtr lk;

    if (l == NULL)
        return;
    lk = l->sentinel->next;
    while(lk != l->sentinel) {
        xmlLinkPtr next = lk->next;

        xmlLinkDeallocator(l, lk);
        lk = next;
    }
}

/**
 * xmlListEmpty:
 * @l: a list

```

```

*
* Is the list empty ?
*
* Returns 1 if the list is empty, 0 if not empty and -1 in case of error
*/
int
xmlListEmpty(xmlListPtr l)
{
    if (l == NULL)
        return(-1);
    return (l->sentinel->next == l->sentinel);
}

/**
 * xmlListFront:
 * @l: a list
 *
 * Get the first element in the list
 *
 * Returns the first element in the list, or NULL
 */
xmlLinkPtr
xmlListFront(xmlListPtr l)
{
    if (l == NULL)
        return(NULL);
    return (l->sentinel->next);
}

/**
 * xmlListEnd:
 * @l: a list
 *
 * Get the last element in the list
 *
 * Returns the last element in the list, or NULL
 */
xmlLinkPtr
xmlListEnd(xmlListPtr l)
{
    if (l == NULL)
        return(NULL);
    return (l->sentinel->prev);
}

/**
 * xmlListSize:
 * @l: a list

```

```

*
* Get the number of elements in the list
*
* Returns the number of elements in the list or -1 in case of error
*/
int
xmlListSize(xmlListPtr l)
{
    xmlLinkPtr lk;
    int count=0;

    if (l == NULL)
        return(-1);
    /* TODO: keep a counter in xmlList instead */
    for(lk = l->sentinel->next; lk != l->sentinel; lk = lk->next, count++);
    return count;
}

/**
 * xmlListPopFront:
 * @l: a list
 *
 * Removes the first element in the list
 */
void
xmlListPopFront(xmlListPtr l)
{
    if(!xmlListEmpty(l))
        xmlLinkDeallocator(l, l->sentinel->next);
}

/**
 * xmlListPopBack:
 * @l: a list
 *
 * Removes the last element in the list
 */
void
xmlListPopBack(xmlListPtr l)
{
    if(!xmlListEmpty(l))
        xmlLinkDeallocator(l, l->sentinel->prev);
}

/**
 * xmlListPushFront:
 * @l: a list
 * @data: new data

```

```

*
* add the new data at the beginning of the list
*
* Returns 1 if successful, 0 otherwise
*/
int
xmlListPushFront(xmlListPtr l, void *data)
{
    xmlLinkPtr lkPlace, lkNew;

    if (l == NULL)
        return(0);
    lkPlace = l->sentinel;
    /* Add the new link */
    lkNew = (xmlLinkPtr) xmlMalloc(sizeof(xmlLink));
    if (lkNew == NULL) {
        xmlGenericError(xmlGenericErrorContext,
            "Cannot initialize memory for new link");
        return (0);
    }
    lkNew->data = data;
    lkNew->next = lkPlace->next;
    (lkPlace->next)->prev = lkNew;
    lkPlace->next = lkNew;
    lkNew->prev = lkPlace;
    return 1;
}

/**
* xmlListPushBack:
* @l: a list
* @data: new data
*
* add the new data at the end of the list
*
* Returns 1 if successful, 0 otherwise
*/
int
xmlListPushBack(xmlListPtr l, void *data)
{
    xmlLinkPtr lkPlace, lkNew;

    if (l == NULL)
        return(0);
    lkPlace = l->sentinel->prev;
    /* Add the new link */
    if (NULL == (lkNew = (xmlLinkPtr)xmlMalloc(sizeof(xmlLink)))) {
        xmlGenericError(xmlGenericErrorContext,

```

```

        "Cannot initialize memory for new link");
    return (0);
}
lkNew->data = data;
lkNew->next = lkPlace->next;
(lkPlace->next)->prev = lkNew;
lkPlace->next = lkNew;
lkNew->prev = lkPlace;
return 1;
}

/**
 * xmlLinkGetData:
 * @lk: a link
 *
 * See Returns.
 *
 * Returns a pointer to the data referenced from this link
 */
void *
xmlLinkGetData(xmlLinkPtr lk)
{
    if (lk == NULL)
        return(NULL);
    return lk->data;
}

/**
 * xmlListReverse:
 * @l: a list
 *
 * Reverse the order of the elements in the list
 */
void
xmlListReverse(xmlListPtr l)
{
    xmlLinkPtr lk;
    xmlLinkPtr lkPrev;

    if (l == NULL)
        return;
    lkPrev = l->sentinel;
    for (lk = l->sentinel->next; lk != l->sentinel; lk = lk->next) {
        lkPrev->next = lkPrev->prev;
        lkPrev->prev = lk;
        lkPrev = lk;
    }
    /* Fix up the last node */

```

```

    lkPrev->next = lkPrev->prev;
    lkPrev->prev = lk;
}

/**
 * xmlListSort:
 * @l: a list
 *
 * Sort all the elements in the list
 */
void
xmlListSort(xmlListPtr l)
{
    xmlListPtr lTemp;

    if (l == NULL)
        return;
    if(xmlListEmpty(l))
        return;

    /* I think that the real answer is to implement quicksort, the
     * alternative is to implement some list copying procedure which
     * would be based on a list copy followed by a clear followed by
     * an insert. This is slow...
     */

    if (NULL == (lTemp = xmlListDup(l)))
        return;
    xmlListClear(l);
    xmlListMerge(l, lTemp);
    xmlListDelete(lTemp);
    return;
}

/**
 * xmlListWalk:
 * @l: a list
 * @walker: a processing function
 * @user: a user parameter passed to the walker function
 *
 * Walk all the element of the first from first to last and
 * apply the walker function to it
 */
void
xmlListWalk(xmlListPtr l, xmlListWalker walker, const void *user) {
    xmlLinkPtr lk;

    if ((l == NULL) || (walker == NULL))

```

```

    return;
    for(lk = l->sentinel->next; lk != l->sentinel; lk = lk->next) {
        if((walker(lk->data, user)) == 0)
            break;
    }
}

/**
 * xmlListReverseWalk:
 * @l: a list
 * @walker: a processing function
 * @user: a user parameter passed to the walker function
 *
 * Walk all the element of the list in reverse order and
 * apply the walker function to it
 */
void
xmlListReverseWalk(xmlListPtr l, xmlListWalker walker, const void *user) {
    xmlLinkPtr lk;

    if ((l == NULL) || (walker == NULL))
        return;
    for(lk = l->sentinel->prev; lk != l->sentinel; lk = lk->prev) {
        if((walker(lk->data, user)) == 0)
            break;
    }
}

/**
 * xmlListMerge:
 * @l1: the original list
 * @l2: the new list
 *
 * include all the elements of the second list in the first one and
 * clear the second list
 */
void
xmlListMerge(xmlListPtr l1, xmlListPtr l2)
{
    xmlListCopy(l1, l2);
    xmlListClear(l2);
}

/**
 * xmlListDup:
 * @old: the list
 *
 * Duplicate the list

```

```

*
* Returns a new copy of the list or NULL in case of error
*/
xmlListPtr
xmlListDup(const xmlListPtr old)
{
    xmlListPtr cur;

    if (old == NULL)
        return(NULL);
    /* Hmmm, how to best deal with allocation issues when copying
    * lists. If there is a de-allocator, should responsibility lie with
    * the new list or the old list. Surely not both. I'll arbitrarily
    * set it to be the old list for the time being whilst I work out
    * the answer
    */
    if (NULL == (cur = xmlListCreate(NULL, old->linkCompare)))
        return (NULL);
    if (0 != xmlListCopy(cur, old))
        return NULL;
    return cur;
}

/**
* xmlListCopy:
* @cur: the new list
* @old: the old list
*
* Move all the element from the old list in the new list
*
* Returns 0 in case of success 1 in case of error
*/
int
xmlListCopy(xmlListPtr cur, const xmlListPtr old)
{
    /* Walk the old tree and insert the data into the new one */
    xmlLinkPtr lk;

    if ((old == NULL) || (cur == NULL))
        return(1);
    for(lk = old->sentinel->next; lk != old->sentinel; lk = lk->next) {
        if (0 !=xmlListInsert(cur, lk->data)) {
            xmlListDelete(cur);
            return (1);
        }
    }
    return (0);
}

```

```
/* xmlListUnique() */
/* xmlListSwap */
#define bottom_list
#include "elfgcchack.h"
```

MIT License

Copyright (c) <year> <copyright holders>

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.

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) 1998-2003 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, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE DANIEL VEILLARD BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CON-

Except as contained in this notice, the name of Daniel Veillard shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from him.

```
/*
 *
 * $Id$
 *
 * Copyright (C) 1998 Bjorn Reese and Daniel Stenberg.
 *
 * 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.
 *
 * THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED
 * WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF
 * MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE AUTHORS AND
 * CONTRIBUTORS ACCEPT NO RESPONSIBILITY IN ANY CONCEIVABLE MANNER.
 *
 *****/
 *
 * A note to trio contributors:
 *
 * Avoid heap allocation at all costs to ensure that the trio functions
 * are async-safe. The exceptions are the printf/fprintf functions, which
 * uses fputc, and the asprintf functions and the <alloc> modifier, which
 * by design are required to allocate form the heap.
 *
 *****/
/*
 *
 * TODO:
 * - Scan is probably too permissive about its modifiers.
 * - C escapes in %#[] ?
 * - Multibyte characters (done for format parsing, except scan groups)
 * - Complex numbers? (C99 _Complex)
 * - Boolean values? (C99 _Bool)
 * - C99 NaN(n-char-sequence) missing. The n-char-sequence can be used
 * to print the mantissa, e.g. NaN(0xc000000000000000)
 * - Should we support the GNU %a alloc modifier? GNU has an ugly hack
 * for %a, because C99 used %a for other purposes. If specified as
 * %as or %a[ it is interpreted as the alloc modifier, otherwise as
 * the C99 hex-float. This means that you cannot scan %as as a hex-float
 * immediately followed by an 's'.
 * - Scanning of collating symbols.
 */
```

```

/*****
* Trio include files
*/
#include "triodef.h"
#include "trio.h"
#include "triop.h"
#include "trionan.h"
#if !defined(TRIO_MINIMAL)
# include "triostr.h"
#endif

/*****
*
* Definitions
*
*****/

#include <math.h>
#include <limits.h>
#include <float.h>

#if (defined(__STDC_ISO_10646__) || defined(MB_LEN_MAX) \
    || defined(USE_MULTIBYTE) || TRIO_WIDECHAR) \
    && !defined(_WIN32_WCE)
# define TRIO_COMPILER_SUPPORTS_MULTIBYTE
# if !defined(MB_LEN_MAX)
# define MB_LEN_MAX 6
# endif
#endif

#if (defined(TRIO_COMPILER_MSVC) && (_MSC_VER >= 1100)) || defined(TRIO_COMPILER_BCB)
# define TRIO_COMPILER_SUPPORTS_MSVC_INT
#endif

#if defined(_WIN32_WCE)
#include <winccompat.h>
#endif

/*****
* Generic definitions
*/

#if !(defined(DEBUG) || defined(NDEBUG))
# define NDEBUG
#endif

#include <assert.h>

```

```

#include <ctype.h>
#if !defined(TRIO_COMPILER_SUPPORTS_C99)
# define isblank(x) (((x)==32) || ((x)==9))
#endif
#if defined(TRIO_COMPILER_ANCIENT)
# include <varargs.h>
#else
# include <stdarg.h>
#endif
#include <stddef.h>

#ifdef HAVE_ERRNO_H
#include <errno.h>
#endif

#ifndef NULL
# define NULL 0
#endif
#define NIL ((char)0)
#ifndef FALSE
# define FALSE (1 == 0)
# define TRUE (! FALSE)
#endif
#define BOOLEAN_T int

/* mincore() can be used for debugging purposes */
#define VALID(x) (NULL != (x))

#if TRIO_ERRORS
/*
 * Encode the error code and the position. This is decoded
 * with TRIO_ERROR_CODE and TRIO_ERROR_POSITION.
 */
# define TRIO_ERROR_RETURN(x,y) (- ((x) + ((y) << 8)))
#else
# define TRIO_ERROR_RETURN(x,y) (-1)
#endif

typedef unsigned long trio_flags_t;

/*****
 * Platform specific definitions
 */
#ifdef TRIO_PLATFORM_UNIX
# include <unistd.h>
# include <signal.h>
# include <locale.h>

```

```

# define USE_LOCALE
#endif /* TRIO_PLATFORM_UNIX */
#if defined(TRIO_PLATFORM_VMS)
# include <unistd.h>
#endif
#if defined(TRIO_PLATFORM_WIN32)
# if defined(_WIN32_WCE)
# include <winccompat.h>
# else
# include <io.h>
# define read _read
# define write _write
# endif
#endif /* TRIO_PLATFORM_WIN32 */

#if TRIO_WIDECHAR
# if defined(TRIO_COMPILER_SUPPORTS_ISO94)
# include <wchar.h>
# include <wctype.h>
typedef wchar_t trio_wchar_t;
typedef wint_t trio_wint_t;
# else
typedef char trio_wchar_t;
typedef int trio_wint_t;
# define WCONST(x) L ## x
# define WEOF EOF
# define iswalnum(x) isalnum(x)
# define iswalphax(x) isalpha(x)
# define iswblank(x) isblank(x)
# define iswcntrl(x) iscntrl(x)
# define iswdigit(x) isdigit(x)
# define iswgraph(x) isgraph(x)
# define iswlower(x) islower(x)
# define iswprint(x) isprint(x)
# define iswpunct(x) ispunct(x)
# define iswspace(x) isspace(x)
# define iswupper(x) isupper(x)
# define iswxdigit(x) isxdigit(x)
# endif
#endif

/*****
* Compiler dependent definitions
*/

/* Support for long long */
#endifdef __cplusplus

```

```

# if !defined(USE_LONGLONG)
# if defined(TRIO_COMPILER_GCC) && !defined(__STRICT_ANSI__)
# define USE_LONGLONG
# elif defined(TRIO_COMPILER_SUNPRO)
# define USE_LONGLONG
# elif defined(_LONG_LONG) || defined(_LONGLONG)
# define USE_LONGLONG
# endif
# endif
#endif

```

```

/* The extra long numbers */
#if defined(USE_LONGLONG)
typedef signed long long int trio_longlong_t;
typedef unsigned long long int trio_ulonglong_t;
#elif defined(TRIO_COMPILER_SUPPORTS_MSVC_INT)
typedef signed __int64 trio_longlong_t;
typedef unsigned __int64 trio_ulonglong_t;
#else
typedef TRIO_SIGNED long int trio_longlong_t;
typedef unsigned long int trio_ulonglong_t;
#endif

```

```

/* Maximal and fixed integer types */
#if defined(TRIO_COMPILER_SUPPORTS_C99)
# include <stdint.h>
typedef intmax_t trio_intmax_t;
typedef uintmax_t trio_uintmax_t;
typedef int8_t trio_int8_t;
typedef int16_t trio_int16_t;
typedef int32_t trio_int32_t;
typedef int64_t trio_int64_t;
#elif defined(TRIO_COMPILER_SUPPORTS_UNIX98)
# include <inttypes.h>
typedef intmax_t trio_intmax_t;
typedef uintmax_t trio_uintmax_t;
typedef int8_t trio_int8_t;
typedef int16_t trio_int16_t;
typedef int32_t trio_int32_t;
typedef int64_t trio_int64_t;
#elif defined(TRIO_COMPILER_SUPPORTS_MSVC_INT)
typedef trio_longlong_t trio_intmax_t;
typedef trio_ulonglong_t trio_uintmax_t;
typedef __int8 trio_int8_t;
typedef __int16 trio_int16_t;
typedef __int32 trio_int32_t;
typedef __int64 trio_int64_t;
#else

```

```

typedef trio_longlong_t trio_intmax_t;
typedef trio_ulonglong_t trio_uintmax_t;
# if defined(TRIO_INT8_T)
typedef TRIO_INT8_T trio_int8_t;
# else
typedef TRIO_SIGNED char trio_int8_t;
# endif
# if defined(TRIO_INT16_T)
typedef TRIO_INT16_T trio_int16_t;
# else
typedef TRIO_SIGNED short trio_int16_t;
# endif
# if defined(TRIO_INT32_T)
typedef TRIO_INT32_T trio_int32_t;
# else
typedef TRIO_SIGNED int trio_int32_t;
# endif
# if defined(TRIO_INT64_T)
typedef TRIO_INT64_T trio_int64_t;
# else
typedef trio_longlong_t trio_int64_t;
# endif
#endif

#if (!(defined(TRIO_COMPILER_SUPPORTS_C99) \
|| defined(TRIO_COMPILER_SUPPORTS_UNIX01))) \
&& !defined(_WIN32_WCE)
# define floorl(x) floor((double)(x))
# define fmodl(x,y) fmod((double)(x),(double)(y))
# define powl(x,y) pow((double)(x),(double)(y))
#endif

#define TRIO_FABS(x) (((x) < 0.0) ? -(x) : (x))

/*****

* Internal Definitions
*/

#ifndef DECIMAL_DIG
# define DECIMAL_DIG DBL_DIG
#endif

/* Long double sizes */
#ifdef LDBL_DIG
# define MAX_MANTISSA_DIGITS LDBL_DIG
# define MAX_EXPONENT_DIGITS 4
# define MAX_DOUBLE_DIGITS LDBL_MAX_10_EXP
#else

```

```

#define MAX_MANTISSA_DIGITS DECIMAL_DIG
#define MAX_EXPONENT_DIGITS 3
#define MAX_DOUBLE_DIGITS DBL_MAX_10_EXP
#endif

#if defined(TRIO_COMPILER_ANCIENT) || !defined(LDBL_DIG)
#define LDBL_DIG
#define LDBL_MANT_DIG
#define LDBL_EPSILON
#define LDBL_DIG DBL_DIG
#define LDBL_MANT_DIG DBL_MANT_DIG
#define LDBL_EPSILON DBL_EPSILON
#endif

/* The maximal number of digits is for base 2 */
#define MAX_CHARS_IN(x) (sizeof(x) * CHAR_BIT)
/* The width of a pointer. The number of bits in a hex digit is 4 */
#define POINTER_WIDTH ((sizeof("0x") - 1) + sizeof(trio_pointer_t) * CHAR_BIT / 4)

/* Infinite and Not-A-Number for floating-point */
#define INFINITE_LOWER "inf"
#define INFINITE_UPPER "INF"
#define LONG_INFINITE_LOWER "infinite"
#define LONG_INFINITE_UPPER "INFINITE"
#define NAN_LOWER "nan"
#define NAN_UPPER "NAN"

#if !defined(HAVE_ISASCII) && !defined(isascii)
#define isascii(x) ((unsigned int)(x) < 128)
#endif

/* Various constants */
enum {
    TYPE_PRINT = 1,
    TYPE_SCAN = 2,

    /* Flags. FLAGS_LAST must be less than ULONG_MAX */
    FLAGS_NEW = 0,
    FLAGS_STICKY = 1,
    FLAGS_SPACE = 2 * FLAGS_STICKY,
    FLAGS_SHOWSIGN = 2 * FLAGS_SPACE,
    FLAGS_LEFTADJUST = 2 * FLAGS_SHOWSIGN,
    FLAGS_ALTERNATIVE = 2 * FLAGS_LEFTADJUST,
    FLAGS_SHORT = 2 * FLAGS_ALTERNATIVE,
    FLAGS_SHORTSHORT = 2 * FLAGS_SHORT,
    FLAGS_LONG = 2 * FLAGS_SHORTSHORT,
    FLAGS_QUAD = 2 * FLAGS_LONG,
    FLAGS_LONGDOUBLE = 2 * FLAGS_QUAD,

```

```

FLAGS_SIZE_T      = 2 * FLAGS_LONGDOUBLE,
FLAGS_PTRDIFF_T   = 2 * FLAGS_SIZE_T,
FLAGS_INTMAX_T    = 2 * FLAGS_PTRDIFF_T,
FLAGS_NILPADDING  = 2 * FLAGS_INTMAX_T,
FLAGS_UNSIGNED    = 2 * FLAGS_NILPADDING,
FLAGS_UPPER       = 2 * FLAGS_UNSIGNED,
FLAGS_WIDTH       = 2 * FLAGS_UPPER,
FLAGS_WIDTH_PARAMETER = 2 * FLAGS_WIDTH,
FLAGS_PRECISION   = 2 * FLAGS_WIDTH_PARAMETER,
FLAGS_PRECISION_PARAMETER = 2 * FLAGS_PRECISION,
FLAGS_BASE        = 2 * FLAGS_PRECISION_PARAMETER,
FLAGS_BASE_PARAMETER = 2 * FLAGS_BASE,
FLAGS_FLOAT_E     = 2 * FLAGS_BASE_PARAMETER,
FLAGS_FLOAT_G     = 2 * FLAGS_FLOAT_E,
FLAGS_QUOTE       = 2 * FLAGS_FLOAT_G,
FLAGS_WIDECHAR    = 2 * FLAGS_QUOTE,
FLAGS_ALLOC       = 2 * FLAGS_WIDECHAR,
FLAGS_IGNORE      = 2 * FLAGS_ALLOC,
FLAGS_IGNORE_PARAMETER = 2 * FLAGS_IGNORE,
FLAGS_VARSIZE_PARAMETER = 2 * FLAGS_IGNORE_PARAMETER,
FLAGS_FIXED_SIZE  = 2 * FLAGS_VARSIZE_PARAMETER,
FLAGS_LAST        = FLAGS_FIXED_SIZE,
/* Reused flags */
FLAGS_EXCLUDE     = FLAGS_SHORT,
FLAGS_USER_DEFINED = FLAGS_IGNORE,
FLAGS_ROUNDING    = FLAGS_INTMAX_T,
/* Compounded flags */
FLAGS_ALL_VARSIZES = FLAGS_LONG | FLAGS_QUAD | FLAGS_INTMAX_T | FLAGS_PTRDIFF_T
| FLAGS_SIZE_T,
FLAGS_ALL_SIZES   = FLAGS_ALL_VARSIZES | FLAGS_SHORTEST | FLAGS_SHORT,

NO_POSITION = -1,
NO_WIDTH    = 0,
NO_PRECISION = -1,
NO_SIZE     = -1,

/* Do not change these */
NO_BASE     = -1,
MIN_BASE    = 2,
MAX_BASE    = 36,
BASE_BINARY = 2,
BASE_OCTAL  = 8,
BASE_DECIMAL = 10,
BASE_HEX    = 16,

/* Maximal number of allowed parameters */
MAX_PARAMETERS = 64,
/* Maximal number of characters in class */

```

```

MAX_CHARACTER_CLASS = UCHAR_MAX + 1,

/* Maximal string lengths for user-defined specifiers */
MAX_USER_NAME = 64,
MAX_USER_DATA = 256,

/* Maximal length of locale separator strings */
MAX_LOCALE_SEPARATOR_LENGTH = MB_LEN_MAX,
/* Maximal number of integers in grouping */
MAX_LOCALE_GROUPS = 64,

/* Initial size of asprintf buffer */
DYNAMIC_START_SIZE = 32
};

#define NO_GROUPING ((int)CHAR_MAX)

/* Fundamental formatting parameter types */
#define FORMAT_UNKNOWN 0
#define FORMAT_INT 1
#define FORMAT_DOUBLE 2
#define FORMAT_CHAR 3
#define FORMAT_STRING 4
#define FORMAT_POINTER 5
#define FORMAT_COUNT 6
#define FORMAT_PARAMETER 7
#define FORMAT_GROUP 8
#if TRIO_GNU
# define FORMAT_ERRNO 9
#endif
#if TRIO_EXTENSION
# define FORMAT_USER_DEFINED 10
#endif

/* Character constants */
#define CHAR_IDENTIFIER '%'
#define CHAR_BACKSLASH '\\'
#define CHAR_QUOTE '\"'
#define CHAR_ADJUST ' '

/* Character class expressions */
#define CLASS_ALNUM "[:alnum:]"
#define CLASS_ALPHA "[:alpha:]"
#define CLASS_BLANK "[:blank:]"
#define CLASS_CNTRL "[:cntrl:]"
#define CLASS_DIGIT "[:digit:]"
#define CLASS_GRAPH "[:graph:]"
#define CLASS_LOWER "[:lower:]"

```

```

#define CLASS_PRINT "[:print:]"
#define CLASS_PUNCT "[:punct:]"
#define CLASS_SPACE "[:space:]"
#define CLASS_UPPER "[:upper:]"
#define CLASS_XDIGIT "[:xdigit:]"

/*
 * SPECIFIERS:
 *
 *
 * a Hex-float
 * A Hex-float
 * c Character
 * C Widechar character (wint_t)
 * d Decimal
 * e Float
 * E Float
 * F Float
 * F Float
 * g Float
 * G Float
 * i Integer
 * m Error message
 * n Count
 * o Octal
 * p Pointer
 * s String
 * S Widechar string (wchar_t *)
 * u Unsigned
 * x Hex
 * X Hex
 * [] Group
 * <> User-defined
 *
 * Reserved:
 *
 * D Binary Coded Decimal %D(length,precision) (OS/390)
 */
#define SPECIFIER_CHAR 'c'
#define SPECIFIER_STRING 's'
#define SPECIFIER_DECIMAL 'd'
#define SPECIFIER_INTEGER 'i'
#define SPECIFIER_UNSIGNED 'u'
#define SPECIFIER_OCTAL 'o'
#define SPECIFIER_HEX 'x'
#define SPECIFIER_HEX_UPPER 'X'
#define SPECIFIER_FLOAT_E 'e'
#define SPECIFIER_FLOAT_E_UPPER 'E'

```

```

#define SPECIFIER_FLOAT_F 'f'
#define SPECIFIER_FLOAT_F_UPPER 'F'
#define SPECIFIER_FLOAT_G 'g'
#define SPECIFIER_FLOAT_G_UPPER 'G'
#define SPECIFIER_POINTER 'p'
#define SPECIFIER_GROUP '['
#define SPECIFIER_UNGROUP ']'
#define SPECIFIER_COUNT 'n'
#if TRIO_UNIX98
# define SPECIFIER_CHAR_UPPER 'C'
# define SPECIFIER_STRING_UPPER 'S'
#endif
#if TRIO_C99
# define SPECIFIER_HEXFLOAT 'a'
# define SPECIFIER_HEXFLOAT_UPPER 'A'
#endif
#if TRIO_GNU
# define SPECIFIER_ERRNO 'm'
#endif
#if TRIO_EXTENSION
# define SPECIFIER_BINARY 'b'
# define SPECIFIER_BINARY_UPPER 'B'
# define SPECIFIER_USER_DEFINED_BEGIN '<'
# define SPECIFIER_USER_DEFINED_END '>'
# define SPECIFIER_USER_DEFINED_SEPARATOR ':'
#endif

/*
* QUALIFIERS:
*
*
* Numbers = d,i,o,u,x,X
* Float = a,A,e,E,f,F,g,G
* String = s
* Char = c
*
*
* 9$ Position
*   Use the 9th parameter. 9 can be any number between 1 and
*   the maximal argument
*
* 9 Width
*   Set width to 9. 9 can be any number, but must not be postfixd
*   by '$'
*
* h Short
*   Numbers:
*   (unsigned) short int

```

