



OSS Review Toolkit

Disclosure Document

apertis-ORT - v2024

2025-02-19

Table of Contents

1. Introduction	1
1.1. Written offer	1
2. Information about Software Packages	1
3. License Texts	79
3.1. 0BSD	79
3.2. AFL-2.0	79
3.3. AFL-2.1	81
3.4. Apache-2.0	84
3.5. Artistic-1.0-Perl	88
3.6. BSD-2-Clause	91
3.7. BSD-3-Clause	91
3.8. BSD-4-Clause-UC	92
3.9. Beerware	93
3.10. CC0-1.0	93
3.11. GPL-1.0-or-later	96
3.12. GPL-2.0-only	101
3.13. GPL-2.0-or-later	108
3.14. GPL-3.0-or-later	115
3.15. GPL-3.0-or-later WITH Bison-exception-2.2	128
3.16. GPL-3.0-or-later WITH GCC-exception-3.1	142
3.17. ISC	157
3.18. LGPL-2.0-only	157
3.19. LGPL-2.0-or-later	167
3.20. LGPL-2.1-only	177
3.21. LGPL-2.1-or-later	187
3.22. LGPL-3.0-or-later	197
3.23. LicenseRef-AFL	201
3.24. LicenseRef-AmbiguousLicenseInfoFound	201
3.25. LicenseRef-Artistic	201
3.26. LicenseRef-BSD-variant	201
3.27. LicenseRef-CC0	201
3.28. LicenseRef-Chromium	201
3.29. LicenseRef-GPL-1.0-or-later-WITH-Bison-exception-1.24	201
3.30. LicenseRef-MIT-X11	201
3.31. LicenseRef-Mazieres-BSD-style	201
3.32. LicenseRef-NoLicenseInfoFound	201
3.33. LicenseRef-PD	201
3.34. LicenseRef-Shadow-Artistic	201
3.35. LicenseRef-perl.5	201
3.36. LicenseRef-public-domain	202
3.37. MIT	202
3.38. NTP	202
3.39. None	202

3.40. OLDAP-2.8	202
3.41. OpenSSL	203
3.42. SSH-OpenSSH	206
3.43. Sleepycat	212
3.44. Unlicense	213
3.45. Vim	214
3.46. Zlib	216
3.47. bzip2-1.0.6	216
3.48. curl	217

1. Introduction

The Product Software contains software components whose licenses require information to the customer. This information is listed below.

Chapter "Information about Software Packages" lists applicable licenses and copyrights per package. The listed licenses and copyrights apply to the package or sub parts thereof.

Chapter "License Texts" provide the license texts of the licenses listed.

1.1. Written offer

The product contains software components that are licensed under an Open Source License, which requires that source code be made available. The source code of these software components is not delivered together with this product. You can obtain the source code for these software components by submitting a written request to our open source office address listed below.

When sending such a request, please name the relevant product and the date of purchase of the same.

Address

Address

Address

Address

2. Information about Software Packages

Package: adduser

NoSourceInfoFound

Package: apertis-archive-keyring

NoSourceInfoFound

Package: busybox-ping

- Licenses:
 - NONE
- Copyright Notices:

Package: ca-certificates

NoSourceInfoFound

Package: chaiwala-apparmor-profiles

NoSourceInfoFound

Package: dbus-session-bus-common

NoSourceInfoFound

Package: dbus-system-bus-common

NoSourceInfoFound

Package: debconf

NoSourceInfoFound

Package: firmware-atheros

NoSourceInfoFound

Package: firmware-brcm80211

NoSourceInfoFound

Package: firmware-iwlwifi

NoSourceInfoFound

Package: firmware-realtek

NoSourceInfoFound

Package: firmware-sof-signed

NoSourceInfoFound

Package: init-system-helpers

NoSourceInfoFound

Package: initramfs-tools

- Licenses:
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © no-info-found

Package: initramfs-tools-core

- Licenses:
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © no-info-found

Package: libaudit-common

NoSourceInfoFound

Package: libglib2.0-data

- Licenses:
 - NONE
- Copyright Notices:

Package: libpam-runtime

NoSourceInfoFound

Package: libsemanage-common

NoSourceInfoFound

Package: libtext-wrapi18n-perl

NoSourceInfoFound

Package: linux-base

NoSourceInfoFound

Package: lsb-base

NoSourceInfoFound

Package: mktemp

NoSourceInfoFound

Package: ncurses-base

NoSourceInfoFound

Package: netbase

NoSourceInfoFound

Package: nginx-common

- Licenses:
 - [BSD-2-Clause](#)
- Copyright Notices:
 - Copyright © 2002-2021 Igor Sysoev
 - Copyright © Maxim Dounin
 - Copyright © 2011-2022 Nginx, Inc.
 - Copyright © Roman Arutyunyan
 - Copyright © Ruslan Ermilov
 - Copyright © Valentin V. Bartenev

Package: nginx-light

- Licenses:
 - NONE
- Copyright Notices:

Package: raspi-firmware

NoSourceInfoFound

Package: rpi64-autoconfig-connman

NoSourceInfoFound

Package: sensible-utils

NoSourceInfoFound

Package: sequoia-gpgv

NoSourceInfoFound

Package: tzdata

- Licenses:
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © STATUS OF THIS FILE
 - Copyright © no-info-found

Package: u-boot-menu

NoSourceInfoFound

Package: ucf

- Licenses:
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2002-2006, 2015 Manoj Srivastava <shivasta@debian.org>

Package: usr-is-merged

- Licenses:
 - NONE
- Copyright Notices:

Package: vim-common

NoSourceInfoFound

Package: wireless-regdb

NoSourceInfoFound

Package: apparmor

- Licenses:
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-only](#)

- [LGPL-2.0-or-later](#)
- [LGPL-2.1-only](#)
- [LicenseRef-public-domain](#)
- [MIT](#)
- Copyright Notices:
 - Copyright © 2006-2007 Andreas Gruenbacher <agruen@suse.de>
 - Copyright © 2009-2022 Canonical Ltd
 - Copyright © 2013-2021 Christian Boltz
 - Copyright © 2009-2017 Dave Gamble and cJSON contributors
 - Copyright © 1989, 1991 Free Software Foundation, Inc.
 - Copyright © 1999-2009 NOVELL (
 - Copyright © 2003-2008 Novell, Inc. (
 - Copyright © 1998-2009, 2011 Novell/SUSE
 - Copyright © 2017 SUSE LINUX GmbH, Nuernberg, Germany.
 - Copyright © 2022 SUSE LLC
 - Copyright © 2015-2016 Simon Deziel
 - Copyright © 2016 intrigeri <intrigeri@boum.org>
 - Copyright © no-info-found

Package: apt

- Licenses:
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2014 Anthony Towns
 - Copyright © 2000 Ben Collins <bcollins@debian.org>
 - Copyright © 2018-2019 Canonical Ltd
 - Copyright © no-info-found

Package: base-files

NoSourceInfoFound

Package: base-passwd

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 2002-2004 Colin Watson <cjwatson@debian.org>
 - Copyright © 1999-2002 Wichert Akkerman <wichert@deephackmode.org>

Package: bsdutils

- Licenses:
 - [BSD-4-Clause-UC](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2010 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 2008 James Youngman <jay@gnu.org>
 - Copyright © 2008-2019 Karel Zak <kzak@redhat.com>
 - Copyright © 2010 Lennart Poettering
 - Copyright © 1980 Regents of the University of California.
 - Copyright © 1980, 1983, 1985, 1987-1994 The Regents of the University of California.
 - Copyright © no-info-found

Package: busybox

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [None](#)
 - [Unlicense](#)
 - [bzip2-1.0.6](#)
- Copyright Notices:
 - Copyright © 1991-1997, 1999 86, , , Free Software Foundation, Inc.
 - Copyright © 1989-2006 89, 91, 92, , Free Software Foundation, Inc.
 - Copyright © 1995-2002 91, , Free Software Foundation, Inc.
 - Copyright © 1990, 1992, 1996 91-93, 96, , Free Software Foundation, Inc.
 - Copyright © 2017 <assafgordon@gmail.com>
 - Copyright © 2002 <dzo@simtreas.ru>
 - Copyright © 2008 <u173034@informatik.uni-oldenburg.de>
 - Copyright © 1992 A. V. Le Blanc (LeBlanc@mcc.ac.uk)
 - Copyright © 2002 AYR Networks, Inc.
 - Copyright © 2001 Aaron Lehmann <aaronl@vitelus.com>
 - Copyright © 1998 Albert Cahalan;