```

*
* hh Short short
* Numbers:
* (unsigned) char
*
* l Long
* Numbers:
* (unsigned) long int
* String:
* as the S specifier
* Char:
* as the C specifier
*
* ll Long Long
* Numbers:
* (unsigned) long long int
*
* L Long Double
* Float
* long double
*
* # Alternative
* Float:
* Decimal-point is always present
* String:
* non-printable characters are handled as \number
*
* Spacing
*
* + Sign
*
* - Alignment
*
* . Precision
*
* * Parameter
* print: use parameter
* scan: no parameter (ignore)
*
* q Quad
*
* Z size_t
*
* w Widechar
*
* ' Thousands/quote
* Numbers:
* Integer part grouped in thousands

```

```

* Binary numbers:
*   Number grouped in nibbles (4 bits)
* String:
*   Quoted string
*
* j intmax_t
* t ptrdiff_t
* z size_t
*
* ! Sticky
* @ Parameter (for both print and scan)
*
* I n-bit Integer
* Numbers:
*   The following options exists
*   I8 = 8-bit integer
*   I16 = 16-bit integer
*   I32 = 32-bit integer
*   I64 = 64-bit integer
*/
#define QUALIFIER_POSITION '$'
#define QUALIFIER_SHORT 'h'
#define QUALIFIER_LONG 'l'
#define QUALIFIER_LONG_UPPER 'L'
#define QUALIFIER_ALTERNATIVE '#'
#define QUALIFIER_SPACE ' '
#define QUALIFIER_PLUS '+'
#define QUALIFIER_MINUS '-'
#define QUALIFIER_DOT '.'
#define QUALIFIER_STAR '*'
#define QUALIFIER_CIRCUMFLEX '^' /* For scanlists */
#if TRIO_C99
# define QUALIFIER_SIZE_T 'z'
# define QUALIFIER_PTRDIFF_T 't'
# define QUALIFIER_INTMAX_T 'j'
#endif
#if TRIO_BSD || TRIO_GNU
# define QUALIFIER_QUAD 'q'
#endif
#if TRIO_GNU
# define QUALIFIER_SIZE_T_UPPER 'Z'
#endif
#if TRIO_MISC
# define QUALIFIER_WIDECHAR 'w'
#endif
#if TRIO_MICROSOFT
# define QUALIFIER_FIXED_SIZE 'T'
#endif

```

```

#if TRIO_EXTENSION
# define QUALIFIER_QUOTE "\"
# define QUALIFIER_STICKY '!'
# define QUALIFIER_VARSIZE '&' /* This should remain undocumented */
# define QUALIFIER_PARAM '@' /* Experimental */
# define QUALIFIER_COLON ':' /* For scanlists */
# define QUALIFIER_EQUAL '=' /* For scanlists */
# define QUALIFIER_ROUNDING_UPPER 'R'
#endif

/*****
*
* Internal Structures
*
*****/

/* Parameters */
typedef struct {
/* An indication of which entry in the data union is used */
int type;
/* The flags */
trio_flags_t flags;
/* The width qualifier */
int width;
/* The precision qualifier */
int precision;
/* The base qualifier */
int base;
/* The size for the variable size qualifier */
int varsize;
/* The marker of the end of the specifier */
int indexAfterSpecifier;
/* The data from the argument list */
union {
char *string;
#if TRIO_WIDECHAR
trio_wchar_t *wstring;
#endif
trio_pointer_t pointer;
union {
trio_intmax_t as_signed;
trio_uintmax_t as_unsigned;
} number;
double doubleNumber;
double *doublePointer;
trio_long_double_t longdoubleNumber;
trio_long_double_t *longdoublePointer;
}
}

```

```

    int errorNumber;
} data;
/* For the user-defined specifier */
char user_name[MAX_USER_NAME];
char user_data[MAX_USER_DATA];
} trio_parameter_t;

/* Container for customized functions */
typedef struct {
    union {
        trio_outstream_t out;
        trio_instream_t in;
    } stream;
    trio_pointer_t closure;
} trio_custom_t;

/* General trio "class" */
typedef struct _trio_class_t {
/*
    * The function to write characters to a stream.
    */
    void (*OutStream) TRIO_PROTO((struct _trio_class_t *, int));
/*
    * The function to read characters from a stream.
    */
    void (*InStream) TRIO_PROTO((struct _trio_class_t *, int *));
/*
    * The current location in the stream.
    */
    trio_pointer_t location;
/*
    * The character currently being processed.
    */
    int current;
/*
    * The number of characters that would have been written/read
    * if there had been sufficient space.
    */
    int processed;
/*
    * The number of characters that are actually written/read.
    * Processed and committed will only differ for the *nprintf
    * and *nscanf functions.
    */
    int committed;
/*
    * The upper limit of characters that may be written/read.
    */

```

```

int max;
/*
 * The last output error that was detected.
 */
int error;
} trio_class_t;

/* References (for user-defined callbacks) */
typedef struct _trio_reference_t {
    trio_class_t *data;
    trio_parameter_t *parameter;
} trio_reference_t;

/* Registered entries (for user-defined callbacks) */
typedef struct _trio_userdef_t {
    struct _trio_userdef_t *next;
    trio_callback_t callback;
    char *name;
} trio_userdef_t;

/*****
 *
 * Internal Variables
 *
 *****/

static TRIO_CONST char rcsid[] = "@(#) $Id$";

/*
 * Need this to workaround a parser bug in HP C/iX compiler that fails
 * to resolves macro definitions that includes type 'long double',
 * e.g: va_arg(arg_ptr, long double)
 */
#ifdef TRIO_PLATFORM_MPEIX
static TRIO_CONST trio_long_double_t ___dummy_long_double = 0;
#endif

static TRIO_CONST char internalNullString[] = "(nil)";

#ifdef USE_LOCALE
static struct lconv *internalLocaleValues = NULL;
#endif

/*
 * UNIX98 says "in a locale where the radix character is not defined,
 * the radix character defaults to a period (.)"
 */
static int internalDecimalPointLength = 1;

```

```

static int internalThousandSeparatorLength = 1;
static char internalDecimalPoint = '.';
static char internalDecimalPointString[MAX_LOCALE_SEPARATOR_LENGTH + 1] = ".";
static char internalThousandSeparator[MAX_LOCALE_SEPARATOR_LENGTH + 1] = ",";
static char internalGrouping[MAX_LOCALE_GROUPS] = { (char)NO_GROUPING };

static TRIO_CONST char internalDigitsLower[] = "0123456789abcdefghijklmnopqrstuvwxyz";
static TRIO_CONST char internalDigitsUpper[] = "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ";
static BOOLEAN_T internalDigitsUnconverted = TRUE;
static int internalDigitArray[128];
#if TRIO_EXTENSION
static BOOLEAN_T internalCollationUnconverted = TRUE;
static char internalCollationArray[MAX_CHARACTER_CLASS][MAX_CHARACTER_CLASS];
#endif

#if TRIO_EXTENSION
static TRIO_VOLATILE trio_callback_t internalEnterCriticalRegion = NULL;
static TRIO_VOLATILE trio_callback_t internalLeaveCriticalRegion = NULL;
static trio_userdef_t *internalUserDef = NULL;
#endif

/*****
*
* Internal Functions
*
*****/

#if defined(TRIO_MINIMAL)
# define TRIO_STRING_PUBLIC static
# include "triostr.c"
#endif /* defined(TRIO_MINIMAL) */

/*****
* TrioIsQualifier
*
* Description:
* Remember to add all new qualifiers to this function.
* QUALIFIER_POSITION must not be added.
*/
TRIO_PRIVATE BOOLEAN_T
TrioIsQualifier
TRIO_ARGS1((character),
           TRIO_CONST char character)
{
/* QUALIFIER_POSITION is not included */
switch (character)
{

```

```

case '0': case '1': case '2': case '3': case '4':
case '5': case '6': case '7': case '8': case '9':
case QUALIFIER_PLUS:
case QUALIFIER_MINUS:
case QUALIFIER_SPACE:
case QUALIFIER_DOT:
case QUALIFIER_STAR:
case QUALIFIER_ALTERNATIVE:
case QUALIFIER_SHORT:
case QUALIFIER_LONG:
case QUALIFIER_LONG_UPPER:
case QUALIFIER_CIRCUMFLEX:
#if defined(QUALIFIER_SIZE_T)
case QUALIFIER_SIZE_T:
#endif
#if defined(QUALIFIER_PTRDIFF_T)
case QUALIFIER_PTRDIFF_T:
#endif
#if defined(QUALIFIER_INTMAX_T)
case QUALIFIER_INTMAX_T:
#endif
#if defined(QUALIFIER_QUAD)
case QUALIFIER_QUAD:
#endif
#if defined(QUALIFIER_SIZE_T_UPPER)
case QUALIFIER_SIZE_T_UPPER:
#endif
#if defined(QUALIFIER_WIDECHAR)
case QUALIFIER_WIDECHAR:
#endif
#if defined(QUALIFIER_QUOTE)
case QUALIFIER_QUOTE:
#endif
#if defined(QUALIFIER_STICKY)
case QUALIFIER_STICKY:
#endif
#if defined(QUALIFIER_VARSIZE)
case QUALIFIER_VARSIZE:
#endif
#if defined(QUALIFIER_PARAM)
case QUALIFIER_PARAM:
#endif
#if defined(QUALIFIER_FIXED_SIZE)
case QUALIFIER_FIXED_SIZE:
#endif
#if defined(QUALIFIER_ROUNDING_UPPER)
case QUALIFIER_ROUNDING_UPPER:
#endif

```

```

    return TRUE;
default:
    return FALSE;
}
}

/*****
* TrioSetLocale
*/
#if defined(USE_LOCALE)
TRIO_PRIVATE void
TrioSetLocale(TRIO_NOARGS)
{
    internalLocaleValues = (struct lconv *)localeconv();
    if (internalLocaleValues)
    {
        if ((internalLocaleValues->decimal_point) &&
            (internalLocaleValues->decimal_point[0] != NIL))
        {
            internalDecimalPointLength = trio_length(internalLocaleValues->decimal_point);
            if (internalDecimalPointLength == 1)
            {
                internalDecimalPoint = internalLocaleValues->decimal_point[0];
            }
            else
            {
                internalDecimalPoint = NIL;
                trio_copy_max(internalDecimalPointString,
                    sizeof(internalDecimalPointString),
                    internalLocaleValues->decimal_point);
            }
        }
        if ((internalLocaleValues->thousands_sep) &&
            (internalLocaleValues->thousands_sep[0] != NIL))
        {
            trio_copy_max(internalThousandSeparator,
                sizeof(internalThousandSeparator),
                internalLocaleValues->thousands_sep);
            internalThousandSeparatorLength = trio_length(internalThousandSeparator);
        }
        if ((internalLocaleValues->grouping) &&
            (internalLocaleValues->grouping[0] != NIL))
        {
            trio_copy_max(internalGrouping,
                sizeof(internalGrouping),
                internalLocaleValues->grouping);
        }
    }
}

```

```

}
#endif /* defined(USE_LOCALE) */

TRIO_PRIVATE int
TrioCalcThousandSeparatorLength
TRIO_ARGS1((digits),
    int digits)
{
#if TRIO_EXTENSION
    int count = 0;
    int step = NO_GROUPING;
    char *groupingPointer = internalGrouping;

    while (digits > 0)
    {
        if (*groupingPointer == CHAR_MAX)
        {
            /* Disable grouping */
            break; /* while */
        }
        else if (*groupingPointer == 0)
        {
            /* Repeat last group */
            if (step == NO_GROUPING)
            {
                /* Error in locale */
                break; /* while */
            }
        }
        else
        {
            step = *groupingPointer++;
        }
        if (digits > step)
            count += internalThousandSeparatorLength;
        digits -= step;
    }
    return count;
#else
    return 0;
#endif
}

TRIO_PRIVATE BOOLEAN_T
TrioFollowedBySeparator
TRIO_ARGS1((position),
    int position)
{

```

```

#if TRIO_EXTENSION
int step = 0;
char *groupingPointer = internalGrouping;

position--;
if (position == 0)
    return FALSE;
while (position > 0)
    {
        if (*groupingPointer == CHAR_MAX)
        {
            /* Disable grouping */
            break; /* while */
        }
        else if (*groupingPointer != 0)
        {
            step = *groupingPointer++;
        }
        if (step == 0)
            break;
        position -= step;
    }
return (position == 0);
#else
return FALSE;
#endif
}

/*****
* TrioGetPosition
*
* Get the %n$ position.
*/
TRIO_PRIVATE int
TrioGetPosition
TRIO_ARGS2((format, indexPointer),
    TRIO_CONST char *format,
    int *indexPointer)
{
#if TRIO_UNIX98
char *tmpformat;
int number = 0;
int index = *indexPointer;

number = (int)trio_to_long(&format[index], &tmpformat, BASE_DECIMAL);
index = (int)(tmpformat - format);
if ((number != 0) && (QUALIFIER_POSITION == format[index++]))
    {

```

```

    *indexPointer = index;
    /*
    * number is decreased by 1, because n$ starts from 1, whereas
    * the array it is indexing starts from 0.
    */
    return number - 1;
}
#endif
return NO_POSITION;
}

#if TRIO_EXTENSION
/*****
* TrioFindNamespace
*
* Find registered user-defined specifier.
* The prev argument is used for optimization only.
*/
TRIO_PRIVATE trio_userdef_t *
TrioFindNamespace
TRIO_ARGS2((name, prev),
    TRIO_CONST char *name,
    trio_userdef_t **prev)
{
    trio_userdef_t *def;

    if (internalEnterCriticalRegion)
        (void)internalEnterCriticalRegion(NULL);

    for (def = internalUserDef; def; def = def->next)
    {
        /* Case-sensitive string comparison */
        if (trio_equal_case(def->name, name))
            break;

        if (prev)
            *prev = def;
    }

    if (internalLeaveCriticalRegion)
        (void)internalLeaveCriticalRegion(NULL);

    return def;
}
#endif

/*****
* TrioPower

```

```

*
* Description:
* Calculate pow(base, exponent), where number and exponent are integers.
*/
TRIO_PRIVATE trio_long_double_t
TrioPower
TRIO_ARGS2((number, exponent),
    int number,
    int exponent)
{
    trio_long_double_t result;

    if (number == 10)
    {
        switch (exponent)
        {
            /* Speed up calculation of common cases */
            case 0:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E-1);
                break;
            case 1:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+0);
                break;
            case 2:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+1);
                break;
            case 3:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+2);
                break;
            case 4:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+3);
                break;
            case 5:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+4);
                break;
            case 6:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+5);
                break;
            case 7:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+6);
                break;
            case 8:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+7);
                break;
            case 9:
                result = (trio_long_double_t)number * TRIO_SUFFIX_LONG(1E+8);
                break;
            default:

```

```

    result = powl((trio_long_double_t)number,
    (trio_long_double_t)exponent);
    break;
}
}
else
{
    return powl((trio_long_double_t)number, (trio_long_double_t)exponent);
}
return result;
}

/*****
* TrioLogarithm
*/
TRIO_PRIVATE double
TrioLogarithm
TRIO_ARGS2((number, base),
    double number,
    int base)
{
    double result;

    if (number <= 0.0)
    {
        /* x1C crashes on log(0) */
        result = (number == 0.0) ? trio_ninf() : trio_nan();
    }
    else
    {
        if (base == 10)
        {
            result = log10(number);
        }
        else
        {
            result = log10(number) / log10((double)base);
        }
    }
    return result;
}

/*****
* TrioLogarithmBase
*/
TRIO_PRIVATE double
TrioLogarithmBase
TRIO_ARGS1((base),

```

```

    int base)
{
switch (base)
    {
    case BASE_BINARY : return 1.0;
    case BASE_OCTAL  : return 3.0;
    case BASE_DECIMAL: return 3.321928094887362345;
    case BASE_HEX    : return 4.0;
    default          : return TrioLogarithm((double)base, 2);
    }
}

/*****

* TrioParse
*
* Description:
* Parse the format string
*/

TRIO_PRIVATE int
TrioParse
TRIO_ARGS5((type, format, parameters, arglist, argarray),
    int type,
    TRIO_CONST char *format,
    trio_parameter_t *parameters,
    va_list *arglist,
    trio_pointer_t *argarray)
{
/* Count the number of times a parameter is referenced */
unsigned short usedEntries[MAX_PARAMETERS];
/* Parameter counters */
int parameterPosition;
int currentParam;
int maxParam = -1;
/* Utility variables */
trio_flags_t flags;
int width;
int precision;
int varsize;
int base;
int index; /* Index into formatting string */
int dots; /* Count number of dots in modifier part */
BOOLEAN_T positional; /* Does the specifier have a positional? */
BOOLEAN_T gotSticky = FALSE; /* Are there any sticky modifiers at all? */
/*
* indices specifies the order in which the parameters must be
* read from the va_args (this is necessary to handle positionals)
*/
int indices[MAX_PARAMETERS];

```

```

int pos = 0;
/* Various variables */
char ch;
#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)
int charlen;
#endif
int save_errno;
int i = -1;
int num;
char *tmpformat;

/* One and only one of arglist and argarray must be used */
assert((arglist != NULL) ^ (argarray != NULL));

/*
 * The 'parameters' array is not initialized, but we need to
 * know which entries we have used.
 */
memset(usedEntries, 0, sizeof(usedEntries));

save_errno = errno;
index = 0;
parameterPosition = 0;
#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)
(void)mblen(NULL, 0);
#endif

while (format[index])
{
#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)
if (! isascii(format[index]))
{
/*
 * Multibyte characters cannot be legal specifiers or
 * modifiers, so we skip over them.
 */
charlen = mblen(&format[index], MB_LEN_MAX);
index += (charlen > 0) ? charlen : 1;
continue; /* while */
}
#endif /* TRIO_COMPILER_SUPPORTS_MULTIBYTE */
if (CHAR_IDENTIFIER == format[index++])
{
if (CHAR_IDENTIFIER == format[index])
{
index++;
continue; /* while */
}
}
}

```

```

flags = FLAGS_NEW;
dots = 0;
currentParam = TrioGetPosition(format, &index);
positional = (NO_POSITION != currentParam);
if (!positional)
{
    /* We have no positional, get the next counter */
    currentParam = parameterPosition;
}
if(currentParam >= MAX_PARAMETERS)
{
    /* Bail out completely to make the error more obvious */
    return TRIO_ERROR_RETURN(TRIO_ETOOMANY, index);
}

if (currentParam > maxParam)
    maxParam = currentParam;

/* Default values */
width = NO_WIDTH;
precision = NO_PRECISION;
base = NO_BASE;
varsize = NO_SIZE;

while (TrioIsQualifier(format[index]))
{
    ch = format[index++];

    switch (ch)
    {
case QUALIFIER_SPACE:
    flags |= FLAGS_SPACE;
    break;

case QUALIFIER_PLUS:
    flags |= FLAGS_SHOWSIGN;
    break;

case QUALIFIER_MINUS:
    flags |= FLAGS_LEFTADJUST;
    flags &= ~FLAGS_NILPADDING;
    break;

case QUALIFIER_ALTERNATIVE:
    flags |= FLAGS_ALTERNATIVE;
    break;

```

```

case QUALIFIER_DOT:
    if (dots == 0) /* Precision */
    {
        dots++;

        /* Skip if no precision */
        if (QUALIFIER_DOT == format[index])
        break;

        /* After the first dot we have the precision */
        flags |= FLAGS_PRECISION;
        if ((QUALIFIER_STAR == format[index])
#if defined(QUALIFIER_PARAM)
        || (QUALIFIER_PARAM == format[index])
#endif
        )
        {
            index++;
            flags |= FLAGS_PRECISION_PARAMETER;

            precision = TrioGetPosition(format, &index);
            if (precision == NO_POSITION)
            {
                parameterPosition++;
                if (positional)
                precision = parameterPosition;
                else
                {
                    precision = currentParam;
                    currentParam = precision + 1;
                }
            }
            else
            {
                if (! positional)
                currentParam = precision + 1;
                if (width > maxParam)
                maxParam = precision;
            }
            if (currentParam > maxParam)
                maxParam = currentParam;
        }
        else
        {
            precision = trio_to_long(&format[index],
                &tmpformat,
                BASE_DECIMAL);
            index = (int)(tmpformat - format);

```

```

}
}
else if (dots == 1) /* Base */
{
    dots++;

    /* After the second dot we have the base */
    flags |= FLAGS_BASE;
    if ((QUALIFIER_STAR == format[index])
#if defined(QUALIFIER_PARAM)
    || (QUALIFIER_PARAM == format[index])
#endif
    )
    {
        index++;
        flags |= FLAGS_BASE_PARAMETER;
        base = TrioGetPosition(format, &index);
        if (base == NO_POSITION)
        {
            parameterPosition++;
            if (positional)
                base = parameterPosition;
            else
            {
                base = currentParam;
                currentParam = base + 1;
            }
        }
        else
        {
            if (! positional)
                currentParam = base + 1;
            if (base > maxParam)
                maxParam = base;
        }
        if (currentParam > maxParam)
            maxParam = currentParam;
    }
    else
    {
        base = trio_to_long(&format[index],
            &tmpformat,
            BASE_DECIMAL);
        if (base > MAX_BASE)
            return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
        index = (int)(tmpformat - format);
    }
}
}

```

```

else
{
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
}
break; /* QUALIFIER_DOT */

#if defined(QUALIFIER_PARAM)
case QUALIFIER_PARAM:
    type = TYPE_PRINT;
    /* FALLTHROUGH */
#endif
case QUALIFIER_STAR:
    /* This has different meanings for print and scan */
    if (TYPE_PRINT == type)
    {
        /* Read with from parameter */
        flags |= (FLAGS_WIDTH | FLAGS_WIDTH_PARAMETER);
        width = TrioGetPosition(format, &index);
        if (width == NO_POSITION)
        {
            parameterPosition++;
            if (positional)
                width = parameterPosition;
            else
            {
                width = currentParam;
                currentParam = width + 1;
            }
        }
        else
        {
            if (!positional)
                currentParam = width + 1;
            if (width > maxParam)
                maxParam = width;
        }
        if (currentParam > maxParam)
            maxParam = currentParam;
    }
    else
    {
        /* Scan, but do not store result */
        flags |= FLAGS_IGNORE;
    }

    break; /* QUALIFIER_STAR */

case '0':

```

```

if (!(flags & FLAGS_LEFTADJUST))
    flags |= FLAGS_NILPADDING;
/* FALLTHROUGH */
case '1': case '2': case '3': case '4':
case '5': case '6': case '7': case '8': case '9':
    flags |= FLAGS_WIDTH;
/* &format[index - 1] is used to "rewind" the read
 * character from format
 */
width = trio_to_long(&format[index - 1],
    &tmpformat,
    BASE_DECIMAL);
index = (int)(tmpformat - format);
break;

case QUALIFIER_SHORT:
if (flags & FLAGS_SHORTSHORT)
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
else if (flags & FLAGS_SHORT)
    flags |= FLAGS_SHORTSHORT;
else
    flags |= FLAGS_SHORT;
break;

case QUALIFIER_LONG:
if (flags & FLAGS_QUAD)
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
else if (flags & FLAGS_LONG)
    flags |= FLAGS_QUAD;
else
    flags |= FLAGS_LONG;
break;

case QUALIFIER_LONG_UPPER:
    flags |= FLAGS_LONGDOUBLE;
    break;

#ifdef QUALIFIER_SIZE_T
case QUALIFIER_SIZE_T:
    flags |= FLAGS_SIZE_T;
/* Modify flags for later truncation of number */
if (sizeof(size_t) == sizeof(trio_ulonglong_t))
    flags |= FLAGS_QUAD;
else if (sizeof(size_t) == sizeof(long))
    flags |= FLAGS_LONG;
break;
#endif

```

```

#if defined(QUALIFIER_PTRDIFF_T)
case QUALIFIER_PTRDIFF_T:
    flags |= FLAGS_PTRDIFF_T;
    if (sizeof(ptrdiff_t) == sizeof(trio_ulonglong_t))
        flags |= FLAGS_QUAD;
    else if (sizeof(ptrdiff_t) == sizeof(long))
        flags |= FLAGS_LONG;
    break;
#endif

#if defined(QUALIFIER_INTMAX_T)
case QUALIFIER_INTMAX_T:
    flags |= FLAGS_INTMAX_T;
    if (sizeof(trio_intmax_t) == sizeof(trio_ulonglong_t))
        flags |= FLAGS_QUAD;
    else if (sizeof(trio_intmax_t) == sizeof(long))
        flags |= FLAGS_LONG;
    break;
#endif

#if defined(QUALIFIER_QUAD)
case QUALIFIER_QUAD:
    flags |= FLAGS_QUAD;
    break;
#endif

#if defined(QUALIFIER_FIXED_SIZE)
case QUALIFIER_FIXED_SIZE:
    if (flags & FLAGS_FIXED_SIZE)
        return TRIO_ERROR_RETURN(TRIO_EINVAL, index);

    if (flags & (FLAGS_ALL_SIZES | FLAGS_LONGDOUBLE |
        FLAGS_WIDECHAR | FLAGS_VARSIZE_PARAMETER))
        return TRIO_ERROR_RETURN(TRIO_EINVAL, index);

    if ((format[index] == '6') &&
        (format[index + 1] == '4'))
    {
        varsize = sizeof(trio_int64_t);
        index += 2;
    }
    else if ((format[index] == '3') &&
        (format[index + 1] == '2'))
    {
        varsize = sizeof(trio_int32_t);
        index += 2;
    }
    else if ((format[index] == '1') &&

```

```

(format[index + 1] == '6'))
{
    varsize = sizeof(trio_int16_t);
    index += 2;
}
else if (format[index] == '8')
{
    varsize = sizeof(trio_int8_t);
    index++;
}
else
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);

flags |= FLAGS_FIXED_SIZE;
break;
#endif

#if defined(QUALIFIER_WIDECHAR)
case QUALIFIER_WIDECHAR:
    flags |= FLAGS_WIDECHAR;
    break;
#endif

#if defined(QUALIFIER_SIZE_T_UPPER)
case QUALIFIER_SIZE_T_UPPER:
    break;
#endif

#if defined(QUALIFIER_QUOTE)
case QUALIFIER_QUOTE:
    flags |= FLAGS_QUOTE;
    break;
#endif

#if defined(QUALIFIER_STICKY)
case QUALIFIER_STICKY:
    flags |= FLAGS_STICKY;
    gotSticky = TRUE;
    break;
#endif

#if defined(QUALIFIER_VARSIZE)
case QUALIFIER_VARSIZE:
    flags |= FLAGS_VARSIZE_PARAMETER;
    parameterPosition++;
    if (positional)
        varsize = parameterPosition;
    else

```

```

    {
        varsize = currentParam;
        currentParam = varsize + 1;
    }
    if (currentParam > maxParam)
        maxParam = currentParam;
    break;
#endif

#ifdef QUALIFIER_ROUNDING_UPPER
    case QUALIFIER_ROUNDING_UPPER:
        flags |= FLAGS_ROUNDING;
        break;
#endif

default:
    /* Bail out completely to make the error more obvious */
        return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
}
} /* while qualifier */

/*
 * Parameters only need the type and value. The value is
 * read later.
 */
if (flags & FLAGS_WIDTH_PARAMETER)
{
    usedEntries[width] += 1;
    parameters[pos].type = FORMAT_PARAMETER;
    parameters[pos].flags = 0;
    indices[width] = pos;
    width = pos++;
}
if (flags & FLAGS_PRECISION_PARAMETER)
{
    usedEntries[precision] += 1;
    parameters[pos].type = FORMAT_PARAMETER;
    parameters[pos].flags = 0;
    indices[precision] = pos;
    precision = pos++;
}
if (flags & FLAGS_BASE_PARAMETER)
{
    usedEntries[base] += 1;
    parameters[pos].type = FORMAT_PARAMETER;
    parameters[pos].flags = 0;
    indices[base] = pos;
    base = pos++;
}

```

```

    }
    if (flags & FLAGS_VARSIZE_PARAMETER)
    {
        usedEntries[varsize] += 1;
        parameters[pos].type = FORMAT_PARAMETER;
        parameters[pos].flags = 0;
        indices[varsize] = pos;
        varsize = pos++;
    }

    indices[currentParam] = pos;

    switch (format[index++])
    {
    #if defined(SPECIFIER_CHAR_UPPER)
        case SPECIFIER_CHAR_UPPER:
            flags |= FLAGS_WIDECHAR;
            /* FALLTHROUGH */
    #endif
        case SPECIFIER_CHAR:
            if (flags & FLAGS_LONG)
                flags |= FLAGS_WIDECHAR;
            else if (flags & FLAGS_SHORT)
                flags &= ~FLAGS_WIDECHAR;
            parameters[pos].type = FORMAT_CHAR;
            break;

    #if defined(SPECIFIER_STRING_UPPER)
        case SPECIFIER_STRING_UPPER:
            flags |= FLAGS_WIDECHAR;
            /* FALLTHROUGH */
    #endif
        case SPECIFIER_STRING:
            if (flags & FLAGS_LONG)
                flags |= FLAGS_WIDECHAR;
            else if (flags & FLAGS_SHORT)
                flags &= ~FLAGS_WIDECHAR;
            parameters[pos].type = FORMAT_STRING;
            break;

        case SPECIFIER_GROUP:
            if (TYPE_SCAN == type)
            {
                int depth = 1;
                parameters[pos].type = FORMAT_GROUP;
                if (format[index] == QUALIFIER_CIRCUMFLEX)
                    index++;
                if (format[index] == SPECIFIER_UNGROUP)

```

```

    index++;
if (format[index] == QUALIFIER_MINUS)
    index++;
/* Skip nested brackets */
while (format[index] != NIL)
    {
        if (format[index] == SPECIFIER_GROUP)
        {
            depth++;
        }
        else if (format[index] == SPECIFIER_UNGROUP)
        {
            if (--depth <= 0)
            {
                index++;
                break;
            }
        }
        index++;
    }
    break;

case SPECIFIER_INTEGER:
    parameters[pos].type = FORMAT_INT;
    break;

case SPECIFIER_UNSIGNED:
    flags |= FLAGS_UNSIGNED;
    parameters[pos].type = FORMAT_INT;
    break;

case SPECIFIER_DECIMAL:
    /* Disable base modifier */
    flags &= ~FLAGS_BASE_PARAMETER;
    base = BASE_DECIMAL;
    parameters[pos].type = FORMAT_INT;
    break;

case SPECIFIER_OCTAL:
    flags |= FLAGS_UNSIGNED;
    flags &= ~FLAGS_BASE_PARAMETER;
    base = BASE_OCTAL;
    parameters[pos].type = FORMAT_INT;
    break;

#ifdef SPECIFIER_BINARY
    case SPECIFIER_BINARY_UPPER:

```

```

    flags |= FLAGS_UPPER;
    /* FALLTHROUGH */
case SPECIFIER_BINARY:
    flags |= FLAGS_NILPADDING;
    flags &= ~FLAGS_BASE_PARAMETER;
    base = BASE_BINARY;
    parameters[pos].type = FORMAT_INT;
    break;
#endif

case SPECIFIER_HEX_UPPER:
    flags |= FLAGS_UPPER;
    /* FALLTHROUGH */
case SPECIFIER_HEX:
    flags |= FLAGS_UNSIGNED;
    flags &= ~FLAGS_BASE_PARAMETER;
    base = BASE_HEX;
    parameters[pos].type = FORMAT_INT;
    break;

case SPECIFIER_FLOAT_E_UPPER:
    flags |= FLAGS_UPPER;
    /* FALLTHROUGH */
case SPECIFIER_FLOAT_E:
    flags |= FLAGS_FLOAT_E;
    parameters[pos].type = FORMAT_DOUBLE;
    break;

case SPECIFIER_FLOAT_G_UPPER:
    flags |= FLAGS_UPPER;
    /* FALLTHROUGH */
case SPECIFIER_FLOAT_G:
    flags |= FLAGS_FLOAT_G;
    parameters[pos].type = FORMAT_DOUBLE;
    break;

case SPECIFIER_FLOAT_F_UPPER:
    flags |= FLAGS_UPPER;
    /* FALLTHROUGH */
case SPECIFIER_FLOAT_F:
    parameters[pos].type = FORMAT_DOUBLE;
    break;

case SPECIFIER_POINTER:
    if (sizeof(trio_pointer_t) == sizeof(trio_ulonglong_t))
flags |= FLAGS_QUAD;
    else if (sizeof(trio_pointer_t) == sizeof(long))
flags |= FLAGS_LONG;

```

```

    parameters[pos].type = FORMAT_POINTER;
    break;

case SPECIFIER_COUNT:
    parameters[pos].type = FORMAT_COUNT;
    break;

#if defined(SPECIFIER_HEXFLOAT)
# if defined(SPECIFIER_HEXFLOAT_UPPER)
    case SPECIFIER_HEXFLOAT_UPPER:
        flags |= FLAGS_UPPER;
        /* FALLTHROUGH */
# endif
    case SPECIFIER_HEXFLOAT:
        base = BASE_HEX;
        parameters[pos].type = FORMAT_DOUBLE;
        break;
#endif

#if defined(FORMAT_ERRNO)
    case SPECIFIER_ERRNO:
        parameters[pos].type = FORMAT_ERRNO;
        break;
#endif

#if defined(SPECIFIER_USER_DEFINED_BEGIN)
    case SPECIFIER_USER_DEFINED_BEGIN:
        {
        unsigned int max;
        int without_namespace = TRUE;

        parameters[pos].type = FORMAT_USER_DEFINED;
        parameters[pos].user_name[0] = NIL;
        tmpformat = (char *)&format[index];

        while ((ch = format[index]))
        {
            index++;
            if (ch == SPECIFIER_USER_DEFINED_END)
            {
                if (without_namespace)
                {
                    /* We must get the handle first */
                    parameters[pos].type = FORMAT_PARAMETER;
                    parameters[pos].indexAfterSpecifier = index;
                    parameters[pos].flags = FLAGS_USER_DEFINED;
                    /* Adjust parameters for insertion of new one */
                    pos++;
                }
            }
        }
    }
#endif

```

```

usedEntries[currentParam] += 1;
parameters[pos].type = FORMAT_USER_DEFINED;
currentParam++;
indices[currentParam] = pos;
if (currentParam > maxParam)
    maxParam = currentParam;
}
/* Copy the user data */
max = (unsigned int>(&format[index] - tmpformat);
if (max > MAX_USER_DATA)
    max = MAX_USER_DATA;
trio_copy_max(parameters[pos].user_data,
    max,
    tmpformat);
break; /* while */
}
if (ch == SPECIFIER_USER_DEFINED_SEPARATOR)
{
without_namespace = FALSE;
/* Copy the namespace for later looking-up */
max = (int>(&format[index] - tmpformat);
if (max > MAX_USER_NAME)
    max = MAX_USER_NAME;
trio_copy_max(parameters[pos].user_name,
    max,
    tmpformat);
tmpformat = (char *)&format[index];
}
}
if (ch != SPECIFIER_USER_DEFINED_END)
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
}
break;
#endif /* defined(SPECIFIER_USER_DEFINED_BEGIN) */

default:
    /* Bail out completely to make the error more obvious */
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
}

/* Count the number of times this entry has been used */
usedEntries[currentParam] += 1;

/* Find last sticky parameters */
if (gotSticky && !(flags & FLAGS_STICKY))
{
    for (i = pos - 1; i >= 0; i--)
    {

```

```

if (parameters[i].type == FORMAT_PARAMETER)
    continue;
if ((parameters[i].flags & FLAGS_STICKY) &&
    (parameters[i].type == parameters[pos].type))
    {
        /* Do not overwrite current qualifiers */
        flags |= (parameters[i].flags & (unsigned long)~FLAGS_STICKY);
        if (width == NO_WIDTH)
width = parameters[i].width;
        if (precision == NO_PRECISION)
precision = parameters[i].precision;
        if (base == NO_BASE)
base = parameters[i].base;
        break;
    }
}
}

parameters[pos].indexAfterSpecifier = index;
parameters[pos].flags = flags;
parameters[pos].width = width;
parameters[pos].precision = precision;
parameters[pos].base = (base == NO_BASE) ? BASE_DECIMAL : base;
parameters[pos].varsize = varsize;
pos++;

if (! positional)
    parameterPosition++;

} /* if identifier */

} /* while format characters left */

for (num = 0; num <= maxParam; num++)
    {
        if (usedEntries[num] != 1)
        {
            if (usedEntries[num] == 0) /* gap detected */
                return TRIO_ERROR_RETURN(TRIO_EGAP, num);
            else /* double references detected */
                return TRIO_ERROR_RETURN(TRIO_EDBLREF, num);
        }

        i = indices[num];

        /*
        * FORMAT_PARAMETERS are only present if they must be read,
        * so it makes no sense to check the ignore flag (besides,

```

```

    * the flags variable is not set for that particular type)
    */
    if ((parameters[i].type != FORMAT_PARAMETER) &&
        (parameters[i].flags & FLAGS_IGNORE))
        continue; /* for all arguments */

/*
 * The stack arguments are read according to ANSI C89
 * default argument promotions:
 *
 * char      = int
 * short     = int
 * unsigned char = unsigned int
 * unsigned short = unsigned int
 * float     = double
 *
 * In addition to the ANSI C89 these types are read (the
 * default argument promotions of C99 has not been
 * considered yet)
 *
 * long long
 * long double
 * size_t
 * ptrdiff_t
 * intmax_t
 */
    switch (parameters[i].type)
    {
    case FORMAT_GROUP:
    case FORMAT_STRING:
    #if TRIO_WIDECHAR
        if (flags & FLAGS_WIDECHAR)
        {
            parameters[i].data.wstring = (argarray == NULL)
? va_arg(*arglist, trio_wchar_t *)
: (trio_wchar_t*)(argarray[num]);
        }
        else
    #endif
        {
            parameters[i].data.string = (argarray == NULL)
? va_arg(*arglist, char *)
: (char*)(argarray[num]);
        }
        break;

    #if defined(FORMAT_USER_DEFINED)
    case FORMAT_USER_DEFINED:

```

```

#endif
case FORMAT_POINTER:
case FORMAT_COUNT:
case FORMAT_UNKNOWN:
    parameters[i].data.pointer = (argarray == NULL)
        ? va_arg(*arglist, trio_pointer_t)
        : argarray[num];
    break;

case FORMAT_CHAR:
case FORMAT_INT:
    if (TYPE_SCAN == type)
    {
        if (argarray == NULL)
            parameters[i].data.pointer =
                (trio_pointer_t)va_arg(*arglist, trio_pointer_t);
        else
        {
            if (parameters[i].type == FORMAT_CHAR)
                parameters[i].data.pointer =
                    (trio_pointer_t)((char *)argarray[num]);
            else if (parameters[i].flags & FLAGS_SHORT)
                parameters[i].data.pointer =
                    (trio_pointer_t)((short *)argarray[num]);
            else
                parameters[i].data.pointer =
                    (trio_pointer_t)((int *)argarray[num]);
        }
    }
    else
    {
#ifdef QUALIFIER_VARSIZE || defined(QUALIFIER_FIXED_SIZE)
        if (parameters[i].flags
            & (FLAGS_VARSIZE_PARAMETER | FLAGS_FIXED_SIZE))
        {
            if (parameters[i].flags & FLAGS_VARSIZE_PARAMETER)
            {
                /*
                 * Variable sizes are mapped onto the fixed sizes, in
                 * accordance with integer promotion.
                 *
                 * Please note that this may not be portable, as we
                 * only guess the size, not the layout of the numbers.
                 * For example, if int is little-endian, and long is
                 * big-endian, then this will fail.
                 */
                varsize = (int)parameters[parameters[i].varsize].data.number.as_unsigned;
            }

```

```

else
{
    /* Used for the I<bits> modifiers */
    varsize = parameters[i].varsize;
}
parameters[i].flags &= ~FLAGS_ALL_VARSIZES;

if (varsize <= (int)sizeof(int))
;
else if (varsize <= (int)sizeof(long))
    parameters[i].flags |= FLAGS_LONG;
#if defined(QUALIFIER_INTMAX_T)
else if (varsize <= (int)sizeof(trio_longlong_t))
    parameters[i].flags |= FLAGS_QUAD;
else
    parameters[i].flags |= FLAGS_INTMAX_T;
#else
else
    parameters[i].flags |= FLAGS_QUAD;
#endif
}
#endif /* defined(QUALIFIER_VARSIZE) */
#if defined(QUALIFIER_SIZE_T) || defined(QUALIFIER_SIZE_T_UPPER)
    if (parameters[i].flags & FLAGS_SIZE_T)
parameters[i].data.number.as_unsigned = (argarray == NULL)
? (trio_uintmax_t)va_arg(*arglist, size_t)
: (trio_uintmax_t)((size_t *)argarray[num]);
    else
#endif
#if defined(QUALIFIER_PTRDIFF_T)
    if (parameters[i].flags & FLAGS_PTRDIFF_T)
parameters[i].data.number.as_unsigned = (argarray == NULL)
? (trio_uintmax_t)va_arg(*arglist, ptrdiff_t)
: (trio_uintmax_t)((ptrdiff_t *)argarray[num]);
    else
#endif
#if defined(QUALIFIER_INTMAX_T)
    if (parameters[i].flags & FLAGS_INTMAX_T)
parameters[i].data.number.as_unsigned = (argarray == NULL)
? (trio_uintmax_t)va_arg(*arglist, trio_intmax_t)
: (trio_uintmax_t)((trio_intmax_t *)argarray[num]);
    else
#endif
#if defined(QUALIFIER_ULONGLONG_T)
    if (parameters[i].flags & FLAGS_QUAD)
parameters[i].data.number.as_unsigned = (argarray == NULL)
? (trio_uintmax_t)va_arg(*arglist, trio_ulonglong_t)
: (trio_uintmax_t)((trio_ulonglong_t *)argarray[num]);
    else if (parameters[i].flags & FLAGS_LONG)

```

```

parameters[i].data.number.as_unsigned = (argarray == NULL)
? (trio_uintmax_t)va_arg(*arglist, long)
: (trio_uintmax_t)*((long *)argarray[num]);
else
{
if (argarray == NULL)
parameters[i].data.number.as_unsigned = (trio_uintmax_t)va_arg(*arglist, int);
else
{
if (parameters[i].type == FORMAT_CHAR)
parameters[i].data.number.as_unsigned = (trio_uintmax_t)*((char *)argarray[num]);
else if (parameters[i].flags & FLAGS_SHORT)
parameters[i].data.number.as_unsigned = (trio_uintmax_t)*((short *)argarray[num]);
else
parameters[i].data.number.as_unsigned = (trio_uintmax_t)*((int *)argarray[num]);
}
}
}
break;

```

case FORMAT_PARAMETER:

```

/*
* The parameter for the user-defined specifier is a pointer,
* whereas the rest (width, precision, base) uses an integer.
*/
if (parameters[i].flags & FLAGS_USER_DEFINED)
parameters[i].data.pointer = (argarray == NULL)
? va_arg(*arglist, trio_pointer_t)
: argarray[num];
else
parameters[i].data.number.as_unsigned = (argarray == NULL)
? (trio_uintmax_t)va_arg(*arglist, int)
: (trio_uintmax_t)*((int *)argarray[num]);
break;

```

case FORMAT_DOUBLE:

```

if (TYPE_SCAN == type)
{
if (parameters[i].flags & FLAGS_LONGDOUBLE)
parameters[i].data.longdoublePointer = (argarray == NULL)
? va_arg(*arglist, trio_long_double_t *)
: (trio_long_double_t *)argarray[num];
else
{
if (parameters[i].flags & FLAGS_LONG)
parameters[i].data.doublePointer = (argarray == NULL)
? va_arg(*arglist, double *)
: (double *)argarray[num];

```

```

else
    parameters[i].data.doublePointer = (argarray == NULL)
        ? (double *)va_arg(*arglist, float *)
        : (double *)((float *)argarray[num]);
    }
}
else
{
    if (parameters[i].flags & FLAGS_LONGDOUBLE)
parameters[i].data.longdoubleNumber = (argarray == NULL)
    ? va_arg(*arglist, trio_long_double_t)
    : (trio_long_double_t)((trio_long_double_t *)argarray[num]);
    else
    {
        if (argarray == NULL)
            parameters[i].data.longdoubleNumber =
                (trio_long_double_t)va_arg(*arglist, double);
        else
        {
            if (parameters[i].flags & FLAGS_SHORT)
parameters[i].data.longdoubleNumber =
                (trio_long_double_t)((float *)argarray[num]);
            else
parameters[i].data.longdoubleNumber =
                (trio_long_double_t)((double *)argarray[num]);
        }
    }
}
break;

#if defined(FORMAT_ERRNO)
case FORMAT_ERRNO:
    parameters[i].data.errorNumber = save_errno;
    break;
#endif

default:
    break;
}
} /* for all specifiers */
return num;
}

/*****
*
* FORMATTING
*
*/

```

```
*****/
```

```
/******
```

```
* TrioWriteNumber
*
* Description:
* Output a number.
* The complexity of this function is a result of the complexity
* of the dependencies of the flags.
*/
```

```
TRIO_PRIVATE void
TrioWriteNumber
TRIO_ARGS6((self, number, flags, width, precision, base),
    trio_class_t *self,
    trio_uintmax_t number,
    trio_flags_t flags,
    int width,
    int precision,
    int base)
{
    BOOLEAN_T isNegative;
    BOOLEAN_T isNumberZero;
    BOOLEAN_T isPrecisionZero;
    BOOLEAN_T ignoreNumber;
    char buffer[MAX_CHARS_IN(trio_uintmax_t) * (1 + MAX_LOCALE_SEPARATOR_LENGTH) + 1];
    char *bufferend;
    char *pointer;
    TRIO_CONST char *digits;
    int i;
    int length;
    char *p;
    int count;

    assert(VALID(self));
    assert(VALID(self->OutStream));
    assert(((base >= MIN_BASE) && (base <= MAX_BASE)) || (base == NO_BASE));

    digits = (flags & FLAGS_UPPER) ? internalDigitsUpper : internalDigitsLower;
    if (base == NO_BASE)
        base = BASE_DECIMAL;

    isNumberZero = (number == 0);
    isPrecisionZero = (precision == 0);
    ignoreNumber = (isNumberZero
        && isPrecisionZero
        && !((flags & FLAGS_ALTERNATIVE) && (base == BASE_OCTAL)));
```

```

if (flags & FLAGS_UNSIGNED)
{
    isNegative = FALSE;
    flags &= ~FLAGS_SHOWSIGN;
}
else
{
    isNegative = ((trio_intmax_t)number < 0);
    if (isNegative)
number = -((trio_intmax_t)number);
}

if (flags & FLAGS_QUAD)
    number &= (trio_ulonglong_t)-1;
else if (flags & FLAGS_LONG)
    number &= (unsigned long)-1;
else
    number &= (unsigned int)-1;

/* Build number */
pointer = bufferend = &buffer[sizeof(buffer) - 1];
*pointer-- = NIL;
for (i = 1; i < (int)sizeof(buffer); i++)
{
    *pointer-- = digits[number % base];
    number /= base;
    if (number == 0)
break;

    if ((flags & FLAGS_QUOTE) && TrioFollowedBySeparator(i + 1))
{
    /*
    * We are building the number from the least significant
    * to the most significant digit, so we have to copy the
    * thousand separator backwards
    */
    length = internalThousandSeparatorLength;
    if (((int)(pointer - buffer) - length) > 0)
    {
        p = &internalThousandSeparator[length - 1];
        while (length-- > 0)
*pointer-- = *p--;
    }
}

if (! ignoreNumber)
{

```

```

/* Adjust width */
width -= (bufferend - pointer) - 1;
}

/* Adjust precision */
if (NO_PRECISION != precision)
{
    precision -= (bufferend - pointer) - 1;
    if (precision < 0)
precision = 0;
    flags |= FLAGS_NILPADDING;
}

/* Calculate padding */
count = (!(flags & FLAGS_LEFTADJUST) || (precision == NO_PRECISION))
? precision
: 0;

/* Adjust width further */
if (isNegative || (flags & FLAGS_SHOWSIGN) || (flags & FLAGS_SPACE))
width--;
if ((flags & FLAGS_ALTERNATIVE) && !isNumberZero)
{
    switch (base)
    {
case BASE_BINARY:
case BASE_HEX:
width -= 2;
break;
case BASE_OCTAL:
if (!(flags & FLAGS_NILPADDING) || (count == 0))
width--;
break;
default:
break;
}
}

/* Output prefixes spaces if needed */
if (!(flags & FLAGS_LEFTADJUST) ||
(flags & FLAGS_NILPADDING) && (precision == NO_PRECISION))
{
    while (width-- > count)
self->OutputStream(self, CHAR_ADJUST);
}

/* width has been adjusted for signs and alternatives */
if (isNegative)

```

```

    self->OutStream(self, '-');
else if (flags & FLAGS_SHOWSIGN)
    self->OutStream(self, '+');
else if (flags & FLAGS_SPACE)
    self->OutStream(self, ' ');

/* Prefix is not written when the value is zero */
if ((flags & FLAGS_ALTERNATIVE) && !isNumberZero)
{
    switch (base)
    {
case BASE_BINARY:
    self->OutStream(self, '0');
    self->OutStream(self, (flags & FLAGS_UPPER) ? 'B' : 'b');
    break;

case BASE_OCTAL:
    if (!(flags & FLAGS_NILPADDING) || (count == 0))
        self->OutStream(self, '0');
    break;

case BASE_HEX:
    self->OutStream(self, '0');
    self->OutStream(self, (flags & FLAGS_UPPER) ? 'X' : 'x');
    break;

default:
    break;
} /* switch base */
}

/* Output prefixed zero padding if needed */
if (flags & FLAGS_NILPADDING)
{
    if (precision == NO_PRECISION)
precision = width;
    while (precision-- > 0)
    {
        self->OutStream(self, '0');
        width--;
    }
}

if (!ignoreNumber)
{
    /* Output the number itself */
    while (*(++pointer))
{

```

```

    self->OutStream(self, *pointer);
}
}

/* Output trailing spaces if needed */
if (flags & FLAGS_LEFTADJUST)
{
    while (width-- > 0)
self->OutStream(self, CHAR_ADJUST);
}
}

/*****
* TrioWriteStringCharacter
*
* Description:
* Output a single character of a string
*/
TRIO_PRIVATE void
TrioWriteStringCharacter
TRIO_ARGS3((self, ch, flags),
    trio_class_t *self,
    int ch,
    trio_flags_t flags)
{
    if (flags & FLAGS_ALTERNATIVE)
    {
        if (! isprint(ch))
        {
            /*
            * Non-printable characters are converted to C escapes or
            * \number, if no C escape exists.
            */
            self->OutStream(self, CHAR_BACKSLASH);
            switch (ch)
            {
                case '\007': self->OutStream(self, 'a'); break;
                case '\b': self->OutStream(self, 'b'); break;
                case '\f': self->OutStream(self, 'f'); break;
                case '\n': self->OutStream(self, 'n'); break;
                case '\r': self->OutStream(self, 'r'); break;
                case '\t': self->OutStream(self, 't'); break;
                case '\v': self->OutStream(self, 'v'); break;
                case '\\': self->OutStream(self, '\\'); break;
                default:
                    self->OutStream(self, 'x');
                    TrioWriteNumber(self, (trio_uintmax_t)ch,
                        FLAGS_UNSIGNED | FLAGS_NILPADDING,

```

```

    2, 2, BASE_HEX);
    break;
}
}
else if (ch == CHAR_BACKSLASH)
{
    self->OutStream(self, CHAR_BACKSLASH);
    self->OutStream(self, CHAR_BACKSLASH);
}
else
{
    self->OutStream(self, ch);
}
}
else
{
    self->OutStream(self, ch);
}
}

/*****
* TrioWriteString
*
* Description:
* Output a string
*/
TRIO_PRIVATE void
TrioWriteString
TRIO_ARGS5((self, string, flags, width, precision),
    trio_class_t *self,
    TRIO_CONST char *string,
    trio_flags_t flags,
    int width,
    int precision)
{
    int length;
    int ch;

    assert(VALID(self));
    assert(VALID(self->OutStream));

    if (string == NULL)
    {
        string = internalNullString;
        length = sizeof(internalNullString) - 1;
        /* Disable quoting for the null pointer */
        flags &= (~FLAGS_QUOTE);
        width = 0;

```

```

    }
else
    {
        length = trio_length(string);
    }
if ((NO_PRECISION != precision) &&
    (precision < length))
    {
        length = precision;
    }
width -= length;

if (flags & FLAGS_QUOTE)
    self->OutStream(self, CHAR_QUOTE);

if (! (flags & FLAGS_LEFTADJUST))
    {
        while (width-- > 0)
            self->OutStream(self, CHAR_ADJUST);
    }

while (length-- > 0)
    {
        /* The ctype parameters must be an unsigned char (or EOF) */
        ch = (int)((unsigned char)(*string++));
        TrioWriteStringCharacter(self, ch, flags);
    }

if (flags & FLAGS_LEFTADJUST)
    {
        while (width-- > 0)
            self->OutStream(self, CHAR_ADJUST);
    }
if (flags & FLAGS_QUOTE)
    self->OutStream(self, CHAR_QUOTE);
}

/*****
* TrioWriteWideStringCharacter
*
* Description:
* Output a wide string as a multi-byte sequence
*/
#if TRIO_WIDECHAR
TRIO_PRIVATE int
TrioWriteWideStringCharacter
TRIO_ARGS4((self, wch, flags, width),
            trio_class_t *self,

```

```

    trio_wchar_t wch,
    trio_flags_t flags,
    int width)
{
    int size;
    int i;
    int ch;
    char *string;
    char buffer[MB_LEN_MAX + 1];

    if (width == NO_WIDTH)
        width = sizeof(buffer);

    size = wctomb(buffer, wch);
    if ((size <= 0) || (size > width) || (buffer[0] == NIL))
        return 0;

    string = buffer;
    i = size;
    while ((width >= i) && (width-- > 0) && (i-- > 0))
    {
        /* The ctype parameters must be an unsigned char (or EOF) */
        ch = (int)((unsigned char)(*string++));
        TrioWriteStringCharacter(self, ch, flags);
    }
    return size;
}
#endif /* TRIO_WIDECHAR */

/*****
* TrioWriteWideString
*
* Description:
* Output a wide character string as a multi-byte string
*/
#if TRIO_WIDECHAR
TRIO_PRIVATE void
TrioWriteWideString
TRIO_ARGS5((self, wstring, flags, width, precision),
    trio_class_t *self,
    TRIO_CONST trio_wchar_t *wstring,
    trio_flags_t flags,
    int width,
    int precision)
{
    int length;
    int size;

```