- Copyright © 2002 Andi Kleen, SuSE Labs.
- Copyright © Andre Masella <andre@masella.no-ip.org>
- Copyright © 1994-1998 Andries E. Brouwer <aeb@cw.nl>
- Copyright © 1999 Anthony Towns <aj@azure.humbug.org.au>
- Copyright © 2015 Ari Sundholm <ari@tuxera.com>
- Copyright © 2015 Ari Sundholm <ari@tuxera.com> and Tuxera Inc.
- Copyright © Arne Bernin <arne@matrix.loopback.org>
- Copyright © 2006 Aurelien Jacobs <aurel@gnuage.org>
- Copyright © 2002 Bart Visscher <magick@linux-fan.com>
- Copyright © 2014, 2016 Bartosz Golaszewski <bartekgola@gmail.com>
- Copyright © 2003 Bastian Blank <waldi@tuxbox.org>
- Copyright © 2005-2009, 2015 Bernhard Reutner-Fischer
- Copyright © 2006 Bernhard Reutner-Fischer <busybox@busybox.net>
- Copyright © 2006 Bernhard Reutner-Fischer <rep.nop@aon.at>
- Copyright © 2010 Bradley M. Kuhn <bkuhn@ebb.org>
- Copyright © 1996 Brian Candler <B.Candler@pobox.com>
- Copyright © 1995-1996 Bruce Perens <bruce@pixar.com>.
- Copyright © 2008 BusyBox Team. -solar 4/26/08
- Copyright © 1998-1999 Charles P. Wright
- Copyright © 2000 Daniel Jacobowitz
- Copyright © 2008 Darius Augulis <augulis.darius@gmail.com>
- Copyright © 1998-1999 Dave Cinege
- Copyright © 1999 David I. Bell
- Copyright © 2006-2018, 2021 Denys Vlasenko
- Copyright © 2008, 2017 Denys Vlasenko <vda.linux@gmail.com>
- Copyright © 2007-2010, 2014, 2017-2021 Denys Vlasenko <vda.linux@googlemail.com>
- Copyright © 2002 Dmitry Zakharov <dmit@crp.bank.gov.ua>
- Copyright © 2004 Ed Clark
- Copyright © 2000, 2002 Edward Betts <edward@debian.org>
- Copyright © Eero Tamminen <oak at welho dot com>
- Copyright © 2001 Emanuele Aina <emanuele.aina@tiscali.it>
- Copyright © 1998 Enrique Zanardi <ezanardi@ull.es>
- Copyright © 2003-2004 Erik Andersen
- Copyright © 1999-2005 Erik Andersen <andersen@codepoet.org>
- Copyright © 2005 Frank Sorenson <frank@tuxrocks.com>
- Copyright © 1990-1998, 2000 Free Software Foundation, Inc.
- Copyright © 2001-2005 Free Software Foundation.

- Copyright © 1997-2000 Frodo Looijaard <frodol@dds.nl>
- Copyright © 2006-2007 Gabriel Somlo <somlo at cmu.edu>
- Copyright © 2018 Gavin D. Howard and contributors.
- Copyright © 2000-2001 Gennady Feldman <gfeldman@gena01.com>
- Copyright © 1999 George Staikos
- Copyright © 2001-2006 Gerrit Pape
- Copyright © 2002-2003 Glenn Engel <glenne@engel.org>
- Copyright © 2003 Glenn L. McGrath
- Copyright © 2000-2004 Glenn McGrath
- Copyright © 1996-1999 Guy Maor <maor@debian.org>
- Copyright © 2005 H. Peter Anvin
- Copyright © 1997-2005 Herbert Xu <herbert@gondor.apana.org.au>
- Copyright © 1999-2005 Igor Pavlov
- Copyright © 2014 Isaac Dunham <ibid.ag@gmail.com>
- Copyright © 2000 Jan-Derk Bakker (J.D.Bakker@its.tudelft.nl)
- Copyright © 2006 Jason Schoon <floydpink@gmail.com>
- Copyright © 2000 Jean-Pierre Lefebvre <helix@step.polymtl.ca>
- Copyright © 1992-1993 Jean-loup Gailly.
- Copyright © 2002 Jeff Angielski, The PTR Group <jeff@theptgroup.com>
- Copyright © 1996 Jeff Noxon <jeff@router.patch.net>
- Copyright © 1999-2001 John Beppu <beppu@codepoet.org>
- Copyright © 1989-1991 Julianne Frances Haugh <jockgrrl@austin.rr.com>
- Copyright © 2000 Karl M. Hegbloom <karlheg@debian.org>
- Copyright © 2004-2005 Kay Sievers <kay.sievers@vrfy.org>
- Copyright © 1997, 2000-2001 Larry Doolittle <LRDoolittle@lbl.gov>
- Copyright © 2001 Larry Doolittle, <ldoolitt@recycle.lbl.gov>
- Copyright © 2001-2002 Laurence Anderson
- Copyright © 2000 Lennert Buytenhek
- Copyright © 1999-2001 Lineo, inc.
- Copyright © 1999-2001 Lineo, inc. and John Beppu
- Copyright © 1999-2001 Lineo, inc. and Mark Whitley
- Copyright © 2001 Magnus Damm <damm@opensource.se>
- Copyright © 2001, 2003, 2005 Manuel Novoa III <mjn3@codepoet.org>
- Copyright © 2003 Mar 16, , Manuel Novoa III (mjn3@codepoet.org)
- Copyright © 2010 Marek Polacek <mmpolacek@gmail.com>
- Copyright © 1999-2001 Mark Whitley <markw@codepoet.org>
- Copyright © 2017 Markus Gothe <nietzsche@lysator.liu.se>