```

assert(VALID(self));
assert(VALID(self->OutStream));

#ifdef TRIO_COMPILER_SUPPORTS_MULTIBYTE
(void)mblen(NULL, 0);
#endif

if (wstring == NULL)
{
TrioWriteString(self, NULL, flags, width, precision);
return;
}

if (NO_PRECISION == precision)
{
length = INT_MAX;
}
else
{
length = precision;
width -= length;
}

if (flags & FLAGS_QUOTE)
self->OutStream(self, CHAR_QUOTE);

if (!(flags & FLAGS_LEFTADJUST))
{
while (width-- > 0)
self->OutStream(self, CHAR_ADJUST);
}

while (length > 0)
{
size = TrioWriteWideStringCharacter(self, *wstring++, flags, length);
if (size == 0)
break; /* while */
length -= size;
}

if (flags & FLAGS_LEFTADJUST)
{
while (width-- > 0)
self->OutStream(self, CHAR_ADJUST);
}
if (flags & FLAGS_QUOTE)
self->OutStream(self, CHAR_QUOTE);
}

```

```

#endif /* TRIO_WIDECHAR */

/*****
* TrioWriteDouble
*
* http://wwwold.dkuug.dk/JTC1/SC22/WG14/www/docs/dr_211.htm
*
* "5.2.4.2.2 paragraph #4
*
* The accuracy [...] is implementation defined, as is the accuracy
* of the conversion between floating-point internal representations
* and string representations performed by the library routine in
* <stdio.h>"
*/
/* FIXME: handle all instances of constant long-double number (L)
* and *l() math functions.
*/
TRIO_PRIVATE void
TrioWriteDouble
TRIO_ARGS6((self, number, flags, width, precision, base),
    trio_class_t *self,
    trio_long_double_t number,
    trio_flags_t flags,
    int width,
    int precision,
    int base)
{
    trio_long_double_t integerNumber;
    trio_long_double_t fractionNumber;
    trio_long_double_t workNumber;
    int integerDigits;
    int fractionDigits;
    int exponentDigits;
    int baseDigits;
    int integerThreshold;
    int fractionThreshold;
    int expectedWidth;
    int exponent = 0;
    unsigned int uExponent = 0;
    int exponentBase;
    trio_long_double_t dblBase;
    trio_long_double_t dblIntegerBase;
    trio_long_double_t dblFractionBase;
    trio_long_double_t integerAdjust;
    trio_long_double_t fractionAdjust;
    BOOLEAN_T isNegative;
    BOOLEAN_T isExponentNegative = FALSE;
    BOOLEAN_T requireTwoDigitExponent;

```

```

BOOLEAN_T isHex;
TRIO_CONST char *digits;
char *groupingPointer;
int i;
int index;
BOOLEAN_T hasOnlyZeroes;
int zeroes = 0;
register int trailingZeroes;
BOOLEAN_T keepTrailingZeroes;
BOOLEAN_T keepDecimalPoint;
trio_long_double_t epsilon;

assert(VALID(self));
assert(VALID(self->OutStream));
assert(((base >= MIN_BASE) && (base <= MAX_BASE)) || (base == NO_BASE));

/* Determine sign and look for special quantities */
switch (trio_fpclassify_and_signbit(number, &isNegative))
{
case TRIO_FP_NAN:
    TrioWriteString(self,
        (flags & FLAGS_UPPER)
        ? NAN_UPPER
        : NAN_LOWER,
        flags, width, precision);
    return;

case TRIO_FP_INFINITE:
    if (isNegative)
    {
        /* Negative infinity */
        TrioWriteString(self,
            (flags & FLAGS_UPPER)
            ? "-" INFINITE_UPPER
            : "-" INFINITE_LOWER,
            flags, width, precision);
        return;
    }
    else
    {
        /* Positive infinity */
        TrioWriteString(self,
            (flags & FLAGS_UPPER)
            ? INFINITE_UPPER
            : INFINITE_LOWER,
            flags, width, precision);
        return;
    }
}

```

```

default:
    /* Finitude */
    break;
}

/* Normal numbers */
if (flags & FLAGS_LONGDOUBLE)
{
    baseDigits = (base == 10)
? LDBL_DIG
: (int)floor(LDBL_MANT_DIG / TrioLogarithmBase(base));
    epsilon = LDBL_EPSILON;
}
else if (flags & FLAGS_SHORT)
{
    baseDigits = (base == BASE_DECIMAL)
? FLT_DIG
: (int)floor(FLT_MANT_DIG / TrioLogarithmBase(base));
    epsilon = FLT_EPSILON;
}
else
{
    baseDigits = (base == BASE_DECIMAL)
? DBL_DIG
: (int)floor(DBL_MANT_DIG / TrioLogarithmBase(base));
    epsilon = DBL_EPSILON;
}

digits = (flags & FLAGS_UPPER) ? internalDigitsUpper : internalDigitsLower;
isHex = (base == BASE_HEX);
if (base == NO_BASE)
    base = BASE_DECIMAL;
dblBase = (trio_long_double_t)base;
keepTrailingZeroes = !( (flags & FLAGS_ROUNDING) ||
    ( (flags & FLAGS_FLOAT_G) &&
        !(flags & FLAGS_ALTERNATIVE) ) );

if (flags & FLAGS_ROUNDING)
    precision = baseDigits;

if (precision == NO_PRECISION)
{
    if (isHex)
    {
        keepTrailingZeroes = FALSE;
        precision = FLT_MANT_DIG;
    }
}

```

```

    else
    {
    precision = FLT_DIG;
    }
}

if (isNegative)
    number = -number;

if (isHex)
    flags |= FLAGS_FLOAT_E;

if (flags & FLAGS_FLOAT_G)
    {
    if (precision == 0)
    precision = 1;

    if ((number < 1.0E-4) || (number > powl(base,
        (trio_long_double_t)precision)))
    {
    /* Use scientific notation */
    flags |= FLAGS_FLOAT_E;
    }
    else if (number < 1.0)
    {
    /*
    * Use normal notation. If the integer part of the number is
    * zero, then adjust the precision to include leading fractional
    * zeros.
    */
    workNumber = TrioLogarithm(number, base);
    workNumber = TRIO_FABS(workNumber);
    if (workNumber - floorl(workNumber) < 0.001)
        workNumber--;
    zeroes = (int)floorl(workNumber);
    }
    }

if (flags & FLAGS_FLOAT_E)
    {
    /* Scale the number */
    workNumber = TrioLogarithm(number, base);
    if (trio_isinf(workNumber) == -1)
    {
    exponent = 0;
    /* Undo setting */
    if (flags & FLAGS_FLOAT_G)
        flags &= ~FLAGS_FLOAT_E;

```

```

}
else
{
    exponent = (int)floorl(workNumber);
    number /= powl(dblBase, (trio_long_double_t)exponent);
    isExponentNegative = (exponent < 0);
    uExponent = (isExponentNegative) ? -exponent : exponent;
    if (isHex)
        uExponent *= 4; /* log16(2) */
    /* No thousand separators */
    flags &= ~FLAGS_QUOTE;
}
}

integerNumber = floorl(number);
fractionNumber = number - integerNumber;

/*
 * Truncated number.
 *
 * Precision is number of significant digits for FLOAT_G
 * and number of fractional digits for others.
 */
integerDigits = (integerNumber > epsilon)
    ? 1 + (int)TrioLogarithm(integerNumber, base)
    : 1;
fractionDigits = ((flags & FLAGS_FLOAT_G) && (zeroes == 0))
    ? precision - integerDigits
    : zeroes + precision;

dblFractionBase = TrioPower(base, fractionDigits);

workNumber = number + 0.5 / dblFractionBase;
if (floorl(number) != floorl(workNumber))
{
    if (flags & FLAGS_FLOAT_E)
    {
        /* Adjust if number was rounded up one digit (ie. 0.99 to 1.00) */
        exponent++;
        isExponentNegative = (exponent < 0);
        uExponent = (isExponentNegative) ? -exponent : exponent;
        if (isHex)
            uExponent *= 4; /* log16(2) */
        workNumber = (number + 0.5 / dblFractionBase) / dblBase;
        integerNumber = floorl(workNumber);
        fractionNumber = workNumber - integerNumber;
    }
    else

```

```

{
    /* Adjust if number was rounded up one digit (ie. 99 to 100) */
    integerNumber = floorl(number + 0.5);
    fractionNumber = 0.0;
    integerDigits = (integerNumber > epsilon)
        ? 1 + (int)TrioLogarithm(integerNumber, base)
        : 1;
}
}

/* Estimate accuracy */
integerAdjust = fractionAdjust = 0.5;
if (flags & FLAGS_ROUNDING)
{
    if (integerDigits > baseDigits)
    {
        integerThreshold = baseDigits;
        fractionDigits = 0;
        dblFractionBase = 1.0;
        fractionThreshold = 0;
        precision = 0; /* Disable decimal-point */
        integerAdjust = TrioPower(base, integerDigits - integerThreshold - 1);
        fractionAdjust = 0.0;
    }
    else
    {
        integerThreshold = integerDigits;
        fractionThreshold = fractionDigits - integerThreshold;
        fractionAdjust = 1.0;
    }
}
else
{
    integerThreshold = INT_MAX;
    fractionThreshold = INT_MAX;
}

/*
 * Calculate expected width.
 * sign + integer part + thousands separators + decimal point
 * + fraction + exponent
 */
fractionAdjust /= dblFractionBase;
hasOnlyZeroes = (floorl((fractionNumber + fractionAdjust) * dblFractionBase) < epsilon);
keepDecimalPoint = ( (flags & FLAGS_ALTERNATIVE) ||
    !((precision == 0) ||
    (!keepTrailingZeroes && hasOnlyZeroes)) );
if (flags & FLAGS_FLOAT_E)

```

```

    {
        exponentDigits = (uExponent == 0)
        ? 1
        : (int)ceil(TrioLogarithm((double)(uExponent + 1),
            (isHex) ? 10.0 : base));
    }
else
    exponentDigits = 0;
requireTwoDigitExponent = ((base == BASE_DECIMAL) && (exponentDigits == 1));

expectedWidth = integerDigits + fractionDigits
    + (keepDecimalPoint
        ? internalDecimalPointLength
        : 0)
    + ((flags & FLAGS_QUOTE)
        ? TrioCalcThousandSeparatorLength(integerDigits)
        : 0);
if (isNegative || (flags & FLAGS_SHOWSIGN) || (flags & FLAGS_SPACE))
    expectedWidth += sizeof("-") - 1;
if (exponentDigits > 0)
    expectedWidth += exponentDigits +
        ((requireTwoDigitExponent ? sizeof("E+0") : sizeof("E+")) - 1);
if (isHex)
    expectedWidth += sizeof("0X") - 1;

/* Output prefixing */
if (flags & FLAGS_NILPADDING)
    {
        /* Leading zeros must be after sign */
        if (isNegative)
            self->OutStream(self, '-');
        else if (flags & FLAGS_SHOWSIGN)
            self->OutStream(self, '+');
        else if (flags & FLAGS_SPACE)
            self->OutStream(self, ' ');
        if (isHex)
            {
                self->OutStream(self, '0');
                self->OutStream(self, (flags & FLAGS_UPPER) ? 'X' : 'x');
            }
        if (!(flags & FLAGS_LEFTADJUST))
            {
                for (i = expectedWidth; i < width; i++)
                    {
                        self->OutStream(self, '0');
                    }
            }
    }
}

```

```

else
{
    /* Leading spaces must be before sign */
    if (!(flags & FLAGS_LEFTADJUST))
    {
        for (i = expectedWidth; i < width; i++)
        {
            self->OutStream(self, CHAR_ADJUST);
        }
    }
    if (isNegative)
self->OutStream(self, '-');
    else if (flags & FLAGS_SHOWSIGN)
self->OutStream(self, '+');
    else if (flags & FLAGS_SPACE)
self->OutStream(self, ' ');
    if (isHex)
    {
        self->OutStream(self, '0');
        self->OutStream(self, (flags & FLAGS_UPPER) ? 'X' : 'x');
    }
}

/* Output the integer part and thousand separators */
dblIntegerBase = 1.0 / TrioPower(base, integerDigits - 1);
for (i = 0; i < integerDigits; i++)
{
    workNumber = floorl(((integerNumber + integerAdjust) * dblIntegerBase));
    if (i > integerThreshold)
    {
        /* Beyond accuracy */
        self->OutStream(self, digits[0]);
    }
    else
    {
        self->OutStream(self, digits[(int)fmodl(workNumber, dblBase)]);
    }
    dblIntegerBase *= dblBase;

    if (((flags & (FLAGS_FLOAT_E | FLAGS_QUOTE)) == FLAGS_QUOTE)
    && TrioFollowedBySeparator(integerDigits - i))
    {
        for (groupingPointer = internalThousandSeparator;
            *groupingPointer != NIL;
            groupingPointer++)
        {
            self->OutStream(self, *groupingPointer);
        }
    }
}

```

```

}
}

/* Insert decimal point and build the fraction part */
trailingZeroes = 0;

if (keepDecimalPoint)
{
    if (internalDecimalPoint)
    {
        self->OutStream(self, internalDecimalPoint);
    }
    else
    {
        for (i = 0; i < internalDecimalPointLength; i++)
        {
            self->OutStream(self, internalDecimalPointString[i]);
        }
    }
}

for (i = 0; i < fractionDigits; i++)
{
    if ((integerDigits > integerThreshold) || (i > fractionThreshold))
    {
        /* Beyond accuracy */
        trailingZeroes++;
    }
    else
    {
        fractionNumber *= dblBase;
        fractionAdjust *= dblBase;
        workNumber = floorl(fractionNumber + fractionAdjust);
        fractionNumber -= workNumber;
        index = (int)fmodl(workNumber, dblBase);
        if (index == 0)
        {
            trailingZeroes++;
        }
        else
        {
            while (trailingZeroes > 0)
            {
                /* Not trailing zeroes after all */
                self->OutStream(self, digits[0]);
                trailingZeroes--;
            }
            self->OutStream(self, digits[index]);
        }
    }
}

```

```

    }
}
}

if (keepTrailingZeroes)
{
    while (trailingZeroes > 0)
    {
        self->OutStream(self, digits[0]);
        trailingZeroes--;
    }
}

/* Output exponent */
if (exponentDigits > 0)
{
    self->OutStream(self,
        isHex
        ? ((flags & FLAGS_UPPER) ? 'P' : 'p')
        : ((flags & FLAGS_UPPER) ? 'E' : 'e'));
    self->OutStream(self, (isExponentNegative) ? '-' : '+');

    /* The exponent must contain at least two digits */
    if (requireTwoDigitExponent)
        self->OutStream(self, '0');

    if (isHex)
base = 10.0;
    exponentBase = (int)TrioPower(base, exponentDigits - 1);
    for (i = 0; i < exponentDigits; i++)
    {
        self->OutStream(self, digits[(uExponent / exponentBase) % base]);
        exponentBase /= base;
    }
}

/* Output trailing spaces */
if (flags & FLAGS_LEFTADJUST)
{
    for (i = expectedWidth; i < width; i++)
    {
        self->OutStream(self, CHAR_ADJUST);
    }
}
}

/*****
* TrioFormatProcess
*

```

```

* Description:
* This is the main engine for formatting output
*/
TRIO_PRIVATE int
TrioFormatProcess
TRIO_ARGS3((data, format, parameters),
    trio_class_t *data,
    TRIO_CONST char *format,
    trio_parameter_t *parameters)
{
#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)
    int charlen;
#endif
    int i;
    TRIO_CONST char *string;
    trio_pointer_t pointer;
    trio_flags_t flags;
    int width;
    int precision;
    int base;
    int index;

    index = 0;
    i = 0;
#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)
    (void)mblen(NULL, 0);
#endif

    while (format[index])
    {
#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)
        if (! isascii(format[index]))
        {
            charlen = mblen(&format[index], MB_LEN_MAX);
            /*
             * Only valid multibyte characters are handled here. Invalid
             * multibyte characters (charlen == -1) are handled as normal
             * characters.
             */
            if (charlen != -1)
            {
                while (charlen-- > 0)
                {
                    data->OutStream(data, format[index++]);
                }
                continue; /* while characters left in formatting string */
            }
        }
    }
}

```

```

#endif /* TRIO_COMPILER_SUPPORTS_MULTIBYTE */
    if (CHAR_IDENTIFIER == format[index])
    {
    if (CHAR_IDENTIFIER == format[index + 1])
        {
        data->OutStream(data, CHAR_IDENTIFIER);
        index += 2;
        }
    else
        {
        /* Skip the parameter entries */
        while (parameters[i].type == FORMAT_PARAMETER)
            i++;

        flags = parameters[i].flags;

        /* Find width */
        width = parameters[i].width;
        if (flags & FLAGS_WIDTH_PARAMETER)
        {
        /* Get width from parameter list */
        width = (int)parameters[width].data.number.as_signed;
        if (width < 0)
            {
            /*
            * A negative width is the same as the - flag and
            * a positive width.
            */
            flags |= FLAGS_LEFTADJUST;
            flags &= ~FLAGS_NILPADDING;
            width = -width;
            }
        }

        /* Find precision */
        if (flags & FLAGS_PRECISION)
        {
        precision = parameters[i].precision;
        if (flags & FLAGS_PRECISION_PARAMETER)
            {
            /* Get precision from parameter list */
            precision = (int)parameters[precision].data.number.as_signed;
            if (precision < 0)
                {
                /*
                * A negative precision is the same as no
                * precision
                */
                }
            }
        }
    }
}

```

```

precision = NO_PRECISION;
}
}
else
{
precision = NO_PRECISION;
}

/* Find base */
base = parameters[i].base;
if (flags & FLAGS_BASE_PARAMETER)
{
/* Get base from parameter list */
base = (int)parameters[base].data.number.as_signed;
}

switch (parameters[i].type)
{
case FORMAT_CHAR:
if (flags & FLAGS_QUOTE)
data->OutputStream(data, CHAR_QUOTE);
if (!(flags & FLAGS_LEFTADJUST))
{
while (--width > 0)
data->OutputStream(data, CHAR_ADJUST);
}
#if TRIO_WIDECHAR
if (flags & FLAGS_WIDECHAR)
{
TrioWriteWideStringCharacter(data,
(trio_wchar_t)parameters[i].data.number.as_signed,
flags,
NO_WIDTH);
}
else
#endif
{
TrioWriteStringCharacter(data,
(int)parameters[i].data.number.as_signed,
flags);
}

if (flags & FLAGS_LEFTADJUST)
{
while(--width > 0)
data->OutputStream(data, CHAR_ADJUST);
}
}

```

```

if (flags & FLAGS_QUOTE)
    data->OutStream(data, CHAR_QUOTE);

break; /* FORMAT_CHAR */

case FORMAT_INT:
    TrioWriteNumber(data,
        parameters[i].data.number.as_unsigned,
        flags,
        width,
        precision,
        base);

    break; /* FORMAT_INT */

case FORMAT_DOUBLE:
    TrioWriteDouble(data,
        parameters[i].data.longdoubleNumber,
        flags,
        width,
        precision,
        base);
    break; /* FORMAT_DOUBLE */

case FORMAT_STRING:
#ifdef TRIO_WIDECHAR
    if (flags & FLAGS_WIDECHAR)
    {
        TrioWriteWideString(data,
            parameters[i].data.wstring,
            flags,
            width,
            precision);
    }
    else
#endif
    {
        TrioWriteString(data,
            parameters[i].data.string,
            flags,
            width,
            precision);
    }
    break; /* FORMAT_STRING */

case FORMAT_POINTER:
    {
        trio_reference_t reference;

```

```

reference.data = data;
reference.parameter = &parameters[i];
trio_print_pointer(&reference, parameters[i].data.pointer);
}
break; /* FORMAT_POINTER */

case FORMAT_COUNT:
pointer = parameters[i].data.pointer;
if (NULL != pointer)
{
/*
* C99 paragraph 7.19.6.1.8 says "the number of
* characters written to the output stream so far by
* this call", which is data->committed
*/
#ifdef QUALIFIER_SIZE_T || defined(QUALIFIER_SIZE_T_UPPER)
if (flags & FLAGS_SIZE_T)
*(size_t *)pointer = (size_t)data->committed;
else
#endif
#ifdef QUALIFIER_PTRDIFF_T
if (flags & FLAGS_PTRDIFF_T)
*(ptrdiff_t *)pointer = (ptrdiff_t)data->committed;
else
#endif
#ifdef QUALIFIER_INTMAX_T
if (flags & FLAGS_INTMAX_T)
*(trio_intmax_t *)pointer = (trio_intmax_t)data->committed;
else
#endif
#ifdef QUALIFIER_QUAD
if (flags & FLAGS_QUAD)
{
*(trio_ulonglong_t *)pointer = (trio_ulonglong_t)data->committed;
}
else if (flags & FLAGS_LONG)
{
*(long int *)pointer = (long int)data->committed;
}
else if (flags & FLAGS_SHORT)
{
*(short int *)pointer = (short int)data->committed;
}
else
{
*(int *)pointer = (int)data->committed;
}
}
}

```

```

break; /* FORMAT_COUNT */

case FORMAT_PARAMETER:
break; /* FORMAT_PARAMETER */

#if defined(FORMAT_ERRNO)
case FORMAT_ERRNO:
string = trio_error(parameters[i].data.errorNumber);
if (string)
{
TrioWriteString(data,
string,
flags,
width,
precision);
}
else
{
data->OutStream(data, '#');
TrioWriteNumber(data,
(trio_uintmax_t)parameters[i].data.errorNumber,
flags,
width,
precision,
BASE_DECIMAL);
}
break; /* FORMAT_ERRNO */
#endif /* defined(FORMAT_ERRNO) */

#if defined(FORMAT_USER_DEFINED)
case FORMAT_USER_DEFINED:
{
trio_reference_t reference;
trio_userdef_t *def = NULL;

if (parameters[i].user_name[0] == NIL)
{
/* Use handle */
if ((i > 0) ||
(parameters[i - 1].type == FORMAT_PARAMETER))
def = (trio_userdef_t *)parameters[i - 1].data.pointer;
}
else
{
/* Look up namespace */
def = TrioFindNamespace(parameters[i].user_name, NULL);
}
if (def) {

```

```

        reference.data = data;
        reference.parameter = &parameters[i];
        def->callback(&reference);
    }
}
break;
#endif /* defined(FORMAT_USER_DEFINED) */

default:
    break;
} /* switch parameter type */

/* Prepare for next */
index = parameters[i].indexAfterSpecifier;
i++;
}
}
else /* not identifier */
{
    data->OutStream(data, format[index++]);
}
}
return data->processed;
}

/*****
* TrioFormatRef
*/
TRIO_PRIVATE int
TrioFormatRef
TRIO_ARGS4((reference, format, arglist, argarray),
    trio_reference_t *reference,
    TRIO_CONST char *format,
    va_list *arglist,
    trio_pointer_t *argarray)
{
    int status;
    trio_parameter_t parameters[MAX_PARAMETERS];

    status = TrioParse(TYPE_PRINT, format, parameters, arglist, argarray);
    if (status < 0)
        return status;

    status = TrioFormatProcess(reference->data, format, parameters);
    if (reference->data->error != 0)
    {
        status = reference->data->error;
    }
}

```

```

return status;
}

/*****
* TrioFormat
*/
TRIO_PRIVATE int
TrioFormat
TRIO_ARGS6((destination, destinationSize, OutStream, format, arglist, argarray),
    trio_pointer_t destination,
    size_t destinationSize,
    void (*OutStream) TRIO_PROTO((trio_class_t *, int)),
    TRIO_CONST char *format,
    va_list *arglist,
    trio_pointer_t *argarray)
{
    int status;
    trio_class_t data;
    trio_parameter_t parameters[MAX_PARAMETERS];

    assert(VALID(OutStream));
    assert(VALID(format));

    memset(&data, 0, sizeof(data));
    data.OutStream = OutStream;
    data.location = destination;
    data.max = destinationSize;
    data.error = 0;

#ifdef USE_LOCALE
    if (NULL == internalLocaleValues)
    {
        TrioSetLocale();
    }
#endif

    status = TrioParse(TYPE_PRINT, format, parameters, arglist, argarray);
    if (status < 0)
        return status;

    status = TrioFormatProcess(&data, format, parameters);
    if (data.error != 0)
    {
        status = data.error;
    }
    return status;
}

```

```

/*****
* TrioOutputStreamFile
*/
TRIO_PRIVATE void
TrioOutputStreamFile
TRIO_ARGS2((self, output),
    trio_class_t *self,
    int output)
{
    FILE *file;

    assert(VALID(self));
    assert(VALID(self->location));

    file = (FILE *)self->location;
    self->processed++;
    if (fputc(output, file) == EOF)
    {
        self->error = TRIO_ERROR_RETURN(TRIO_EOF, 0);
    }
    else
    {
        self->committed++;
    }
}

/*****
* TrioOutputStreamFileDescriptor
*/
TRIO_PRIVATE void
TrioOutputStreamFileDescriptor
TRIO_ARGS2((self, output),
    trio_class_t *self,
    int output)
{
    int fd;
    char ch;

    assert(VALID(self));

    fd = *((int *)self->location);
    ch = (char)output;
    self->processed++;
    if (write(fd, &ch, sizeof(char)) == -1)
    {
        self->error = TRIO_ERROR_RETURN(TRIO_ERRNO, 0);
    }
    else

```

```

    {
        self->committed++;
    }
}

/*****
* TrioOutputStreamCustom
*/
TRIO_PRIVATE void
TrioOutputStreamCustom
TRIO_ARGS2((self, output),
    trio_class_t *self,
    int output)
{
    int status;
    trio_custom_t *data;

    assert(VALID(self));
    assert(VALID(self->location));

    data = (trio_custom_t *)self->location;
    if (data->stream.out)
    {
        status = (data->stream.out)(data->closure, output);
        if (status >= 0)
        {
            self->committed++;
        }
        else
        {
            if (self->error == 0)
            {
                self->error = TRIO_ERROR_RETURN(TRIO_ECUSTOM, -status);
            }
        }
    }
    self->processed++;
}

/*****
* TrioOutputStreamString
*/
TRIO_PRIVATE void
TrioOutputStreamString
TRIO_ARGS2((self, output),
    trio_class_t *self,
    int output)
{

```

```

char **buffer;

assert(VALID(self));
assert(VALID(self->location));

buffer = (char **)self->location;
**buffer = (char)output;
(*buffer)++;
self->processed++;
self->committed++;
}

/*****
* TrioOutputStreamStringMax
*/
TRIO_PRIVATE void
TrioOutputStreamStringMax
TRIO_ARGS2((self, output),
    trio_class_t *self,
    int output)
{
char **buffer;

assert(VALID(self));
assert(VALID(self->location));

buffer = (char **)self->location;

if (self->processed < self->max)
{
    **buffer = (char)output;
    (*buffer)++;
    self->committed++;
}
self->processed++;
}

/*****
* TrioOutputStreamStringDynamic
*/
TRIO_PRIVATE void
TrioOutputStreamStringDynamic
TRIO_ARGS2((self, output),
    trio_class_t *self,
    int output)
{
assert(VALID(self));
assert(VALID(self->location));

```

```

if (self->error == 0)
{
    trio_xstring_append_char((trio_string_t *)self->location,
        (char)output);
    self->committed++;
}
/* The processed variable must always be increased */
self->processed++;
}

/*****
*
* Formatted printing functions
*
*****/

#ifdef TRIO_DOCUMENTATION
#include "doc/doc_printf.h"
#endif
/** @addtogroup Printf
    @{
*/

/*****
* printf
*/

/**
    Print to standard output stream.

    @param format Formatting string.
    @param ... Arguments.
    @return Number of printed characters.
*/
TRIO_PUBLIC int
trio_printf
TRIO_VARGS2((format, va_alist),
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioFormat(stdout, 0, TrioOutputStreamFile, format, &args, NULL);

```

```

TRIO_VA_END(args);
return status;
}

/**
Print to standard output stream.

@param format Formatting string.
@param args Arguments.
@return Number of printed characters.
*/
TRIO_PUBLIC int
trio_vprintf
TRIO_ARGS2((format, args),
    TRIO_CONST char *format,
    va_list args)
{
assert(VALID(format));

return TrioFormat(stdout, 0, TrioOutputStreamFile, format, &args, NULL);
}

/**
Print to standard output stream.

@param format Formatting string.
@param args Arguments.
@return Number of printed characters.
*/
TRIO_PUBLIC int
trio_printfv
TRIO_ARGS2((format, args),
    TRIO_CONST char *format,
    trio_pointer_t * args)
{
assert(VALID(format));

return TrioFormat(stdout, 0, TrioOutputStreamFile, format, NULL, args);
}

/*****
* fprintf
*/

/**
Print to file.

@param file File pointer.

```

```

    @param format Formatting string.
    @param ... Arguments.
    @return Number of printed characters.
*/
TRIO_PUBLIC int
trio_fprintf
TRIO_VARGS3((file, format, va_list),
    FILE *file,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(file));
    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioFormat(file, 0, TrioOutputStreamFile, format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

/**
    Print to file.

    @param file File pointer.
    @param format Formatting string.
    @param args Arguments.
    @return Number of printed characters.
*/
TRIO_PUBLIC int
trio_vfprintf
TRIO_ARGS3((file, format, args),
    FILE *file,
    TRIO_CONST char *format,
    va_list args)
{
    assert(VALID(file));
    assert(VALID(format));

    return TrioFormat(file, 0, TrioOutputStreamFile, format, &args, NULL);
}

/**
    Print to file.

    @param file File pointer.

```

```

    @param format Formatting string.
    @param args Arguments.
    @return Number of printed characters.
*/
TRIO_PUBLIC int
trio_fprintfv
TRIO_ARGS3((file, format, args),
    FILE *file,
    TRIO_CONST char *format,
    trio_pointer_t * args)
{
    assert(VALID(file));
    assert(VALID(format));

    return TrioFormat(file, 0, TrioOutputStreamFile, format, NULL, args);
}

/*****
* dprintf
*/

/**
    Print to file descriptor.

    @param fd File descriptor.
    @param format Formatting string.
    @param ... Arguments.
    @return Number of printed characters.
*/
TRIO_PUBLIC int
trio_dprintf
TRIO_VARGS3((fd, format, va_alist),
    int fd,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioFormat(&fd, 0, TrioOutputStreamFileDescriptor, format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

/**

```

Print to file descriptor.

@param fd File descriptor.
@param format Formatting string.
@param args Arguments.
@return Number of printed characters.

*/

TRIO_PUBLIC int

trio_vdprintf

TRIO_ARGS3((fd, format, args),

int fd,

TRIO_CONST char *format,

va_list args)

{

assert(VALID(format));

return TrioFormat(&fd, 0, TrioOutputStreamFileDescriptor, format, &args, NULL);

}

/**

Print to file descriptor.

@param fd File descriptor.
@param format Formatting string.
@param args Arguments.
@return Number of printed characters.

*/

TRIO_PUBLIC int

trio_dprintfv

TRIO_ARGS3((fd, format, args),

int fd,

TRIO_CONST char *format,

trio_pointer_t *args)

{

assert(VALID(format));

return TrioFormat(&fd, 0, TrioOutputStreamFileDescriptor, format, NULL, args);

}

* cprintf

*/

TRIO_PUBLIC int

trio_cprintf

TRIO_VARGS4((stream, closure, format, va_alist),

trio_outstream_t stream,

trio_pointer_t closure,

TRIO_CONST char *format,

```

    TRIO_VA_DECL)
{
    int status;
    va_list args;
    trio_custom_t data;

    assert(VALID(stream));
    assert(VALID(format));

    TRIO_VA_START(args, format);
    data.stream.out = stream;
    data.closure = closure;
    status = TrioFormat(&data, 0, TrioOutputStreamCustom, format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

```

```

TRIO_PUBLIC int
trio_vcprintf
TRIO_ARGS4((stream, closure, format, args),
    trio_outstream_t stream,
    trio_pointer_t closure,
    TRIO_CONST char *format,
    va_list args)
{
    trio_custom_t data;

    assert(VALID(stream));
    assert(VALID(format));

    data.stream.out = stream;
    data.closure = closure;
    return TrioFormat(&data, 0, TrioOutputStreamCustom, format, &args, NULL);
}

```

```

TRIO_PUBLIC int
trio_cprintfv
TRIO_ARGS4((stream, closure, format, args),
    trio_outstream_t stream,
    trio_pointer_t closure,
    TRIO_CONST char *format,
    void **args)
{
    trio_custom_t data;

    assert(VALID(stream));
    assert(VALID(format));

```

```

data.stream.out = stream;
data.closure = closure;
return TrioFormat(&data, 0, TrioOutputStreamCustom, format, NULL, args);
}

```

```

/*****

```

```

* sprintf
*/

```

```

/**

```

Print to string.

```

@param buffer Output string.
@param format Formatting string.
@param ... Arguments.
@return Number of printed characters.

```

```

*/

```

```

TRIO_PUBLIC int

```

```

trio_sprintf

```

```

TRIO_VARGS3((buffer, format, va_alist),

```

```

    char *buffer,

```

```

    TRIO_CONST char *format,

```

```

    TRIO_VA_DECL)

```

```

{

```

```

    int status;

```

```

    va_list args;

```

```

    assert(VALID(buffer));

```

```

    assert(VALID(format));

```

```

    TRIO_VA_START(args, format);

```

```

    status = TrioFormat(&buffer, 0, TrioOutputStreamString, format, &args, NULL);

```

```

    *buffer = NIL; /* Terminate with NIL character */

```

```

    TRIO_VA_END(args);

```

```

    return status;

```

```

}

```

```

/**

```

Print to string.

```

@param buffer Output string.
@param format Formatting string.
@param args Arguments.
@return Number of printed characters.

```

```

*/

```

```

TRIO_PUBLIC int

```

```

trio_vsprintf

```

```

TRIO_ARGS3((buffer, format, args),

```

```

    char *buffer,
    TRIO_CONST char *format,
    va_list args)
{
    int status;

    assert(VALID(buffer));
    assert(VALID(format));

    status = TrioFormat(&buffer, 0, TrioOutputStreamString, format, &args, NULL);
    *buffer = NIL;
    return status;
}

/**
    Print to string.

    @param buffer Output string.
    @param format Formatting string.
    @param args Arguments.
    @return Number of printed characters.
*/
TRIO_PUBLIC int
trio_sprintfv
TRIO_ARGS3((buffer, format, args),
    char *buffer,
    TRIO_CONST char *format,
    trio_pointer_t *args)
{
    int status;

    assert(VALID(buffer));
    assert(VALID(format));

    status = TrioFormat(&buffer, 0, TrioOutputStreamString, format, NULL, args);
    *buffer = NIL;
    return status;
}

/*****
* snprintf
*/

/**
    Print at most @p max characters to string.

    @param buffer Output string.
    @param max Maximum number of characters to print.

```

```

    @param format Formatting string.
    @param ... Arguments.
    @return Number of printed characters.
*/
TRIO_PUBLIC int
trio_snprintf
TRIO_VARGS4((buffer, max, format, va_alist),
    char *buffer,
    size_t max,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(buffer));
    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioFormat(&buffer, max > 0 ? max - 1 : 0,
        TrioOutputStreamStringMax, format, &args, NULL);
    if (max > 0)
        *buffer = NIL;
    TRIO_VA_END(args);
    return status;
}

/**
    Print at most @p max characters to string.

```

```

    @param buffer Output string.
    @param max Maximum number of characters to print.
    @param format Formatting string.
    @param args Arguments.
    @return Number of printed characters.
*/

```

```

TRIO_PUBLIC int
trio_vsnprintf
TRIO_ARGS4((buffer, max, format, args),
    char *buffer,
    size_t max,
    TRIO_CONST char *format,
    va_list args)
{
    int status;

    assert(VALID(buffer));
    assert(VALID(format));

```

```

status = TrioFormat(&buffer, max > 0 ? max - 1 : 0,
    TrioOutputStreamStringMax, format, &args, NULL);
if (max > 0)
    *buffer = NIL;
return status;
}

/**
Print at most @p max characters to string.

@param buffer Output string.
@param max Maximum number of characters to print.
@param format Formatting string.
@param args Arguments.
@return Number of printed characters.
*/
TRIO_PUBLIC int
trio_snprintfv
TRIO_ARGS4((buffer, max, format, args),
    char *buffer,
    size_t max,
    TRIO_CONST char *format,
    trio_pointer_t *args)
{
int status;

assert(VALID(buffer));
assert(VALID(format));

status = TrioFormat(&buffer, max > 0 ? max - 1 : 0,
    TrioOutputStreamStringMax, format, NULL, args);
if (max > 0)
    *buffer = NIL;
return status;
}

/*****
* snprintfcat
* Appends the new string to the buffer string overwriting the '\0'
* character at the end of buffer.
*/
TRIO_PUBLIC int
trio_snprintfcat
TRIO_VARGS4((buffer, max, format, va_alist),
    char *buffer,
    size_t max,
    TRIO_CONST char *format,

```

```

    TRIO_VA_DECL)
{
    int status;
    va_list args;
    size_t buf_len;

    TRIO_VA_START(args, format);

    assert(VALID(buffer));
    assert(VALID(format));

    buf_len = trio_length(buffer);
    buffer = &buffer[buf_len];

    status = TrioFormat(&buffer, max - 1 - buf_len,
        TrioOutputStreamStringMax, format, &args, NULL);
    TRIO_VA_END(args);
    *buffer = NIL;
    return status;
}

TRIO_PUBLIC int
trio_vsnprintfcat
TRIO_ARGS4((buffer, max, format, args),
    char *buffer,
    size_t max,
    TRIO_CONST char *format,
    va_list args)
{
    int status;
    size_t buf_len;

    assert(VALID(buffer));
    assert(VALID(format));

    buf_len = trio_length(buffer);
    buffer = &buffer[buf_len];
    status = TrioFormat(&buffer, max - 1 - buf_len,
        TrioOutputStreamStringMax, format, &args, NULL);
    *buffer = NIL;
    return status;
}

/*****
* trio_aprintf
*/

/* Deprecated */

```

```

TRIO_PUBLIC char *
trio_aprintf
TRIO_VARGS2((format, va_alist),
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    va_list args;
    trio_string_t *info;
    char *result = NULL;

    assert(VALID(format));

    info = trio_xstring_duplicate("");
    if (info)
    {
        TRIO_VA_START(args, format);
        (void)TrioFormat(info, 0, TrioOutputStreamStringDynamic,
            format, &args, NULL);
        TRIO_VA_END(args);

        trio_string_terminate(info);
        result = trio_string_extract(info);
        trio_string_destroy(info);
    }
    return result;
}

/* Deprecated */
TRIO_PUBLIC char *
trio_vaprintf
TRIO_ARGS2((format, args),
    TRIO_CONST char *format,
    va_list args)
{
    trio_string_t *info;
    char *result = NULL;

    assert(VALID(format));

    info = trio_xstring_duplicate("");
    if (info)
    {
        (void)TrioFormat(info, 0, TrioOutputStreamStringDynamic,
            format, &args, NULL);
        trio_string_terminate(info);
        result = trio_string_extract(info);
        trio_string_destroy(info);
    }
}

```

```

return result;
}

TRIO_PUBLIC int
trio_asprintf
TRIO_VARGS3((result, format, va_alist),
    char **result,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
va_list args;
int status;
trio_string_t *info;

assert(VALID(format));

*result = NULL;

info = trio_xstring_duplicate("");
if (info == NULL)
{
    status = TRIO_ERROR_RETURN(TRIO_ENOMEM, 0);
}
else
{
    TRIO_VA_START(args, format);
    status = TrioFormat(info, 0, TrioOutputStreamStringDynamic,
        format, &args, NULL);
    TRIO_VA_END(args);
    if (status >= 0)
    {
        trio_string_terminate(info);
        *result = trio_string_extract(info);
    }
    trio_string_destroy(info);
}
return status;
}

```

```

TRIO_PUBLIC int
trio_vasprintf
TRIO_ARGS3((result, format, args),
    char **result,
    TRIO_CONST char *format,
    va_list args)
{
int status;
trio_string_t *info;

```

```

assert(VALID(format));

*result = NULL;

info = trio_xstring_duplicate("");
if (info == NULL)
{
    status = TRIO_ERROR_RETURN(TRIO_ENOMEM, 0);
}
else
{
    status = TrioFormat(info, 0, TrioOutputStreamStringDynamic,
        format, &args, NULL);
    if (status >= 0)
    {
        trio_string_terminate(info);
        *result = trio_string_extract(info);
    }
    trio_string_destroy(info);
}
return status;
}

/** @ } End of Printf documentation module */

/*****
*
* CALLBACK
*
*****/

#if defined(TRIO_DOCUMENTATION)
#include "doc/doc_register.h"
#endif
/**
@addtogroup UserDefined
@{
*/

#if TRIO_EXTENSION

/*****
* trio_register
*/

/**
Register new user-defined specifier.

```

```

@param callback
@param name
@return Handle.
*/
TRIO_PUBLIC trio_pointer_t
trio_register
TRIO_ARGS2((callback, name),
    trio_callback_t callback,
    TRIO_CONST char *name)
{
    trio_userdef_t *def;
    trio_userdef_t *prev = NULL;

    if (callback == NULL)
        return NULL;

    if (name)
    {
        /* Handle built-in namespaces */
        if (name[0] == ':')
        {
            if (trio_equal(name, ":enter"))
            {
                internalEnterCriticalRegion = callback;
            }
            else if (trio_equal(name, ":leave"))
            {
                internalLeaveCriticalRegion = callback;
            }
            return NULL;
        }

        /* Bail out if namespace is too long */
        if (trio_length(name) >= MAX_USER_NAME)
            return NULL;

        /* Bail out if namespace already is registered */
        def = TrioFindNamespace(name, &prev);
        if (def)
            return NULL;
    }

    def = (trio_userdef_t *)TRIO_MALLOC(sizeof(trio_userdef_t));
    if (def)
    {
        if (internalEnterCriticalRegion)
            (void)internalEnterCriticalRegion(NULL);
    }
}

```

```

    if (name)
    {
        /* Link into internal list */
        if (prev == NULL)
            internalUserDef = def;
        else
            prev->next = def;
    }
    /* Initialize */
    def->callback = callback;
    def->name = (name == NULL)
? NULL
: trio_duplicate(name);
    def->next = NULL;

    if (internalLeaveCriticalRegion)
(void)internalLeaveCriticalRegion(NULL);
    }
return (trio_pointer_t)def;
}

/**
    Unregister an existing user-defined specifier.

    @param handle
*/
void
trio_unregister
TRIO_ARGS1((handle),
    trio_pointer_t handle)
{
    trio_userdef_t *self = (trio_userdef_t *)handle;
    trio_userdef_t *def;
    trio_userdef_t *prev = NULL;

    assert(VALID(self));

    if (self->name)
    {
        def = TrioFindNamespace(self->name, &prev);
        if (def)
        {
            if (internalEnterCriticalRegion)
                (void)internalEnterCriticalRegion(NULL);

            if (prev == NULL)
                internalUserDef = NULL;

```

```

else
    prev->next = def->next;

if (internalLeaveCriticalRegion)
    (void)internalLeaveCriticalRegion(NULL);
}
trio_destroy(self->name);
}
TRIO_FREE(self);
}

/*****
* trio_get_format [public]
*/
TRIO_CONST char *
trio_get_format
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
#if defined(FORMAT_USER_DEFINED)
    assert(((trio_reference_t *)ref)->parameter->type == FORMAT_USER_DEFINED);
#endif

    return (((trio_reference_t *)ref)->parameter->user_data);
}

/*****
* trio_get_argument [public]
*/
trio_pointer_t
trio_get_argument
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
#if defined(FORMAT_USER_DEFINED)
    assert(((trio_reference_t *)ref)->parameter->type == FORMAT_USER_DEFINED);
#endif

    return ((trio_reference_t *)ref)->parameter->data.pointer;
}

/*****
* trio_get_width / trio_set_width [public]
*/
int
trio_get_width
TRIO_ARGS1((ref),
    trio_pointer_t ref)

```

```

{
    return (((trio_reference_t *)ref)->parameter->width);
}

void
trio_set_width
TRIO_ARGS2((ref, width),
    trio_pointer_t ref,
    int width)
{
    (((trio_reference_t *)ref)->parameter->width) = width;
}

/*****
* trio_get_precision / trio_set_precision [public]
*/
int
trio_get_precision
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->precision);
}

void
trio_set_precision
TRIO_ARGS2((ref, precision),
    trio_pointer_t ref,
    int precision)
{
    (((trio_reference_t *)ref)->parameter->precision) = precision;
}

/*****
* trio_get_base / trio_set_base [public]
*/
int
trio_get_base
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->base);
}

void
trio_set_base
TRIO_ARGS2((ref, base),
    trio_pointer_t ref,

```

```

    int base)
{
    ((trio_reference_t *)ref)->parameter->base = base;
}

/*****
* trio_get_long / trio_set_long [public]
*/
int
trio_get_long
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_LONG)
        ? TRUE
        : FALSE;
}

void
trio_set_long
TRIO_ARGS2((ref, is_long),
    trio_pointer_t ref,
    int is_long)
{
    if (is_long)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_LONG;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_LONG;
}

/*****
* trio_get_longlong / trio_set_longlong [public]
*/
int
trio_get_longlong
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_QUAD)
        ? TRUE
        : FALSE;
}

void
trio_set_longlong
TRIO_ARGS2((ref, is_longlong),
    trio_pointer_t ref,
    int is_longlong)

```

```

{
if (is_longlong)
    ((trio_reference_t *)ref)->parameter->flags |= FLAGS_QUAD;
else
    ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_QUAD;
}

/*****
* trio_get_longdouble / trio_set_longdouble [public]
*/
int
trio_get_longdouble
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
return (((trio_reference_t *)ref)->parameter->flags & FLAGS_LONGDOUBLE)
    ? TRUE
    : FALSE;
}

void
trio_set_longdouble
TRIO_ARGS2((ref, is_longdouble),
    trio_pointer_t ref,
    int is_longdouble)
{
if (is_longdouble)
    ((trio_reference_t *)ref)->parameter->flags |= FLAGS_LONGDOUBLE;
else
    ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_LONGDOUBLE;
}

/*****
* trio_get_short / trio_set_short [public]
*/
int
trio_get_short
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
return (((trio_reference_t *)ref)->parameter->flags & FLAGS_SHORT)
    ? TRUE
    : FALSE;
}

void
trio_set_short
TRIO_ARGS2((ref, is_short),

```

```

    trio_pointer_t ref,
    int is_short)
{
    if (is_short)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_SHORT;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_SHORT;
}

/*****
* trio_get_shortshort / trio_set_shortshort [public]
*/
int
trio_get_shortshort
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_SHORTSHORT)
        ? TRUE
        : FALSE;
}

void
trio_set_shortshort
TRIO_ARGS2((ref, is_shortshort),
    trio_pointer_t ref,
    int is_shortshort)
{
    if (is_shortshort)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_SHORTSHORT;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_SHORTSHORT;
}

/*****
* trio_get_alternative / trio_set_alternative [public]
*/
int
trio_get_alternative
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_ALTERNATIVE)
        ? TRUE
        : FALSE;
}

void

```

```

trio_set_alternative
TRIO_ARGS2((ref, is_alternative),
    trio_pointer_t ref,
    int is_alternative)
{
    if (is_alternative)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_ALTERNATIVE;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_ALTERNATIVE;
}

/*****
* trio_get_alignment / trio_set_alignment [public]
*/
int
trio_get_alignment
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_LEFTADJUST)
        ? TRUE
        : FALSE;
}

void
trio_set_alignment
TRIO_ARGS2((ref, is_leftaligned),
    trio_pointer_t ref,
    int is_leftaligned)
{
    if (is_leftaligned)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_LEFTADJUST;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_LEFTADJUST;
}

/*****
* trio_get_spacing /trio_set_spacing [public]
*/
int
trio_get_spacing
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_SPACE)
        ? TRUE
        : FALSE;
}

```

```

void
trio_set_spacing
TRIO_ARGS2((ref, is_space),
    trio_pointer_t ref,
    int is_space)
{
    if (is_space)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_SPACE;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_SPACE;
}

/*****
* trio_get_sign / trio_set_sign [public]
*/
int
trio_get_sign
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_SHOWSIGN)
        ? TRUE
        : FALSE;
}

void
trio_set_sign
TRIO_ARGS2((ref, is_sign),
    trio_pointer_t ref,
    int is_sign)
{
    if (is_sign)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_SHOWSIGN;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_SHOWSIGN;
}

/*****
* trio_get_padding / trio_set_padding [public]
*/
int
trio_get_padding
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_NILPADDING)
        ? TRUE

```

```

    : FALSE;
}

void
trio_set_padding
TRIO_ARGS2((ref, is_padding),
    trio_pointer_t ref,
    int is_padding)
{
    if (is_padding)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_NILPADDING;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_NILPADDING;
}

/*****
* trio_get_quote / trio_set_quote [public]
*/
int
trio_get_quote
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
    return (((trio_reference_t *)ref)->parameter->flags & FLAGS_QUOTE)
        ? TRUE
        : FALSE;
}

void
trio_set_quote
TRIO_ARGS2((ref, is_quote),
    trio_pointer_t ref,
    int is_quote)
{
    if (is_quote)
        ((trio_reference_t *)ref)->parameter->flags |= FLAGS_QUOTE;
    else
        ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_QUOTE;
}

/*****
* trio_get_upper / trio_set_upper [public]
*/
int
trio_get_upper
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{

```

```

return (((trio_reference_t *)ref)->parameter->flags & FLAGS_UPPER)
? TRUE
: FALSE;
}

void
trio_set_upper
TRIO_ARGS2((ref, is_upper),
    trio_pointer_t ref,
    int is_upper)
{
if (is_upper)
    ((trio_reference_t *)ref)->parameter->flags |= FLAGS_UPPER;
else
    ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_UPPER;
}

/*****
* trio_get_largest / trio_set_largest [public]
*/
#if TRIO_C99
int
trio_get_largest
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
return (((trio_reference_t *)ref)->parameter->flags & FLAGS_INTMAX_T)
? TRUE
: FALSE;
}

void
trio_set_largest
TRIO_ARGS2((ref, is_largest),
    trio_pointer_t ref,
    int is_largest)
{
if (is_largest)
    ((trio_reference_t *)ref)->parameter->flags |= FLAGS_INTMAX_T;
else
    ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_INTMAX_T;
}
#endif

/*****
* trio_get_ptrdiff / trio_set_ptrdiff [public]
*/
int

```

```

trio_get_ptrdiff
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
return (((trio_reference_t *)ref)->parameter->flags & FLAGS_PTRDIFF_T)
    ? TRUE
    : FALSE;
}

void
trio_set_ptrdiff
TRIO_ARGS2((ref, is_ptrdiff),
    trio_pointer_t ref,
    int is_ptrdiff)
{
if (is_ptrdiff)
    ((trio_reference_t *)ref)->parameter->flags |= FLAGS_PTRDIFF_T;
else
    ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_PTRDIFF_T;
}

/*****
* trio_get_size / trio_set_size [public]
*/
#if TRIO_C99
int
trio_get_size
TRIO_ARGS1((ref),
    trio_pointer_t ref)
{
return (((trio_reference_t *)ref)->parameter->flags & FLAGS_SIZE_T)
    ? TRUE
    : FALSE;
}

void
trio_set_size
TRIO_ARGS2((ref, is_size),
    trio_pointer_t ref,
    int is_size)
{
if (is_size)
    ((trio_reference_t *)ref)->parameter->flags |= FLAGS_SIZE_T;
else
    ((trio_reference_t *)ref)->parameter->flags &= ~FLAGS_SIZE_T;
}
#endif

```

```

/*****
* trio_print_int [public]
*/
void
trio_print_int
TRIO_ARGS2((ref, number),
    trio_pointer_t ref,
    int number)
{
    trio_reference_t *self = (trio_reference_t *)ref;

    TrioWriteNumber(self->data,
        (trio_uintmax_t)number,
        self->parameter->flags,
        self->parameter->width,
        self->parameter->precision,
        self->parameter->base);
}

/*****
* trio_print_uint [public]
*/
void
trio_print_uint
TRIO_ARGS2((ref, number),
    trio_pointer_t ref,
    unsigned int number)
{
    trio_reference_t *self = (trio_reference_t *)ref;

    TrioWriteNumber(self->data,
        (trio_uintmax_t)number,
        self->parameter->flags | FLAGS_UNSIGNED,
        self->parameter->width,
        self->parameter->precision,
        self->parameter->base);
}

/*****
* trio_print_double [public]
*/
void
trio_print_double
TRIO_ARGS2((ref, number),
    trio_pointer_t ref,
    double number)
{
    trio_reference_t *self = (trio_reference_t *)ref;

```

```

TrioWriteDouble(self->data,
    number,
    self->parameter->flags,
    self->parameter->width,
    self->parameter->precision,
    self->parameter->base);
}

/*****
* trio_print_string [public]
*/
void
trio_print_string
TRIO_ARGS2((ref, string),
    trio_pointer_t ref,
    char *string)
{
    trio_reference_t *self = (trio_reference_t *)ref;

    TrioWriteString(self->data,
        string,
        self->parameter->flags,
        self->parameter->width,
        self->parameter->precision);
}

/*****
* trio_print_ref [public]
*/
int
trio_print_ref
TRIO_VARGS3((ref, format, va_alist),
    trio_pointer_t ref,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list arglist;

    assert(VALID(format));

    TRIO_VA_START(arglist, format);
    status = TrioFormatRef((trio_reference_t *)ref, format, &arglist, NULL);
    TRIO_VA_END(arglist);
    return status;
}

```

```

/*****
* trio_vprint_ref [public]
*/
int
trio_vprint_ref
TRIO_ARGS3((ref, format, arglist),
    trio_pointer_t ref,
    TRIO_CONST char *format,
    va_list arglist)
{
    assert(VALID(format));

    return TrioFormatRef((trio_reference_t *)ref, format, &arglist, NULL);
}

/*****
* trio_printv_ref [public]
*/
int
trio_printv_ref
TRIO_ARGS3((ref, format, argarray),
    trio_pointer_t ref,
    TRIO_CONST char *format,
    trio_pointer_t *argarray)
{
    assert(VALID(format));

    return TrioFormatRef((trio_reference_t *)ref, format, NULL, argarray);
}

#endif /* TRIO_EXTENSION */

/*****
* trio_print_pointer [public]
*/
void
trio_print_pointer
TRIO_ARGS2((ref, pointer),
    trio_pointer_t ref,
    trio_pointer_t pointer)
{
    trio_reference_t *self = (trio_reference_t *)ref;
    trio_flags_t flags;
    trio_uintmax_t number;

    if (NULL == pointer)
    {
        TRIO_CONST char *string = internalNullString;

```