- Copyright © 2010 Matheus Izvekov <mizvekov@gmail.com>
- Copyright © 2000-2002 Matt Kraai
- Copyright © 2000-2001 Matt Kraai <kraai@alumni.carnegiemellon.edu>
- Copyright © 2001 Matt Krai
- Copyright © 1999 Matthew Ramsay <matthewr@moreton.com.au>
- Copyright © 2001 Michael Habermann <mhabermann@gmx.de>
- Copyright © 1993 MicroWalt Corporation
- Copyright © 2005 Mike Frysinger <vapier@gentoo.org>
- Copyright © 2007-2008 Natanael Copa <natanael.copa@gmail.com>
- Copyright © 2020 Norbert Lange <nolange79@gmail.com>
- Copyright © 2008 Pascal Bellard
- Copyright © 2003 Paul Mundt <lethal@linux-sh.org>
- Copyright © 1987, 1997 Prentice Hall
- Copyright © 1999-2000 Randolph Chung <tausq@debian.org>
- Copyright © 2006 Rob Landley
- Copyright © 2003-2008, 2010 Rob Landley <rob@landley.net>
- Copyright © 2005-2006 Rob Sullivan <cogito.ergo.cogito@gmail.com>
- Copyright © 2006 Rob Sullivan, with ideas from codeWalter Harms
- Copyright © 2002 Robert Griebel
- Copyright © 2002 Robert Griebel <griebel@gmx.de>
- Copyright © 2006 Robert Sullivan <cogito.ergo.cogito@hotmail.com>
- Copyright © 2005-2006 Roberto A. Foglietta <me@roberto.foglietta.name>
- Copyright © 2013 Rolf Fokkens <rolf@fokkens.nl>
- Copyright © 2003 Russ Dill <Russ.Dill@asu.edu>
- Copyright © 2012 S-G Bergh <sgb@systemasis.org>
- Copyright © 2010 Sergey Naumov <sknaumov@gmail.com>
- Copyright © 2007 Stephane Billiard <stephane.billiard@gmail.com>
- Copyright © 2000-2001 Sterling Huxley <sterling@europa.com>
- Copyright © 1980, 1988-1994 The Regents of the University of California.
- Copyright © 2008 Timo Teras <timo.teras@iki.fi>
- Copyright © 2003, 2006-2008, 2014 Tito Ragusa <farmatito@tiscali.it>
- Copyright © 2005 Tito Ragusa <tito-wolit@tiscali.it>
- Copyright © 2005 Tobias Klausner <tklausner@access.unizh.ch>
- Copyright © 2003 Todd C. Miller <Todd.Miller@courtesan.com>
- Copyright © 1994-2000 Tomi Ollila
- Copyright © 1999 Uwe Ohse <uwe@ohse.de>
- Copyright © 2008 Vladimir Dronnikov