```

    while (*string)
self->data->OutStream(self->data, *string++);
    }
else
    {
    /*
    * The subtraction of the null pointer is a workaround
    * to avoid a compiler warning. The performance overhead
    * is negligible (and likely to be removed by an
    * optimizing compiler). The (char *) casting is done
    * to please ANSI C++.
    */
    number = (trio_uintmax_t)((char *)pointer - (char *)0);
    /* Shrink to size of pointer */
    number &= (trio_uintmax_t)-1;
    flags = self->parameter->flags;
    flags |= (FLAGS_UNSIGNED | FLAGS_ALTERNATIVE |
    FLAGS_NILPADDING);
    TrioWriteNumber(self->data,
    number,
    flags,
    POINTER_WIDTH,
    NO_PRECISION,
    BASE_HEX);
    }
}

/** @ } End of UserDefined documentation module */

/*****
*
* LOCALES
*
*****/

/*****
* trio_locale_set_decimal_point
*
* Decimal point can only be one character. The input argument is a
* string to enable multibyte characters. At most MB_LEN_MAX characters
* will be used.
*/
TRIO_PUBLIC void
trio_locale_set_decimal_point
TRIO_ARGS1((decimalPoint),
    char *decimalPoint)
{
#if defined(USE_LOCALE)

```

```

if (NULL == internalLocaleValues)
{
    TrioSetLocale();
}
#endif
internalDecimalPointLength = trio_length(decimalPoint);
if (internalDecimalPointLength == 1)
{
    internalDecimalPoint = *decimalPoint;
}
else
{
    internalDecimalPoint = NIL;
    trio_copy_max(internalDecimalPointString,
        sizeof(internalDecimalPointString),
        decimalPoint);
}
}

/*****
* trio_locale_set_thousand_separator
*
* See trio_locale_set_decimal_point
*/
TRIO_PUBLIC void
trio_locale_set_thousand_separator
TRIO_ARGS1((thousandSeparator),
    char *thousandSeparator)
{
#ifdef USE_LOCALE
    if (NULL == internalLocaleValues)
    {
        TrioSetLocale();
    }
#endif
    trio_copy_max(internalThousandSeparator,
        sizeof(internalThousandSeparator),
        thousandSeparator);
    internalThousandSeparatorLength = trio_length(internalThousandSeparator);
}

/*****
* trio_locale_set_grouping
*
* Array of bytes. Reversed order.
*
* CHAR_MAX : No further grouping
* 0       : Repeat last group for the remaining digits (not necessary

```

```

*      as C strings are zero-terminated)
* n    : Set current group to n
*
* Same order as the grouping attribute in LC_NUMERIC.
*/
TRIO_PUBLIC void
trio_locale_set_grouping
TRIO_ARGS1((grouping),
    char *grouping)
{
#if defined(USE_LOCALE)
if (NULL == internalLocaleValues)
    {
        TrioSetLocale();
    }
#endif
trio_copy_max(internalGrouping,
    sizeof(internalGrouping),
    grouping);
}

/*****
*
* SCANNING
*
*****/

/*****
* TrioSkipWhitespaces
*/
TRIO_PRIVATE int
TrioSkipWhitespaces
TRIO_ARGS1((self),
    trio_class_t *self)
{
    int ch;

    ch = self->current;
    while (isspace(ch))
        {
            self->InStream(self, &ch);
        }
    return ch;
}

/*****
* TrioGetCollation

```

```

*/
#if TRIO_EXTENSION
TRIO_PRIVATE void
TrioGetCollation(TRIO_NOARGS)
{
    int i;
    int j;
    int k;
    char first[2];
    char second[2];

    /* This is computationally expensive */
    first[1] = NIL;
    second[1] = NIL;
    for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    {
        k = 0;
        first[0] = (char)i;
        for (j = 0; j < MAX_CHARACTER_CLASS; j++)
        {
            second[0] = (char)j;
            if (trio_equal_locale(first, second))
                internalCollationArray[i][k++] = (char)j;
        }
        internalCollationArray[i][k] = NIL;
    }
}
#endif

/*****
* TrioGetCharacterClass
*
* FIXME:
* multibyte
*/
TRIO_PRIVATE int
TrioGetCharacterClass
TRIO_ARGS4((format, indexPointer, flagsPointer, characterclass),
    TRIO_CONST char *format,
    int *indexPointer,
    trio_flags_t *flagsPointer,
    int *characterclass)
{
    int index = *indexPointer;
    int i;
    char ch;
    char range_begin;
    char range_end;

```

```

*flagsPointer &= ~FLAGS_EXCLUDE;

if (format[index] == QUALIFIER_CIRCUMFLEX)
{
    *flagsPointer |= FLAGS_EXCLUDE;
    index++;
}
/*
* If the ungroup character is at the beginning of the scanlist,
* it will be part of the class, and a second ungroup character
* must follow to end the group.
*/
if (format[index] == SPECIFIER_UNGROUP)
{
    characterclass[(int)SPECIFIER_UNGROUP]++;
    index++;
}
/*
* Minus is used to specify ranges. To include minus in the class,
* it must be at the beginning of the list
*/
if (format[index] == QUALIFIER_MINUS)
{
    characterclass[(int)QUALIFIER_MINUS]++;
    index++;
}
/* Collect characters */
for (ch = format[index];
    (ch != SPECIFIER_UNGROUP) && (ch != NIL);
    ch = format[++index])
{
    switch (ch)
    {
case QUALIFIER_MINUS: /* Scanlist ranges */

/*
* Both C99 and UNIX98 describes ranges as implementation-
* defined.
*
* We support the following behaviour (although this may
* change as we become wiser)
* - only increasing ranges, ie. [a-b] but not [b-a]
* - transitive ranges, ie. [a-b-c] == [a-c]
* - trailing minus, ie. [a-] is interpreted as an 'a'
*   and a '-'
* - duplicates (although we can easily convert these
*   into errors)

```

```

*/
range_begin = format[index - 1];
range_end = format[++index];
if (range_end == SPECIFIER_UNGROUP)
{
    /* Trailing minus is included */
    characterclass[(int)ch]++;
    ch = range_end;
    break; /* for */
}
if (range_end == NIL)
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
if (range_begin > range_end)
    return TRIO_ERROR_RETURN(TRIO_ERANGE, index);

for (i = (int)range_begin; i <= (int)range_end; i++)
    characterclass[i]++;

ch = range_end;
break;

#if TRIO_EXTENSION

case SPECIFIER_GROUP:

switch (format[index + 1])
{
case QUALIFIER_DOT: /* Collating symbol */
    /*
     * FIXME: This will be easier to implement when multibyte
     * characters have been implemented. Until now, we ignore
     * this feature.
     */
    for (i = index + 2; ; i++)
    {
        if (format[i] == NIL)
            /* Error in syntax */
            return -1;
        else if (format[i] == QUALIFIER_DOT)
            break; /* for */
    }
    if (format[++i] != SPECIFIER_UNGROUP)
        return -1;

    index = i;
    break;

case QUALIFIER_EQUAL: /* Equivalence class expressions */

```

```

    {
    unsigned int j;
    unsigned int k;

    if (internalCollationUnconverted)
    {
        /* Lazy evaluation of collation array */
        TrioGetCollation();
        internalCollationUnconverted = FALSE;
    }
    for (i = index + 2; ; i++)
    {
        if (format[i] == NIL)
            /* Error in syntax */
            return -1;
        else if (format[i] == QUALIFIER_EQUAL)
            break; /* for */
        else
        {
            /* Mark any equivalent character */
            k = (unsigned int)format[i];
            for (j = 0; internalCollationArray[k][j] != NIL; j++)
                characterclass[(int)internalCollationArray[k][j]]++;
        }
    }
    if (format[++i] != SPECIFIER_UNGROUP)
        return -1;

    index = i;
    }
    break;

    case QUALIFIER_COLON: /* Character class expressions */

        if (trio_equal_max(CLASS_ALNUM, sizeof(CLASS_ALNUM) - 1,
            &format[index]))
        {
            for (i = 0; i < MAX_CHARACTER_CLASS; i++)
                if (isalnum(i))
                    characterclass[i]++;
            index += sizeof(CLASS_ALNUM) - 1;
        }
        else if (trio_equal_max(CLASS_ALPHA, sizeof(CLASS_ALPHA) - 1,
            &format[index]))
        {
            for (i = 0; i < MAX_CHARACTER_CLASS; i++)
                if (isalpha(i))
                    characterclass[i]++;

```

```

index += sizeof(CLASS_ALPHA) - 1;
}
else if (trio_equal_max(CLASS_CNTRL, sizeof(CLASS_CNTRL) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (iscntrl(i))
        characterclass[i]++;
index += sizeof(CLASS_CNTRL) - 1;
}
else if (trio_equal_max(CLASS_DIGIT, sizeof(CLASS_DIGIT) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (isdigit(i))
        characterclass[i]++;
index += sizeof(CLASS_DIGIT) - 1;
}
else if (trio_equal_max(CLASS_GRAPH, sizeof(CLASS_GRAPH) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (isgraph(i))
        characterclass[i]++;
index += sizeof(CLASS_GRAPH) - 1;
}
else if (trio_equal_max(CLASS_LOWER, sizeof(CLASS_LOWER) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (islower(i))
        characterclass[i]++;
index += sizeof(CLASS_LOWER) - 1;
}
else if (trio_equal_max(CLASS_PRINT, sizeof(CLASS_PRINT) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (isprint(i))
        characterclass[i]++;
index += sizeof(CLASS_PRINT) - 1;
}
else if (trio_equal_max(CLASS_PUNCT, sizeof(CLASS_PUNCT) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (ispunct(i))
        characterclass[i]++;
}

```

```

index += sizeof(CLASS_PUNCT) - 1;
}
else if (trio_equal_max(CLASS_SPACE, sizeof(CLASS_SPACE) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (isspace(i))
        characterclass[i]++;
index += sizeof(CLASS_SPACE) - 1;
}
else if (trio_equal_max(CLASS_UPPER, sizeof(CLASS_UPPER) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (isupper(i))
        characterclass[i]++;
index += sizeof(CLASS_UPPER) - 1;
}
else if (trio_equal_max(CLASS_XDIGIT, sizeof(CLASS_XDIGIT) - 1,
    &format[index]))
{
for (i = 0; i < MAX_CHARACTER_CLASS; i++)
    if (isxdigit(i))
        characterclass[i]++;
index += sizeof(CLASS_XDIGIT) - 1;
}
else
{
characterclass[(int)ch]++;
}
break;

default:
    characterclass[(int)ch]++;
    break;
}
break;

#endif /* TRIO_EXTENSION */

default:
    characterclass[(int)ch]++;
    break;
}
}
return 0;
}

```

```
/******
```

```
* TrioReadNumber
```

```
*
```

```
* We implement our own number conversion in preference of strtol and
```

```
* strtoul, because we must handle 'long long' and thousand separators.
```

```
*/
```

```
TRIO_PRIVATE BOOLEAN_T
```

```
TrioReadNumber
```

```
TRIO_ARGS5((self, target, flags, width, base),
```

```
    trio_class_t *self,
```

```
    trio_uintmax_t *target,
```

```
    trio_flags_t flags,
```

```
    int width,
```

```
    int base)
```

```
{
```

```
    trio_uintmax_t number = 0;
```

```
    int digit;
```

```
    int count;
```

```
    BOOLEAN_T isNegative = FALSE;
```

```
    BOOLEAN_T gotNumber = FALSE;
```

```
    int j;
```

```
    assert(VALID(self));
```

```
    assert(VALID(self->InStream));
```

```
    assert((base >= MIN_BASE && base <= MAX_BASE) || (base == NO_BASE));
```

```
    if (internalDigitsUnconverted)
```

```
    {
```

```
        /* Lazy evaluation of digits array */
```

```
        memset(internalDigitArray, -1, sizeof(internalDigitArray));
```

```
        for (j = 0; j < (int)sizeof(internalDigitsLower) - 1; j++)
```

```
        {
```

```
            internalDigitArray[(int)internalDigitsLower[j]] = j;
```

```
            internalDigitArray[(int)internalDigitsUpper[j]] = j;
```

```
        }
```

```
        internalDigitsUnconverted = FALSE;
```

```
    }
```

```
    TrioSkipWhitespaces(self);
```

```
    if (!(flags & FLAGS_UNSIGNED))
```

```
    {
```

```
        /* Leading sign */
```

```
        if (self->current == '+')
```

```
        {
```

```
            self->InStream(self, NULL);
```

```
        }
```

```
        else if (self->current == '-')
```

```

{
    self->InStream(self, NULL);
    isNegative = TRUE;
}
}

count = self->processed;

if (flags & FLAGS_ALTERNATIVE)
{
    switch (base)
    {
    case NO_BASE:
    case BASE_OCTAL:
    case BASE_HEX:
    case BASE_BINARY:
        if (self->current == '0')
        {
            self->InStream(self, NULL);
            if (self->current)
            {
                if ((base == BASE_HEX) &&
                    (trio_to_upper(self->current) == 'X'))
                {
                    self->InStream(self, NULL);
                }
                else if ((base == BASE_BINARY) &&
                    (trio_to_upper(self->current) == 'B'))
                {
                    self->InStream(self, NULL);
                }
            }
        }
        else
            return FALSE;
        break;
    default:
        break;
    }
}

while (((width == NO_WIDTH) || (self->processed - count < width)) &&
(!((self->current == EOF) || isspace(self->current))))
{
    if (isascii(self->current))
    {
        digit = internalDigitArray[self->current];
        /* Abort if digit is not allowed in the specified base */

```

```

if ((digit == -1) || (digit >= base))
    break;
}
else if (flags & FLAGS_QUOTE)
{
    /* Compare with thousands separator */
    for (j = 0; internalThousandSeparator[j] && self->current; j++)
    {
        if (internalThousandSeparator[j] != self->current)
            break;

        self->InStream(self, NULL);
    }
    if (internalThousandSeparator[j])
        break; /* Mismatch */
    else
        continue; /* Match */
}
else
    break;

    number *= base;
    number += digit;
    gotNumber = TRUE; /* we need at least one digit */

    self->InStream(self, NULL);
}

/* Was anything read at all? */
if (!gotNumber)
    return FALSE;

if (target)
    *target = (isNegative) ? -((trio_intmax_t)number) : number;
return TRUE;
}

/*****
* TrioReadChar
*/
TRIO_PRIVATE int
TrioReadChar
TRIO_ARGS4((self, target, flags, width),
    trio_class_t *self,
    char *target,
    trio_flags_t flags,
    int width)
{

```

```

int i;
char ch;
trio_uintmax_t number;

assert(VALID(self));
assert(VALID(self->InStream));

for (i = 0;
     (self->current != EOF) && (i < width);
     i++)
{
    ch = (char)self->current;
    self->InStream(self, NULL);
    if ((flags & FLAGS_ALTERNATIVE) && (ch == CHAR_BACKSLASH))
    {
        switch (self->current)
        {
            case '\\': ch = '\\'; break;
            case 'a': ch = '\007'; break;
            case 'b': ch = '\b'; break;
            case 'f': ch = '\f'; break;
            case 'n': ch = '\n'; break;
            case 'r': ch = '\r'; break;
            case 't': ch = '\t'; break;
            case 'v': ch = '\v'; break;
            default:
                if (isdigit(self->current))
                {
                    /* Read octal number */
                    if (!TrioReadNumber(self, &number, 0, 3, BASE_OCTAL))
                        return 0;
                    ch = (char)number;
                }
                else if (trio_to_upper(self->current) == 'X')
                {
                    /* Read hexadecimal number */
                    self->InStream(self, NULL);
                    if (!TrioReadNumber(self, &number, 0, 2, BASE_HEX))
                        return 0;
                    ch = (char)number;
                }
                else
                {
                    ch = (char)self->current;
                }
                break;
            }
        }
    }
}

```

```

    if (target)
target[i] = ch;
    }
return i + 1;
}

/*****
* TrioReadString
*/
TRIO_PRIVATE BOOLEAN_T
TrioReadString
TRIO_ARGS4((self, target, flags, width),
    trio_class_t *self,
    char *target,
    trio_flags_t flags,
    int width)
{
int i;

assert(VALID(self));
assert(VALID(self->InStream));

TrioSkipWhitespaces(self);

/*
* Continue until end of string is reached, a whitespace is encountered,
* or width is exceeded
*/
for (i = 0;
    ((width == NO_WIDTH) || (i < width)) &&
    (!(self->current == EOF) || isspace(self->current)));
    i++)
    {
    if (TrioReadChar(self, (target ? &target[i] : 0), flags, 1) == 0)
break; /* for */
    }
if (target)
    target[i] = NIL;
return TRUE;
}

/*****
* TrioReadWideChar
*/
#if TRIO_WIDECHAR
TRIO_PRIVATE int
TrioReadWideChar

```

```

TRIO_ARGS4((self, target, flags, width),
    trio_class_t *self,
    trio_wchar_t *target,
    trio_flags_t flags,
    int width)
{
    int i;
    int j;
    int size;
    int amount = 0;
    trio_wchar_t wch;
    char buffer[MB_LEN_MAX + 1];

    assert(VALID(self));
    assert(VALID(self->InStream));

    for (i = 0;
        (self->current != EOF) && (i < width);
        i++)
    {
        if (isascii(self->current))
        {
            if (TrioReadChar(self, buffer, flags, 1) == 0)
                return 0;
            buffer[i] = NIL;
        }
        else
        {
            /*
             * Collect a multibyte character, by enlarging buffer until
             * it contains a fully legal multibyte character, or the
             * buffer is full.
             */
            j = 0;
            do
            {
                buffer[j++] = (char)self->current;
                buffer[j] = NIL;
                self->InStream(self, NULL);
            }
            while ((j < (int)sizeof(buffer)) && (mblen(buffer, (size_t)j) != j));
        }
        if (target)
        {
            size = mbtowc(&wch, buffer, sizeof(buffer));
            if (size > 0)
                target[i] = wch;
        }
    }
}

```

```

    amount += size;
    self->InStream(self, NULL);
}
return amount;
}
#endif /* TRIO_WIDECHAR */

/*****
* TrioReadWideString
*/
#if TRIO_WIDECHAR
TRIO_PRIVATE BOOLEAN_T
TrioReadWideString
TRIO_ARGS4((self, target, flags, width),
    trio_class_t *self,
    trio_wchar_t *target,
    trio_flags_t flags,
    int width)
{
    int i;
    int size;

    assert(VALID(self));
    assert(VALID(self->InStream));

    TrioSkipWhitespaces(self);

#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)
    (void)mblen(NULL, 0);
#endif

    /*
    * Continue until end of string is reached, a whitespace is encountered,
    * or width is exceeded
    */
    for (i = 0;
        ((width == NO_WIDTH) || (i < width)) &&
        (!(self->current == EOF) || isspace(self->current)));
    {
        size = TrioReadWideChar(self, &target[i], flags, 1);
        if (size == 0)
            break; /* for */

        i += size;
    }
    if (target)
        target[i] = WCONST('\0');

```

```

return TRUE;
}
#endif /* TRIO_WIDECHAR */

/*****
* TrioReadGroup
*
* FIXME: characterclass does not work with multibyte characters
*/
TRIO_PRIVATE BOOLEAN_T
TrioReadGroup
TRIO_ARGS5((self, target, characterclass, flags, width),
    trio_class_t *self,
    char *target,
    int *characterclass,
    trio_flags_t flags,
    int width)
{
    int ch;
    int i;

    assert(VALID(self));
    assert(VALID(self->InStream));

    ch = self->current;
    for (i = 0;
        ((width == NO_WIDTH) || (i < width)) &&
        (!(ch == EOF) ||
        (((flags & FLAGS_EXCLUDE) != 0) ^ (characterclass[ch] == 0))));
        i++)
    {
        if (target)
            target[i] = (char)ch;
        self->InStream(self, &ch);
    }

    if (target)
        target[i] = NIL;
    return TRUE;
}

/*****
* TrioReadDouble
*
* FIXME:
* add long double
* handle base
*/

```

```

TRIO_PRIVATE BOOLEAN_T
TrioReadDouble
TRIO_ARGS4((self, target, flags, width),
    trio_class_t *self,
    trio_pointer_t target,
    trio_flags_t flags,
    int width)
{
    int ch;
    char doubleString[512];
    int index = 0;
    int start;
    int j;
    BOOLEAN_T isHex = FALSE;

    doubleString[0] = 0;

    if ((width == NO_WIDTH) || (width > (int)sizeof(doubleString) - 1))
        width = sizeof(doubleString) - 1;

    TrioSkipWhitespaces(self);

    /*
     * Read entire double number from stream. trio_to_double requires
     * a string as input, but InStream can be anything, so we have to
     * collect all characters.
     */
    ch = self->current;
    if ((ch == '+') || (ch == '-'))
    {
        doubleString[index++] = (char)ch;
        self->InStream(self, &ch);
        width--;
    }

    start = index;
    switch (ch)
    {
        case 'n':
        case 'N':
            /* Not-a-number */
            if (index != 0)
                break;
            /* FALLTHROUGH */
        case 'i':
        case 'I':
            /* Infinity */
            while (isalpha(ch) && (index - start < width))

```

```

{
doubleString[index++] = (char)ch;
self->InStream(self, &ch);
}
doubleString[index] = NIL;

/* Case insensitive string comparison */
if (trio_equal(&doubleString[start], INFINITE_UPPER) ||
trio_equal(&doubleString[start], LONG_INFINITE_UPPER))
{
if (flags & FLAGS_LONGDOUBLE)
{
if ((start == 1) && (doubleString[0] == '-'))
{
*((trio_long_double_t *)target) = trio_ninf();
}
else
{
*((trio_long_double_t *)target) = trio_pinf();
}
}
else
{
if ((start == 1) && (doubleString[0] == '-'))
{
*((double *)target) = trio_ninf();
}
else
{
*((double *)target) = trio_pinf();
}
}
}
return TRUE;
}
if (trio_equal(doubleString, NAN_UPPER))
{
/* NaN must not have a preceeding + nor - */
if (flags & FLAGS_LONGDOUBLE)
{
*((trio_long_double_t *)target) = trio_nan();
}
else
{
*((double *)target) = trio_nan();
}
}
return TRUE;
}
return FALSE;

```

```

case '0':
    doubleString[index++] = (char)ch;
    self->InStream(self, &ch);
    if (trio_to_upper(ch) == 'X')
    {
        isHex = TRUE;
        doubleString[index++] = (char)ch;
        self->InStream(self, &ch);
    }
    break;

default:
    break;
}

while ((ch != EOF) && (index - start < width))
{
    /* Integer part */
    if (isHex ? isxdigit(ch) : isdigit(ch))
    {
        doubleString[index++] = (char)ch;
        self->InStream(self, &ch);
    }
    else if (flags & FLAGS_QUOTE)
    {
        /* Compare with thousands separator */
        for (j = 0; internalThousandSeparator[j] && self->current; j++)
        {
            if (internalThousandSeparator[j] != self->current)
                break;
            self->InStream(self, &ch);
        }
        if (internalThousandSeparator[j])
            break; /* Mismatch */
        else
            continue; /* Match */
    }
    else
        break; /* while */
}
if (ch == '.')
{
    /* Decimal part */
    doubleString[index++] = (char)ch;
    self->InStream(self, &ch);
    while ((isHex ? isxdigit(ch) : isdigit(ch)) &&

```

```

        (index - start < width))
    {
        doubleString[index++] = (char)ch;
        self->InStream(self, &ch);
    }
    if (isHex ? (trio_to_upper(ch) == 'P') : (trio_to_upper(ch) == 'E'))
    {
        /* Exponent */
        doubleString[index++] = (char)ch;
        self->InStream(self, &ch);
        if ((ch == '+') || (ch == '-'))
        {
            doubleString[index++] = (char)ch;
            self->InStream(self, &ch);
        }
        while (isdigit(ch) && (index - start < width))
        {
            doubleString[index++] = (char)ch;
            self->InStream(self, &ch);
        }
    }
}

if ((index == start) || (*doubleString == NIL))
    return FALSE;

doubleString[index] = 0;

if (flags & FLAGS_LONGDOUBLE)
{
    *((trio_long_double_t *)target) = trio_to_long_double(doubleString, NULL);
}
else
{
    *((double *)target) = trio_to_double(doubleString, NULL);
}
return TRUE;
}

/*****
* TrioReadPointer
*/
TRIO_PRIVATE BOOLEAN_T
TrioReadPointer
TRIO_ARGS3((self, target, flags),
    trio_class_t *self,
    trio_pointer_t *target,
    trio_flags_t flags)

```

```

{
trio_uintmax_t number;
char buffer[sizeof(internalNullString)];

flags |= (FLAGS_UNSIGNED | FLAGS_ALTERNATIVE | FLAGS_NILPADDING);

if (TrioReadNumber(self,
    &number,
    flags,
    POINTER_WIDTH,
    BASE_HEX))
{
/*
 * The strange assignment of number is a workaround for a compiler
 * warning
 */
if (target)
*target = (char *)0 + number;
return TRUE;
}
else if (TrioReadString(self,
    (flags & FLAGS_IGNORE)
    ? NULL
    : buffer,
    0,
    sizeof(internalNullString) - 1))
{
if (trio_equal_case(buffer, internalNullString))
{
if (target)
*target = NULL;
return TRUE;
}
}
return FALSE;
}

/*****
* TrioScanProcess
*/
TRIO_PRIVATE int
TrioScanProcess
TRIO_ARGS3((data, format, parameters),
    trio_class_t *data,
    TRIO_CONST char *format,
    trio_parameter_t *parameters)
{
#if defined(TRIO_COMPILER_SUPPORTS_MULTIBYTE)

```

```

int charlen;
int cnt;
#endif
int assignment;
int ch;
int index; /* Index of format string */
int i; /* Index of current parameter */
trio_flags_t flags;
int width;
int base;
trio_pointer_t pointer;

assignment = 0;
i = 0;
index = 0;
data->InStream(data, &ch);

#ifdef TRIO_COMPILER_SUPPORTS_MULTIBYTE
(void)mblen(NULL, 0);
#endif

while (format[index])
{
#ifdef TRIO_COMPILER_SUPPORTS_MULTIBYTE
if (! isascii(format[index]))
{
charlen = mblen(&format[index], MB_LEN_MAX);
if (charlen != -1)
{
/* Compare multibyte characters in format string */
for (cnt = 0; cnt < charlen - 1; cnt++)
{
if (ch != format[index + cnt])
{
return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
}
}
data->InStream(data, &ch);
}
continue; /* while characters left in formatting string */
}
}
#endif /* TRIO_COMPILER_SUPPORTS_MULTIBYTE */

if ((EOF == ch) && (parameters[i].type != FORMAT_COUNT))
{
return (assignment > 0) ? assignment : EOF;
}
}

```

```

    if (CHAR_IDENTIFIER == format[index])
    {
    if (CHAR_IDENTIFIER == format[index + 1])
        {
        /* Two % in format matches one % in input stream */
        if (CHAR_IDENTIFIER == ch)
        {
        data->InStream(data, &ch);
        index += 2;
        continue; /* while format chars left */
        }
        else
        return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
        }

    /* Skip the parameter entries */
    while (parameters[i].type == FORMAT_PARAMETER)
        i++;

    flags = parameters[i].flags;
    /* Find width */
    width = parameters[i].width;
    if (flags & FLAGS_WIDTH_PARAMETER)
        {
        /* Get width from parameter list */
        width = (int)parameters[width].data.number.as_signed;
        }
    /* Find base */
    base = parameters[i].base;
    if (flags & FLAGS_BASE_PARAMETER)
        {
        /* Get base from parameter list */
        base = (int)parameters[base].data.number.as_signed;
        }

    switch (parameters[i].type)
        {
        case FORMAT_INT:
            {
            trio_uintmax_t number;

            if (0 == base)
                base = BASE_DECIMAL;

            if (!TrioReadNumber(data,
                &number,
                flags,
                width,

```

```

    base))
return assignment;

if (!(flags & FLAGS_IGNORE))
{
    assignment++;

    pointer = parameters[i].data.pointer;
#if defined(QUALIFIER_SIZE_T) || defined(QUALIFIER_SIZE_T_UPPER)
    if (flags & FLAGS_SIZE_T)
        *(size_t *)pointer = (size_t)number;
    else
#endif
#if defined(QUALIFIER_PTRDIFF_T)
    if (flags & FLAGS_PTRDIFF_T)
        *(ptrdiff_t *)pointer = (ptrdiff_t)number;
    else
#endif
#if defined(QUALIFIER_INTMAX_T)
    if (flags & FLAGS_INTMAX_T)
        *(trio_intmax_t *)pointer = (trio_intmax_t)number;
    else
#endif
#if defined(QUALIFIER_QUAD)
    if (flags & FLAGS_QUAD)
        *(trio_ulonglong_t *)pointer = (trio_ulonglong_t)number;
    else if (flags & FLAGS_LONG)
        *(long int *)pointer = (long int)number;
    else if (flags & FLAGS_SHORT)
        *(short int *)pointer = (short int)number;
    else
        *(int *)pointer = (int)number;
}
}
break; /* FORMAT_INT */

case FORMAT_STRING:
#if TRIO_WIDECHAR
    if (flags & FLAGS_WIDECHAR)
    {
        if (!TrioReadWideString(data,
            (flags & FLAGS_IGNORE)
            ? NULL
            : parameters[i].data.wstring,
            flags,
            width))
            return assignment;
    }
}
else

```

```

#endif
{
    if (!TrioReadString(data,
        (flags & FLAGS_IGNORE)
        ? NULL
        : parameters[i].data.string,
        flags,
        width))
        return assignment;
}
if (!(flags & FLAGS_IGNORE))
assignment++;
break; /* FORMAT_STRING */

case FORMAT_DOUBLE:
{
trio_pointer_t pointer;

if (flags & FLAGS_IGNORE)
{
    pointer = NULL;
}
else
{
    pointer = (flags & FLAGS_LONGDOUBLE)
        ? (trio_pointer_t)parameters[i].data.longdoublePointer
        : (trio_pointer_t)parameters[i].data.doublePointer;
}
if (!TrioReadDouble(data, pointer, flags, width))
{
    return assignment;
}
if (!(flags & FLAGS_IGNORE))
{
    assignment++;
}
break; /* FORMAT_DOUBLE */
}
case FORMAT_GROUP:
{
int characterclass[MAX_CHARACTER_CLASS + 1];
int rc;

/* Skip over modifiers */
while (format[index] != SPECIFIER_GROUP)
{
    index++;
}

```

```

/* Skip over group specifier */
index++;

memset(characterclass, 0, sizeof(characterclass));
rc = TrioGetCharacterClass(format,
    &index,
    &flags,
    characterclass);
if (rc < 0)
    return rc;

if (!TrioReadGroup(data,
    (flags & FLAGS_IGNORE)
    ? NULL
    : parameters[i].data.string,
    characterclass,
    flags,
    parameters[i].width))
    return assignment;
if (!(flags & FLAGS_IGNORE))
    assignment++;
    }
    break; /* FORMAT_GROUP */

case FORMAT_COUNT:
    pointer = parameters[i].data.pointer;
    if (NULL != pointer)
    {
        int count = data->committed;
        if (ch != EOF)
            count--; /* a character is read, but is not consumed yet */
#ifdef QUALIFIER_SIZE_T || defined(QUALIFIER_SIZE_T_UPPER)
        if (flags & FLAGS_SIZE_T)
            *(size_t *)pointer = (size_t)count;
        else
#endif
#ifdef QUALIFIER_PTRDIFF_T
        if (flags & FLAGS_PTRDIFF_T)
            *(ptrdiff_t *)pointer = (ptrdiff_t)count;
        else
#endif
#ifdef QUALIFIER_INTMAX_T
        if (flags & FLAGS_INTMAX_T)
            *(trio_intmax_t *)pointer = (trio_intmax_t)count;
        else
#endif
        if (flags & FLAGS_QUAD)
            {

```

```

        *(trio_ulonglong_t *)pointer = (trio_ulonglong_t)count;
    }
else if (flags & FLAGS_LONG)
    {
        *(long int *)pointer = (long int)count;
    }
else if (flags & FLAGS_SHORT)
    {
        *(short int *)pointer = (short int)count;
    }
else
    {
        *(int *)pointer = (int)count;
    }
}
break; /* FORMAT_COUNT */

case FORMAT_CHAR:
#if TRIO_WIDECHAR
    if (flags & FLAGS_WIDECHAR)
    {
        if (TrioReadWideChar(data,
            (flags & FLAGS_IGNORE)
            ? NULL
            : parameters[i].data.wstring,
            flags,
            (width == NO_WIDTH) ? 1 : width) == 0)
            return assignment;
    }
    else
#endif
    {
        if (TrioReadChar(data,
            (flags & FLAGS_IGNORE)
            ? NULL
            : parameters[i].data.string,
            flags,
            (width == NO_WIDTH) ? 1 : width) == 0)
            return assignment;
    }
    if (!(flags & FLAGS_IGNORE))
assignment++;
    break; /* FORMAT_CHAR */

case FORMAT_POINTER:
    if (!TrioReadPointer(data,
        (flags & FLAGS_IGNORE)
        ? NULL

```

```

        : (trio_pointer_t *)parameters[i].data.pointer,
        flags))
return assignment;
    if (!(flags & FLAGS_IGNORE))
assignment++;
    break; /* FORMAT_POINTER */

case FORMAT_PARAMETER:
    break; /* FORMAT_PARAMETER */

default:
    return TRIO_ERROR_RETURN(TRIO_EINVAL, index);
}
ch = data->current;
index = parameters[i].indexAfterSpecifier;
i++;
}
    else /* Not an % identifier */
{
if (isspace((int)format[index]))
    {
        /* Whitespaces may match any amount of whitespaces */
        ch = TrioSkipWhitespaces(data);
    }
else if (ch == format[index])
    {
        data->InStream(data, &ch);
    }
else
    return assignment;

index++;
}
}
return assignment;
}

/*****
* TrioScan
*/
TRIO_PRIVATE int
TrioScan
TRIO_ARGS6((source, sourceSize, InStream, format, arglist, argarray),
    trio_pointer_t source,
    size_t sourceSize,
    void (*InStream) TRIO_PROTO((trio_class_t *, int *)),
    TRIO_CONST char *format,
    va_list *arglist,

```

```

    trio_pointer_t *argarray)
{
    int status;
    trio_parameter_t parameters[MAX_PARAMETERS];
    trio_class_t data;

    assert(VALID(InStream));
    assert(VALID(format));

    memset(&data, 0, sizeof(data));
    data.InStream = InStream;
    data.location = (trio_pointer_t)source;
    data.max = sourceSize;
    data.error = 0;

#ifdef USE_LOCALE
    if (NULL == internalLocaleValues)
    {
        TrioSetLocale();
    }
#endif

    status = TrioParse(TYPE_SCAN, format, parameters, arglist, argarray);
    if (status < 0)
        return status;

    status = TrioScanProcess(&data, format, parameters);
    if (data.error != 0)
    {
        status = data.error;
    }
    return status;
}

/*****
* TrioInStreamFile
*/
TRIO_PRIVATE void
TrioInStreamFile
TRIO_ARGS2((self, intPointer),
    trio_class_t *self,
    int *intPointer)
{
    FILE *file = (FILE *)self->location;

    assert(VALID(self));
    assert(VALID(file));

```

```

self->current = fgetc(file);
if (self->current == EOF)
{
    self->error = (ferror(file))
? TRIO_ERROR_RETURN(TRIO_ERRNO, 0)
: TRIO_ERROR_RETURN(TRIO_EOF, 0);
}
else
{
    self->processed++;
    self->committed++;
}

if (VALID(intPointer))
{
    *intPointer = self->current;
}
}

/*****
* TrioInStreamFileDescriptor
*/
TRIO_PRIVATE void
TrioInStreamFileDescriptor
TRIO_ARGS2((self, intPointer),
    trio_class_t *self,
    int *intPointer)
{
    int fd = *((int *)self->location);
    int size;
    unsigned char input;

    assert(VALID(self));

    size = read(fd, &input, sizeof(char));
    if (size == -1)
    {
        self->error = TRIO_ERROR_RETURN(TRIO_ERRNO, 0);
        self->current = EOF;
    }
    else
    {
        self->current = (size == 0) ? EOF : input;
    }
    if (self->current != EOF)
    {
        self->committed++;
        self->processed++;
    }
}

```

```

    }

if (VALID(intPointer))
{
    *intPointer = self->current;
}
}

/*****
* TrioInStreamCustom
*/
TRIO_PRIVATE void
TrioInStreamCustom
TRIO_ARGS2((self, intPointer),
    trio_class_t *self,
    int *intPointer)
{
    trio_custom_t *data;

    assert(VALID(self));
    assert(VALID(self->location));

    data = (trio_custom_t *)self->location;

    self->current = (data->stream.in == NULL)
        ? NIL
        : (data->stream.in)(data->closure);

    if (self->current == NIL)
    {
        self->current = EOF;
    }
    else
    {
        self->processed++;
        self->committed++;
    }

    if (VALID(intPointer))
    {
        *intPointer = self->current;
    }
}

/*****
* TrioInStreamString
*/
TRIO_PRIVATE void

```

```

TrioInStreamString
TRIO_ARGS2((self, intPointer),
    trio_class_t *self,
    int *intPointer)
{
    unsigned char **buffer;

    assert(VALID(self));
    assert(VALID(self->location));

    buffer = (unsigned char **)self->location;
    self->current = (*buffer)[0];
    if (self->current == NIL)
    {
        self->current = EOF;
    }
    else
    {
        (*buffer)++;
        self->processed++;
        self->committed++;
    }

    if (VALID(intPointer))
    {
        *intPointer = self->current;
    }
}

/*****
*
* Formatted scanning functions
*
*****/

#if defined(TRIO_DOCUMENTATION)
# include "doc/doc_scanf.h"
#endif
/** @addtogroup Scanf
    @ {
*/

/*****
* scanf
*/

/**
    Scan characters from standard input stream.

```

```

@param format Formatting string.
@param ... Arguments.
@return Number of scanned characters.
*/
TRIO_PUBLIC int
trio_scanf
TRIO_VARGS2((format, va_alist),
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioScan((trio_pointer_t)stdin, 0,
        TrioInStreamFile,
        format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

TRIO_PUBLIC int
trio_vscanf
TRIO_ARGS2((format, args),
    TRIO_CONST char *format,
    va_list args)
{
    assert(VALID(format));

    return TrioScan((trio_pointer_t)stdin, 0,
        TrioInStreamFile,
        format, &args, NULL);
}

TRIO_PUBLIC int
trio_scanfv
TRIO_ARGS2((format, args),
    TRIO_CONST char *format,
    trio_pointer_t *args)
{
    assert(VALID(format));

    return TrioScan((trio_pointer_t)stdin, 0,
        TrioInStreamFile,
        format, NULL, args);
}

```

```

}

/*****
* fscanf
*/
TRIO_PUBLIC int
trio_fscanf
TRIO_VARGS3((file, format, va_list),
    FILE *file,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(file));
    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioScan((trio_pointer_t)file, 0,
        TrioInStreamFile,
        format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

TRIO_PUBLIC int
trio_vfscanf
TRIO_ARGS3((file, format, args),
    FILE *file,
    TRIO_CONST char *format,
    va_list args)
{
    assert(VALID(file));
    assert(VALID(format));

    return TrioScan((trio_pointer_t)file, 0,
        TrioInStreamFile,
        format, &args, NULL);
}

TRIO_PUBLIC int
trio_fscanfv
TRIO_ARGS3((file, format, args),
    FILE *file,
    TRIO_CONST char *format,
    trio_pointer_t *args)
{

```

```

assert(VALID(file));
assert(VALID(format));

return TrioScan((trio_pointer_t)file, 0,
    TrioInStreamFile,
    format, NULL, args);
}

/*****
 * dscanf
 */
TRIO_PUBLIC int
trio_dscanf
TRIO_VARGS3((fd, format, va_alist),
    int fd,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioScan((trio_pointer_t)&fd, 0,
        TrioInStreamFileDescriptor,
        format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

TRIO_PUBLIC int
trio_vdscanf
TRIO_ARGS3((fd, format, args),
    int fd,
    TRIO_CONST char *format,
    va_list args)
{
    assert(VALID(format));

    return TrioScan((trio_pointer_t)&fd, 0,
        TrioInStreamFileDescriptor,
        format, &args, NULL);
}

TRIO_PUBLIC int
trio_dscanfv
TRIO_ARGS3((fd, format, args),

```

```

    int fd,
    TRIO_CONST char *format,
    trio_pointer_t *args)
{
    assert(VALID(format));

    return TrioScan((trio_pointer_t)&fd, 0,
        TrioInStreamFileDescriptor,
        format, NULL, args);
}

/*****
* cscanf
*/
TRIO_PUBLIC int
trio_cscanf
TRIO_VARGS4((stream, closure, format, va_alist),
    trio_instream_t stream,
    trio_pointer_t closure,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;
    trio_custom_t data;

    assert(VALID(stream));
    assert(VALID(format));

    TRIO_VA_START(args, format);
    data.stream.in = stream;
    data.closure = closure;
    status = TrioScan(&data, 0, TrioInStreamCustom, format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

TRIO_PUBLIC int
trio_vcscanf
TRIO_ARGS4((stream, closure, format, args),
    trio_instream_t stream,
    trio_pointer_t closure,
    TRIO_CONST char *format,
    va_list args)
{
    trio_custom_t data;

    assert(VALID(stream));

```

```

assert(VALID(format));

data.stream.in = stream;
data.closure = closure;
return TrioScan(&data, 0, TrioInStreamCustom, format, &args, NULL);
}

```

```

TRIO_PUBLIC int
trio_cscanfv
TRIO_ARGS4((stream, closure, format, args),
    trio_instream_t stream,
    trio_pointer_t closure,
    TRIO_CONST char *format,
    trio_pointer_t *args)
{
    trio_custom_t data;

    assert(VALID(stream));
    assert(VALID(format));

    data.stream.in = stream;
    data.closure = closure;
    return TrioScan(&data, 0, TrioInStreamCustom, format, NULL, args);
}

```

```

/*****

```

```

* sscanf
*/

```

```

TRIO_PUBLIC int
trio_sscanf
TRIO_VARGS3((buffer, format, va_alist),
    TRIO_CONST char *buffer,
    TRIO_CONST char *format,
    TRIO_VA_DECL)
{
    int status;
    va_list args;

    assert(VALID(buffer));
    assert(VALID(format));

    TRIO_VA_START(args, format);
    status = TrioScan((trio_pointer_t)&buffer, 0,
        TrioInStreamString,
        format, &args, NULL);
    TRIO_VA_END(args);
    return status;
}

```

```

TRIO_PUBLIC int
trio_vscanf
TRIO_ARGS3((buffer, format, args),
    TRIO_CONST char *buffer,
    TRIO_CONST char *format,
    va_list args)
{
    assert(VALID(buffer));
    assert(VALID(format));

    return TrioScan((trio_pointer_t)&buffer, 0,
        TrioInStreamString,
        format, &args, NULL);
}

```

```

TRIO_PUBLIC int
trio_sscanfv
TRIO_ARGS3((buffer, format, args),
    TRIO_CONST char *buffer,
    TRIO_CONST char *format,
    trio_pointer_t *args)
{
    assert(VALID(buffer));
    assert(VALID(format));

    return TrioScan((trio_pointer_t)&buffer, 0,
        TrioInStreamString,
        format, NULL, args);
}

```

```

/** @ } End of Scanf documentation module */

```

```

/*****

```

```

* trio_strerror
*/
TRIO_PUBLIC TRIO_CONST char *
trio_strerror
TRIO_ARGS1((errorcode),
    int errorcode)
{
    /* Textual versions of the error codes */
    switch (TRIO_ERROR_CODE(errorcode))
    {
        case TRIO_EOF:
            return "End of file";
        case TRIO_EINVAL:
            return "Invalid argument";
    }
}

```

```

case TRIO_ETOOMANY:
    return "Too many arguments";
case TRIO_EDBLREF:
    return "Double reference";
case TRIO_EGAP:
    return "Reference gap";
case TRIO_ENOMEM:
    return "Out of memory";
case TRIO_ERANGE:
    return "Invalid range";
case TRIO_ECUSTOM:
    return "Custom error";
default:
    return "Unknown";
}
}

```

1.35 Net SNMP - net-snmp 5.6.1

1.35.1 Available under license :

Various copyrights apply to this package, listed in various separate parts below. Please make sure that you read all the parts.

---- Part 1: CMU/UCD copyright notice: (BSD like) ----

Copyright 1989, 1991, 1992 by Carnegie Mellon University

Derivative Work - 1996, 1998-2000

Copyright 1996, 1998-2000 The Regents of the University of California

All Rights Reserved

Permission to use, copy, modify and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appears in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of CMU and The Regents of the University of California not be used in advertising or publicity pertaining to distribution of the software without specific written permission.

CMU AND THE REGENTS OF THE UNIVERSITY OF CALIFORNIA DISCLAIM ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL CMU OR THE REGENTS OF THE UNIVERSITY OF CALIFORNIA BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING

FROM THE 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.

---- Part 2: Networks Associates Technology, Inc copyright notice (BSD) ----

Copyright (c) 2001-2003, Networks Associates Technology, 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 Networks Associates Technology, 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.

---- Part 3: Cambridge Broadband Ltd. copyright notice (BSD) ----

Portions of this code are copyright (c) 2001-2003, Cambridge Broadband Ltd.
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.

* The name of Cambridge Broadband Ltd. 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 HOLDER "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 HOLDER 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.

---- Part 4: Sun Microsystems, Inc. copyright notice (BSD) ----

Copyright 2003 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

Use is subject to license terms below.

This distribution may include materials developed by third parties.

Sun, Sun Microsystems, the Sun logo and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

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 Sun Microsystems, 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.

---- Part 5: Sparta, Inc copyright notice (BSD) ----

Copyright (c) 2003-2010, Sparta, 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 Sparta, 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.

---- Part 6: Cisco/BUPTNIC copyright notice (BSD) ----

Copyright (c) 2004, Cisco, Inc and Information Network
Center of Beijing University of Posts and Telecommunications.
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 Cisco, Inc, Beijing University of Posts and Telecommunications, nor the names of their 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.

---- Part 7: Fabasoft R&D Software GmbH & Co KG copyright notice (BSD) ----

Copyright (c) Fabasoft R&D Software GmbH & Co KG, 2003
oss@fabasoft.com
Author: Bernhard Penz <bernhard.penz@fabasoft.com>

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.
- * The name of Fabasoft R&D Software GmbH & Co KG or any of its subsidiaries, brand or product names 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 HOLDER "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 HOLDER 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.

---- Part 8: Apple Inc. copyright notice (BSD) ----

Copyright (c) 2007 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 Apple Inc. ("Apple") 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 APPLE AND ITS 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 APPLE 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.

---- Part 9: ScienceLogic, LLC copyright notice (BSD) ----

Copyright (c) 2009, ScienceLogic, 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 ScienceLogic, 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 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.

1.36 OpenForecast 0.4

1.36.1 Available under license :

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!  
//  
// OpenForecast - open source, general-purpose forecasting package.  
// Copyright (C) 2002-2003 Steven R. Gould  
//  
// 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  
//
```

1.37 openssl 0.9.8y :9.0.27.20130304

1.37.1 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).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

1.37.2 Available under license :

LICENSE ISSUES

=====

The OpenSSL toolkit stays under a dual 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) 1998-2011 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 rouines 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.]
*/

Copyright (C) 1995-1997 Eric Young (eay@cryptsoft.com)

All rights reserved.

This package is an Blowfish implementation written
by Eric Young (eay@cryptsoft.com).

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.

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 (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.
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 aheared 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.

1.38 openwsman-core-1.5.9 1.5.9

1.38.1 Available under license :

Copyright (C) 2004-2006 Intel Corp. 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 Intel Corp. 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 Intel Corp. OR THE 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) 2000 by Nicolas Devillard.

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.

LibU - Copyright (c) 2005, 2006 by KoanLogic srl

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 KoanLogic srl 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) 2004-2005 Sergey Lyubka <valenok@gmail.com>

*

* 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.

*/

1.39 PAM Radius 1.3.17

1.39.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 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.

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

1.40 PAM Tacplus 1.3.2

1.40.1 Available under license :

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 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.

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

Appendix: 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., 675 Mass Ave, Cambridge, MA 02139, 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.

1.41 pam_radius 1.3.17

1.41.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 2, June 1991

Copyright (C) 1989, 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.

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

1.42 perl 5.12.3

1.42.1 Available under license :

The "Artistic License"

Preamble

The intent of this document is to state the conditions under which a Package may be copied, such that the Copyright Holder maintains some semblance of artistic control over the development of the package, while giving the users of the package the right to use and distribute the Package in a more-or-less customary fashion, plus the right to make reasonable modifications.

Definitions:

"Package" refers to the collection of files distributed by the Copyright Holder, and derivatives of that collection of files created through textual modification.

"Standard Version" refers to such a Package if it has not been

modified, or has been modified in accordance with the wishes of the Copyright Holder as specified below.

"Copyright Holder" is whoever is named in the copyright or copyrights for the package.

"You" is you, if you're thinking about copying or distributing this Package.

"Reasonable copying fee" is whatever you can justify on the basis of media cost, duplication charges, time of people involved, and so on. (You will not be required to justify it to the Copyright Holder, but only to the computing community at large as a market that must bear the fee.)

"Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1. You may make and give away verbatim copies of the source form of the Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.
2. You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.
3. You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:
 - a) place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as uunet.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.
 - b) use the modified Package only within your corporation or organization.
 - c) rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it differs from the Standard Version.
 - d) make other distribution arrangements with the Copyright Holder.

4. You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:
 - a) distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.
 - b) accompany the distribution with the machine-readable source of the Package with your modifications.
 - c) give non-standard executables non-standard names, and clearly document the differences in manual pages (or equivalent), together with instructions on where to get the Standard Version.
 - d) make other distribution arrangements with the Copyright Holder.
5. You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided that you do not advertise this Package as a product of your own. You may embed this Package's interpreter within an executable of yours (by linking); this shall be construed as a mere form of aggregation, provided that the complete Standard Version of the interpreter is so embedded.
6. The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whoever generated them, and may be sold commercially, and may be aggregated with this Package. If such scripts or library files are aggregated with this Package via the so-called "undump" or "unexec" methods of producing a binary executable image, then distribution of such an image shall neither be construed as a distribution of this Package nor shall it fall under the restrictions of Paragraphs 3 and 4, provided that you do not represent such an executable image as a Standard Version of this Package.
7. C subroutines (or comparably compiled subroutines in other languages) supplied by you and linked into this Package in order to emulate subroutines and variables of the language defined by this Package shall not be considered part of this Package, but are the equivalent of input as in Paragraph 6, provided these subroutines do not change the language in any way that would cause it to fail the regression tests for the language.
8. Aggregation of this Package with a commercial distribution is always

permitted provided that the use of this Package is embedded; that is, when no overt attempt is made to make this Package's interfaces visible to the end user of the commercial distribution. Such use shall not be construed as a distribution of this Package.

9. The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.

10. THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

1.43 phantomjs v1

1.43.1 Available under license :

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1996 - 2011, Daniel Stenberg, <daniel@haxx.se>.

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.

Copyright (c) 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.

A function `gettimeofday` in `utilities.cc` is based on

<http://www.google.com/codesearch/p?hl=en#dR3YEbitojA/COPYING&q=GetSystemTimeAsFileTime%20license:bsd>

The license of this code is:

Copyright (c) 2003-2008, Jouni Malinen <j@w1.fi> and contributors
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(s) of the above-listed copyright holder(s) 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 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.

Copyright (c) 2009 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) 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) 2009-2012 Jeremy Ashkenas

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.

HarfBuzz was previously licensed under different licenses. This was changed in January 2008. If you need to relicense your old copies, consult the announcement of the license change on the internet. Other than that, each copy of HarfBuzz is licensed under the COPYING file included with it. The actual license follows:

Permission is hereby granted, without written agreement and without license or royalty fees, to use, copy, modify, and distribute this software and its documentation for any purpose, provided that the above copyright notice and the following two paragraphs appear in all copies of this software.

IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF THE COPYRIGHT HOLDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

THE COPYRIGHT HOLDER SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED HEREUNDER IS ON AN "AS IS" BASIS, AND THE COPYRIGHT HOLDER HAS NO OBLIGATION TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.

This copy of the libpng notices is provided for your convenience. In case of any discrepancy between this copy and the notices in the file png.h that is included in the libpng distribution, the latter shall prevail.

COPYRIGHT NOTICE, DISCLAIMER, and LICENSE:

If you modify libpng you may insert additional notices immediately following this sentence.

This code is released under the libpng license.

libpng versions 1.2.6, August 15, 2004, through 1.5.10, March 29, 2012, are Copyright (c) 2004, 2006-2011 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-1.2.5 with the following individual added to the list of Contributing Authors

Cosmin Truta

libpng versions 1.0.7, July 1, 2000, through 1.2.5 - October 3, 2002, are Copyright (c) 2000-2002 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-1.0.6 with the following individuals added to the list of Contributing Authors

Simon-Pierre Cadieux

Eric S. Raymond

Gilles Vollant

and with the following additions to the disclaimer:

There is no warranty against interference with your enjoyment of the library or against infringement. There is no warranty that our efforts or the library will fulfill any of your particular purposes or needs. This library is provided with all faults, and the entire risk of satisfactory quality, performance, accuracy, and effort is with the user.

libpng versions 0.97, January 1998, through 1.0.6, March 20, 2000, are Copyright (c) 1998, 1999 Glenn Randers-Pehrson, and are distributed according to the same disclaimer and license as libpng-0.96, with the following individuals added to the list of Contributing Authors:

Tom Lane

Glenn Randers-Pehrson

Willem van Schaik

libpng versions 0.89, June 1996, through 0.96, May 1997, are Copyright (c) 1996, 1997 Andreas Dilger

Distributed according to the same disclaimer and license as libpng-0.88, with the following individuals added to the list of Contributing Authors:

John Bowler
Kevin Bracey
Sam Bushell
Magnus Holmgren
Greg Roelofs
Tom Tanner

libpng versions 0.5, May 1995, through 0.88, January 1996, are
Copyright (c) 1995, 1996 Guy Eric Schalnat, Group 42, Inc.

For the purposes of this copyright and license, "Contributing Authors" is defined as the following set of individuals:

Andreas Dilger
Dave Martindale
Guy Eric Schalnat
Paul Schmidt
Tim Wegner

The PNG Reference Library is supplied "AS IS". The Contributing Authors and Group 42, Inc. disclaim all warranties, expressed or implied, including, without limitation, the warranties of merchantability and of fitness for any purpose. The Contributing Authors and Group 42, Inc. assume no liability for direct, indirect, incidental, special, exemplary, or consequential damages, which may result from the use of the PNG Reference Library, even if advised of the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this source code, or portions hereof, for any purpose, without fee, subject to the following restrictions:

1. The origin of this source code must not be misrepresented.
2. Altered versions must be plainly marked as such and must not be misrepresented as being the original source.
3. This Copyright notice may not be removed or altered from any source or altered source distribution.

The Contributing Authors and Group 42, Inc. specifically permit, without fee, and encourage the use of this source code as a component to supporting the PNG file format in commercial products. If you use this source code in a product, acknowledgment is not required but would be appreciated.

A "png_get_copyright" function is available, for convenient use in "about" boxes and the like:

```
printf("%s",png_get_copyright(NULL));
```

Also, the PNG logo (in PNG format, of course) is supplied in the files "pngbar.png" and "pngbar.jpg (88x31) and "pngnow.png" (98x31).

Libpng is OSI Certified Open Source Software. OSI Certified Open Source is a certification mark of the Open Source Initiative.

Glenn Randers-Pehrson
glennrp at users.sourceforge.net
March 29, 2012

NOTE! The LGPL below is copyrighted by the Free Software Foundation, but the instance of code that it refers to (the kde libraries) are copyrighted by the authors who actually wrote it.

GNU LIBRARY GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 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.

[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 Lesser 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
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!
SGI FREE SOFTWARE LICENSE B (Version 2.0, Sept. 18, 2008)

Copyright (C) [dates of first publication] Silicon Graphics, Inc. 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 including the dates of first publication
and either this permission notice or a reference to [HYPERLINK](http://oss.sgi.com/projects/FreeB/)
"<http://oss.sgi.com/projects/FreeB/>"
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 SILICON GRAPHICS, INC. 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 Silicon Graphics, Inc. shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from Silicon Graphics, Inc.

Copyright (C) 2005, 2006, 2007, 2008, 2009 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.

THIS SOFTWARE IS PROVIDED BY APPLE INC. AND ITS 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 APPLE INC. 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.

Copyright (C) 2005, 2006, 2007, 2008, 2009 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.

THIS SOFTWARE IS PROVIDED BY APPLE INC. AND ITS 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 APPLE INC. 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.

Digia Qt LGPL Exception version 1.1

As an additional permission to the GNU Lesser General Public License version 2.1, the object code form of a "work that uses the Library" may incorporate material from a header file that is part of the Library. You may distribute such object code under terms of your choice, provided that:

- (i) the header files of the Library have not been modified; and
- (ii) the incorporated material is limited to numerical parameters, data structure layouts, accessors, macros, inline functions and templates; and
- (iii) you comply with the terms of Section 6 of the GNU Lesser General Public License version 2.1.

Moreover, you may apply this exception to a modified version of the Library, provided that such modification does not involve copying material from the Library into the modified Library's header files unless such material is limited to (i) numerical parameters; (ii) data structure layouts; (iii) accessors; and (iv) small macros, templates and inline functions of five lines or less in length.

Furthermore, you are not required to apply this additional permission to a modified version of the Library.

GNU Free Documentation License
Version 1.3, 3 November 2008

Copyright (C) 2000, 2001, 2002, 2007, 2008 Free Software Foundation, Inc.
<<http://fsf.org/>>

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

0. PREAMBLE

The purpose of this License is to make a manual, textbook, or other functional and useful document "free" in the sense of freedom: to assure everyone the effective freedom to copy and redistribute it, with or without modifying it, either commercially or noncommercially. Secondly, this License preserves for the author and publisher a way to get credit for their work, while not being considered responsible for modifications made by others.

This License is a kind of "copyleft", which means that derivative works of the document must themselves be free in the same sense. It complements the GNU General Public License, which is a copyleft license designed for free software.

We have designed this License in order to use it for manuals for free software, because free software needs free documentation: a free

program should come with manuals providing the same freedoms that the software does. But this License is not limited to software manuals; it can be used for any textual work, regardless of subject matter or whether it is published as a printed book. We recommend this License principally for works whose purpose is instruction or reference.

1. APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The "Document", below, refers to any such manual or work. Any member of the public is a licensee, and is addressed as "you". You accept the license if you copy, modify or distribute the work in a way requiring permission under copyright law.

A "Modified Version" of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A "Secondary Section" is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics.) The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The "Invariant Sections" are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the notice that says that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The "Cover Texts" are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A "Transparent" copy of the Document means a machine-readable copy,

represented in a format whose specification is available to the general public, that is suitable for revising the document straightforwardly with generic text editors or (for images composed of pixels) generic paint programs or (for drawings) some widely available drawing editor, and that is suitable for input to text formatters or for automatic translation to a variety of formats suitable for input to text formatters. A copy made in an otherwise Transparent file format whose markup, or absence of markup, has been arranged to thwart or discourage subsequent modification by readers is not Transparent. An image format is not Transparent if used for any substantial amount of text. A copy that is not "Transparent" is called "Opaque".

Examples of suitable formats for Transparent copies include plain ASCII without markup, Texinfo input format, LaTeX input format, SGML or XML using a publicly available DTD, and standard-conforming simple HTML, PostScript or PDF designed for human modification. Examples of transparent image formats include PNG, XCF and JPG. Opaque formats include proprietary formats that can be read and edited only by proprietary word processors, SGML or XML for which the DTD and/or processing tools are not generally available, and the machine-generated HTML, PostScript or PDF produced by some word processors for output purposes only.

The "Title Page" means, for a printed book, the title page itself, plus such following pages as are needed to hold, legibly, the material this License requires to appear in the title page. For works in formats which do not have any title page as such, "Title Page" means the text near the most prominent appearance of the work's title, preceding the beginning of the body of the text.

The "publisher" means any person or entity that distributes copies of the Document to the public.

A section "Entitled XYZ" means a named subunit of the Document whose title either is precisely XYZ or contains XYZ in parentheses following text that translates XYZ in another language. (Here XYZ stands for a specific section name mentioned below, such as "Acknowledgements", "Dedications", "Endorsements", or "History".) To "Preserve the Title" of such a section when you modify the Document means that it remains a section "Entitled XYZ" according to this definition.

The Document may include Warranty Disclaimers next to the notice which states that this License applies to the Document. These Warranty Disclaimers are considered to be included by reference in this License, but only as regards disclaiming warranties: any other implication that these Warranty Disclaimers may have is void and has no effect on the meaning of this License.

2. VERBATIM COPYING

You may copy and distribute the Document in any medium, either commercially or noncommercially, provided that this License, the copyright notices, and the license notice saying this License applies to the Document are reproduced in all copies, and that you add no other conditions whatsoever to those of this License. You may not use technical measures to obstruct or control the reading or further copying of the copies you make or distribute. However, you may accept compensation in exchange for copies. If you distribute a large enough number of copies you must also follow the conditions in section 3.

You may also lend copies, under the same conditions stated above, and you may publicly display copies.

3. COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have printed covers) of the Document, numbering more than 100, and the Document's license notice requires Cover Texts, you must enclose the copies in covers that carry, clearly and legibly, all these Cover Texts: Front-Cover Texts on the front cover, and Back-Cover Texts on the back cover. Both covers must also clearly and legibly identify you as the publisher of these copies. The front cover must present the full title with all words of the title equally prominent and visible. You may add other material on the covers in addition. Copying with changes limited to the covers, as long as they preserve the title of the Document and satisfy these conditions, can be treated as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit legibly, you should put the first ones listed (as many as fit reasonably) on the actual cover, and continue the rest onto adjacent pages.

If you publish or distribute Opaque copies of the Document numbering more than 100, you must either include a machine-readable Transparent copy along with each Opaque copy, or state in or with each Opaque copy a computer-network location from which the general network-using public has access to download using public-standard network protocols a complete Transparent copy of the Document, free of added material. If you use the latter option, you must take reasonably prudent steps, when you begin distribution of Opaque copies in quantity, to ensure that this Transparent copy will remain thus accessible at the stated location until at least one year after the last time you distribute an Opaque copy (directly or through your agents or retailers) of that edition to the public.

It is requested, but not required, that you contact the authors of the Document well before redistributing any large number of copies, to give them a chance to provide you with an updated version of the Document.

4. MODIFICATIONS

You may copy and distribute a Modified Version of the Document under the conditions of sections 2 and 3 above, provided that you release the Modified Version under precisely this License, with the Modified Version filling the role of the Document, thus licensing distribution and modification of the Modified Version to whoever possesses a copy of it. In addition, you must do these things in the Modified Version:

- A. Use in the Title Page (and on the covers, if any) a title distinct from that of the Document, and from those of previous versions (which should, if there were any, be listed in the History section of the Document). You may use the same title as a previous version if the original publisher of that version gives permission.
- B. List on the Title Page, as authors, one or more persons or entities responsible for authorship of the modifications in the Modified Version, together with at least five of the principal authors of the Document (all of its principal authors, if it has fewer than five), unless they release you from this requirement.
- C. State on the Title page the name of the publisher of the Modified Version, as the publisher.
- D. Preserve all the copyright notices of the Document.
- E. Add an appropriate copyright notice for your modifications adjacent to the other copyright notices.
- F. Include, immediately after the copyright notices, a license notice giving the public permission to use the Modified Version under the terms of this License, in the form shown in the Addendum below.
- G. Preserve in that license notice the full lists of Invariant Sections and required Cover Texts given in the Document's license notice.
- H. Include an unaltered copy of this License.
- I. Preserve the section Entitled "History", Preserve its Title, and add to it an item stating at least the title, year, new authors, and publisher of the Modified Version as given on the Title Page. If there is no section Entitled "History" in the Document, create one stating the title, year, authors, and publisher of the Document as given on its Title Page, then add an item describing the Modified Version as stated in the previous sentence.
- J. Preserve the network location, if any, given in the Document for public access to a Transparent copy of the Document, and likewise the network locations given in the Document for previous versions it was based on. These may be placed in the "History" section.

You may omit a network location for a work that was published at least four years before the Document itself, or if the original publisher of the version it refers to gives permission.

K. For any section Entitled "Acknowledgements" or "Dedications", Preserve the Title of the section, and preserve in the section all the substance and tone of each of the contributor acknowledgements and/or dedications given therein.

L. Preserve all the Invariant Sections of the Document, unaltered in their text and in their titles. Section numbers or the equivalent are not considered part of the section titles.

M. Delete any section Entitled "Endorsements". Such a section may not be included in the Modified Version.

N. Do not retitle any existing section to be Entitled "Endorsements" or to conflict in title with any Invariant Section.

O. Preserve any Warranty Disclaimers.

If the Modified Version includes new front-matter sections or appendices that qualify as Secondary Sections and contain no material copied from the Document, you may at your option designate some or all of these sections as invariant. To do this, add their titles to the list of Invariant Sections in the Modified Version's license notice. These titles must be distinct from any other section titles.

You may add a section Entitled "Endorsements", provided it contains nothing but endorsements of your Modified Version by various parties--for example, statements of peer review or that the text has been approved by an organization as the authoritative definition of a standard.

You may add a passage of up to five words as a Front-Cover Text, and a passage of up to 25 words as a Back-Cover Text, to the end of the list of Cover Texts in the Modified Version. Only one passage of Front-Cover Text and one of Back-Cover Text may be added by (or through arrangements made by) any one entity. If the Document already includes a cover text for the same cover, previously added by you or by arrangement made by the same entity you are acting on behalf of, you may not add another; but you may replace the old one, on explicit permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License give permission to use their names for publicity for or to assert or imply endorsement of any Modified Version.

5. COMBINING DOCUMENTS

You may combine the Document with other documents released under this License, under the terms defined in section 4 above for modified

versions, provided that you include in the combination all of the Invariant Sections of all of the original documents, unmodified, and list them all as Invariant Sections of your combined work in its license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and multiple identical Invariant Sections may be replaced with a single copy. If there are multiple Invariant Sections with the same name but different contents, make the title of each such section unique by adding at the end of it, in parentheses, the name of the original author or publisher of that section if known, or else a unique number. Make the same adjustment to the section titles in the list of Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled "History" in the various original documents, forming one section Entitled "History"; likewise combine any sections Entitled "Acknowledgements", and any sections Entitled "Dedications". You must delete all sections Entitled "Endorsements".

6. COLLECTIONS OF DOCUMENTS

You may make a collection consisting of the Document and other documents released under this License, and replace the individual copies of this License in the various documents with a single copy that is included in the collection, provided that you follow the rules of this License for verbatim copying of each of the documents in all other respects.

You may extract a single document from such a collection, and distribute it individually under this License, provided you insert a copy of this License into the extracted document, and follow this License in all other respects regarding verbatim copying of that document.

7. AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives with other separate and independent documents or works, in or on a volume of a storage or distribution medium, is called an "aggregate" if the copyright resulting from the compilation is not used to limit the legal rights of the compilation's users beyond what the individual works permit. When the Document is included in an aggregate, this License does not apply to the other works in the aggregate which are not themselves derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these copies of the Document, then if the Document is less than one half of the entire aggregate, the Document's Cover Texts may be placed on covers that bracket the Document within the aggregate, or the electronic equivalent of covers if the Document is in electronic form. Otherwise they must appear on printed covers that bracket the whole aggregate.

8. TRANSLATION

Translation is considered a kind of modification, so you may distribute translations of the Document under the terms of section 4. Replacing Invariant Sections with translations requires special permission from their copyright holders, but you may include translations of some or all Invariant Sections in addition to the original versions of these Invariant Sections. You may include a translation of this License, and all the license notices in the Document, and any Warranty Disclaimers, provided that you also include the original English version of this License and the original versions of those notices and disclaimers. In case of a disagreement between the translation and the original version of this License or a notice or disclaimer, the original version will prevail.

If a section in the Document is Entitled "Acknowledgements", "Dedications", or "History", the requirement (section 4) to Preserve its Title (section 1) will typically require changing the actual title.

9. TERMINATION

You may not copy, modify, sublicense, or distribute the Document except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, or distribute it is void, and will automatically terminate your rights under this License.

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that

copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, receipt of a copy of some or all of the same material does not give you any rights to use it.

10. FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions of the GNU Free Documentation 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. See <http://www.gnu.org/copyleft/>.

Each version of the License is given a distinguishing version number. If the Document specifies that a particular numbered version of this License "or any later version" applies to it, you have the option of following the terms and conditions either of that specified version or of any later version that has been published (not as a draft) by the Free Software Foundation. If the Document does not specify a version number of this License, you may choose any version ever published (not as a draft) by the Free Software Foundation. If the Document specifies that a proxy can decide which future versions of this License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Document.

11. RELICENSING

"Massive Multiauthor Collaboration Site" (or "MMC Site") means any World Wide Web server that publishes copyrightable works and also provides prominent facilities for anybody to edit those works. A public wiki that anybody can edit is an example of such a server. A "Massive Multiauthor Collaboration" (or "MMC") contained in the site means any set of copyrightable works thus published on the MMC site.

"CC-BY-SA" means the Creative Commons Attribution-Share Alike 3.0 license published by Creative Commons Corporation, a not-for-profit corporation with a principal place of business in San Francisco, California, as well as future copyleft versions of that license published by that same organization.

"Incorporate" means to publish or republish a Document, in whole or in part, as part of another Document.

An MMC is "eligible for relicensing" if it is licensed under this License, and if all works that were first published under this License somewhere other than this MMC, and subsequently incorporated in whole or in part into the MMC, (1) had no cover texts or invariant sections, and (2) were thus incorporated prior to November 1, 2008.

The operator of an MMC Site may republish an MMC contained in the site under CC-BY-SA on the same site at any time before August 1, 2009, provided the MMC is eligible for relicensing.

ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of the License in the document and put the following copyright and license notices just after the title page:

Copyright (c) YEAR YOUR NAME.

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.3 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts.

A copy of the license is included in the section entitled "GNU Free Documentation License".

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts, replace the "with...Texts." line with this:

with the Invariant Sections being LIST THEIR TITLES, with the Front-Cover Texts being LIST, and with the Back-Cover Texts being LIST.

If you have Invariant Sections without Cover Texts, or some other combination of the three, merge those two alternatives to suit the situation.

If your document contains nontrivial examples of program code, we recommend releasing these examples in parallel under your choice of free software license, such as the GNU General Public License, to permit their use in free software.

GNU GENERAL PUBLIC LICENSE

The Qt GUI Toolkit is Copyright (C) 2012 Digia Plc.

For any questions to Digia, please use contact form at <http://qt.digia.com/>

You may use, distribute and copy the Qt GUI Toolkit under the terms of GNU General Public License version 3, which is displayed below.

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <<http://fsf.org/>>
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for
software and other kinds of works.

The licenses for most software and other practical works are designed
to take away your freedom to share and change the works. By contrast,
the GNU General Public License is intended to guarantee your freedom to
share and change all versions of a program--to make sure it remains free
software for all its users. We, the Free Software Foundation, use the
GNU General Public License for most of our software; it applies also to
any other work released this way by its authors. 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
them 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 prevent others from denying you
these rights or asking you to surrender the rights. Therefore, you have
certain responsibilities if you distribute copies of the software, or if
you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether
gratis or for a fee, you must pass on to the recipients the same
freedoms that you received. 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.

Developers that use the GNU GPL protect your rights with two steps:
(1) assert copyright on the software, and (2) offer you this License
giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains
that there is no warranty for this free software. For both users' and
authors' sake, the GPL requires that modified versions be marked as

changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a

computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically

linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or

modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey 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; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a) The work must carry prominent notices stating that you modified it, and giving a relevant date.
- b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".
- c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.
- d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an

"aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

- a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.
- b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.
- c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.
- d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and

protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

- a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or
- b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or
- c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or
- d) Limiting the use for publicity purposes of names of licensors or authors of the material; or
- e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or
- f) Requiring indemnification of licensors and authors of that

material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under

this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or

hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment

to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If 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 convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU 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 that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software

Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

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.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS 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.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

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 state 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 3 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, see <http://www.gnu.org/licenses/>.

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

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

```
<program> Copyright (C) <year> <name of author>  
This program 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, your program's commands might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school, if any, to sign a "copyright disclaimer" for the program, if necessary. For more information on this, and how to apply and follow the GNU GPL, see <http://www.gnu.org/licenses/>.

The GNU 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. But first, please read <<http://www.gnu.org/philosophy/why-not-lgpl.html>>.

In addition, as a special exception, Digia gives permission to link the code of its release of Qt with the OpenSSL project's "OpenSSL" library (or modified versions of it that use the same license as the "OpenSSL" library), and distribute the linked executables. You must comply with the GNU General Public License versions 2.0 or 3.0 in all respects for all of the code used other than the "OpenSSL" code. If you modify this file, you may extend this exception to your version of the file, but you are not obligated to do so. If you do not wish to do so, delete this exception statement from your version of this file.

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!

Copyright (c) 2008-2011 Pivotal Labs

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.

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 <organization> 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 <COPYRIGHT HOLDER> 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.

1.44 sblim-sfcc-2.0.2 2.0.2

1.44.1 Available under license :

Eclipse Public License - v 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

1. DEFINITIONS

"Contribution" means:

- a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and
- b) in the case of each subsequent Contributor:

- i) changes to the Program, and

- ii) additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents " mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

2. GRANT OF RIGHTS

- a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.

- b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.

- c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.

- d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a) it complies with the terms and conditions of this Agreement; and
- b) its license agreement:
 - i) effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;
 - ii) effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
 - iii) states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and
 - iv) states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a) it must be made available under this Agreement; and
- b) a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM IS PROVIDED 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. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), 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 OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the

right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

1.45 tar 1.26

1.45.1 Available under license :

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

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

Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. 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 them 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 prevent others from denying you

these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. 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.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of

works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major

Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey 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; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a) The work must carry prominent notices stating that you modified it, and giving a relevant date.
- b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the

written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

- a) Disclaiming warranty or limiting liability differently from the

terms of sections 15 and 16 of this License; or

- b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or
- c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or
- d) Limiting the use for publicity purposes of names of licensors or authors of the material; or
- e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or
- f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work

in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If 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 convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this

License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU 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 that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

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.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS 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.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

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 state 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 3 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, see <http://www.gnu.org/licenses/>.
```

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

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>
This program 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, your program's commands might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school, if any, to sign a "copyright disclaimer" for the program, if necessary. For more information on this, and how to apply and follow the GNU GPL, see <<http://www.gnu.org/licenses/>>.

The GNU 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. But first, please read <<http://www.gnu.org/philosophy/why-not-lgpl.html>>.

1.46 unzip 6.0

1.46.1 Available under license :

This is version 2009-Jan-02 of the Info-ZIP license.
The definitive version of this document should be available at <ftp://ftp.info-zip.org/pub/infozip/license.html> indefinitely and a copy at <http://www.info-zip.org/pub/infozip/license.html>.

Copyright (c) 1990-2009 Info-ZIP. All rights reserved.

For the purposes of this copyright and license, "Info-ZIP" is defined as the following set of individuals:

Mark Adler, John Bush, Karl Davis, Harald Denker, Jean-Michel Dubois, Jean-loup Gailly, Hunter Goatley, Ed Gordon, Ian Gorman, Chris Herborth, Dirk Haase, Greg Hartwig, Robert Heath, Jonathan Hudson, Paul Kienitz, David Kirschbaum, Johnny Lee, Onno van der Linden, Igor Mandrichenko, Steve P. Miller, Sergio Monesi, Keith Owens, George Petrov, Greg Roelofs, Kai Uwe Rommel, Steve Salisbury, Dave Smith, Steven M. Schweda, Christian Spieler, Cosmin Truta, Antoine Verheijen, Paul von Behren, Rich Wales, Mike White.

This software is provided "as is," without warranty of any kind, express or implied. In no event shall Info-ZIP or its contributors be held liable

for any direct, indirect, incidental, special or consequential damages arising out of the use of or inability to use 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 above disclaimer and the following restrictions:

1. Redistributions of source code (in whole or in part) must retain the above copyright notice, definition, disclaimer, and this list of conditions.
2. Redistributions in binary form (compiled executables and libraries) must reproduce the above copyright notice, definition, disclaimer, and this list of conditions in documentation and/or other materials provided with the distribution. Additional documentation is not needed for executables where a command line license option provides these and a note regarding this option is in the executable's startup banner. The sole exception to this condition is redistribution of a standard UnZipSFX binary (including SFXWiz) as part of a self-extracting archive; that is permitted without inclusion of this license, as long as the normal SFX banner has not been removed from the binary or disabled.
3. Altered versions--including, but not limited to, ports to new operating systems, existing ports with new graphical interfaces, versions with modified or added functionality, and dynamic, shared, or static library versions not from Info-ZIP--must be plainly marked as such and must not be misrepresented as being the original source or, if binaries, compiled from the original source. Such altered versions also must not be misrepresented as being Info-ZIP releases--including, but not limited to, labeling of the altered versions with the names "Info-ZIP" (or any variation thereof, including, but not limited to, different capitalizations), "Pocket UnZip," "WiZ" or "MacZip" without the explicit permission of Info-ZIP. Such altered versions are further prohibited from misrepresentative use of the Zip-Bugs or Info-ZIP e-mail addresses or the Info-ZIP URL(s), such as to imply Info-ZIP will provide support for the altered versions.
4. Info-ZIP retains the right to use the names "Info-ZIP," "Zip," "UnZip," "UnZipSFX," "WiZ," "Pocket UnZip," "Pocket Zip," and "MacZip" for its own source and binary releases.

1.47 velocity 1.6.2

1.47.1 Available under 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 Velocity

Copyright (C) 2000-2007 The Apache Software Foundation

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

1.48 zip 3.0

1.48.1 Available under license :

This is version 2007-Mar-4 of the Info-ZIP license.

The definitive version of this document should be available at
<ftp://ftp.info-zip.org/pub/infozip/license.html> indefinitely and
a copy at <http://www.info-zip.org/pub/infozip/license.html>.

Copyright (c) 1990-2007 Info-ZIP. All rights reserved.

For the purposes of this copyright and license, "Info-ZIP" is defined as
the following set of individuals:

Mark Adler, John Bush, Karl Davis, Harald Denker, Jean-Michel Dubois,
Jean-loup Gailly, Hunter Goatley, Ed Gordon, Ian Gorman, Chris Herborth,
Dirk Haase, Greg Hartwig, Robert Heath, Jonathan Hudson, Paul Kienitz,
David Kirschbaum, Johnny Lee, Onno van der Linden, Igor Mandrichenko,
Steve P. Miller, Sergio Monesi, Keith Owens, George Petrov, Greg Roelofs,
Kai Uwe Rommel, Steve Salisbury, Dave Smith, Steven M. Schweda,
Christian Spieler, Cosmin Truta, Antoine Verheijen, Paul von Behren,
Rich Wales, Mike White.

This software is provided "as is," without warranty of any kind, express
or implied. In no event shall Info-ZIP or its contributors be held liable
for any direct, indirect, incidental, special or consequential damages
arising out of the use of or inability to use 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 above disclaimer and the following restrictions:

1. Redistributions of source code (in whole or in part) must retain the above copyright notice, definition, disclaimer, and this list of conditions.
2. Redistributions in binary form (compiled executables and libraries) must reproduce the above copyright notice, definition, disclaimer, and this list of conditions in documentation and/or other materials provided with the distribution. The sole exception to this condition is redistribution of a standard UnZipSFX binary (including SFXWiz) as part of a self-extracting archive; that is permitted without inclusion of this license, as long as the normal SFX banner has not been removed from the binary or disabled.
3. Altered versions--including, but not limited to, ports to new operating systems, existing ports with new graphical interfaces, versions with modified or added functionality, and dynamic, shared, or static library versions not from Info-ZIP--must be plainly marked as such and must not be misrepresented as being the original source or, if binaries, compiled from the original source. Such altered versions also must not be misrepresented as being Info-ZIP releases--including, but not limited to, labeling of the altered versions with the names "Info-ZIP" (or any variation thereof, including, but not limited to, different capitalizations), "Pocket UnZip," "WiZ" or "MacZip" without the explicit permission of Info-ZIP. Such altered versions are further prohibited from misrepresentative use of the Zip-Bugs or Info-ZIP e-mail addresses or the Info-ZIP URL(s), such as to imply Info-ZIP will provide support for the altered versions.
4. Info-ZIP retains the right to use the names "Info-ZIP," "Zip," "UnZip," "UnZipSFX," "WiZ," "Pocket UnZip," "Pocket Zip," and "MacZip" for its own source and binary releases.

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. 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)

©2014 Cisco Systems, Inc. All rights reserved.