- Copyright © 2008-2009 Vladimir Dronnikov <dronnikov@gmail.com>
- Copyright © Vladimir N. Oleynik <dzo@simtreas.ru>
- Copyright © 2005 Vladimir Oleynik
- Copyright © 2002-2006 Vladimir Oleynik <dzo@simtreas.ru>
- Copyright © 2001-2002 Vladimir Oleynik <dzo@simtreas.ru> (initial bb port)
- Copyright © 2005 W. Michael Petullo <mike@flyn.org>
- Copyright © 2003 Yang Xiaopeng <yxp at hanwang.com.cn>
- Copyright © 2006 Yoshinori Sato <ysato@users.sourceforge.jp>
- Copyright © 2007 Yuichi Nakamura <ynakam@hitachisoft.jp>
- Copyright © a global variable. ;-) Oh well.
- Copyright © a whole pile of folks:
- Copyright © 2000 and written Emanuele Caratti <wiz@iol.it>
- Copyright © 2008 for SUSv3.
- Copyright © many different people.
- Copyright © many different people. If you wrote this, please
- Copyright © 1986-2003 may safely be consumed a BSD or GPL license.
- Copyright © no-info-found
- Copyright © 2001-2005 to be
- Copyright © 2004 to handle usernames of whatever
- Copyright © 2004 to support
- Copyright © tons of folks. Tracking down who wrote what

Package: busybox-diffutils

- Licenses:
 - NONE
- Copyright Notices:

Package: busybox-grep

- Licenses:
 - NONE
- Copyright Notices:

Package: busybox-gzip

- Licenses:
 - NONE
- Copyright Notices:

Package: busybox-sed

- Licenses:

- NONE
- Copyright Notices:

Package: connman

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 2007-2018 Intel Corporation. All rights reserved

Package: dash

- Licenses:
 - [BSD-3-Clause](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 1997-2005, 2007 Herbert Xu <herbert@gondor.apana.org.au>
 - Copyright © 2002 Herbert Xu.
 - Copyright © 1989, 1991, 1993, 1995 The Regents of the University of California.
 - Copyright © no-info-found

Package: dbus

- Licenses:
 - [AFL-2.1](#)
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2007 Allison Lortie
 - Copyright © 2002-2003 CodeFactory AB
 - Copyright © 2016-2018 Collabora Ltd.
 - Copyright © 2003 Mark McLoughlin
 - Copyright © 2004 Michael Meeks
 - Copyright © 2011 Nokia Corporation
 - Copyright © 2006-2015 Ralf Habacker <ralf.habacker@freenet.de>
 - Copyright © 2002-2008 Red Hat Inc.
 - Copyright © 2011 Roberto Guido

Package: dbus-bin

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LicenseRef-AFL](#)
 - [MIT](#)

- Copyright Notices:
 - Copyright © 2013-2018, 2022-2023 Collabora Ltd.
 - Copyright © 2002 Michael Meeks
 - Copyright © 2011 Nokia Corporation
 - Copyright © 2003 Philip Blundell <philb@gnu.org>
 - Copyright © 2003, 2006 Red Hat, Inc.

Package: dbus-daemon

- Licenses:
 - [AFL-2.1](#)
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2007 Allison Lortie
 - Copyright © 2014-2015 Canonical, Ltd.
 - Copyright © 2002-2003 CodeFactory AB
 - Copyright © 2012-2018 Collabora Ltd.
 - Copyright © 2004 Imendio HB
 - Copyright © 2006 Mandriva
 - Copyright © 2003 Mark McLoughlin
 - Copyright © 2004 Michael Meeks
 - Copyright © 2011-2012 Nokia Corporation
 - Copyright © 2003 Philip Blundell <philb@gnu.org>
 - Copyright © 2006, 2018, 2021 Ralf Habacker
 - Copyright © 2006-2015 Ralf Habacker <ralf.habacker@freenet.de>
 - Copyright © 2002-2008 Red Hat Inc.
 - Copyright © 2011 Roberto Guido
 - Copyright © 2006 Sjoerd Simons
 - Copyright © 2006 Thiago Macieira <thiago@kde.org>
 - Copyright © no-info-found

Package: dbus-user-session

NoSourceInfoFound

Package: debianutils

NoSourceInfoFound

Package: debug-symbols

- Licenses:
 - NONE

- Copyright Notices:

Package: dmsetup

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 2005-2007 NEC Corporation
 - Copyright © 2004-2018 Red Hat, Inc.
 - Copyright © 2001-2004 Sistina Software, Inc.

Package: dpkg

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2006-2022 207, , Guillem Jover <guillem@debian.org>
 - Copyright © 2000-2003 Adam Heath <doogie@debian.org>
 - Copyright © 1995 Bruce Perens
 - Copyright © 2007, 2009-2010 Canonical Ltd
 - Copyright © 2004 Changwoo Ryu <cwryu@debian.org>
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2003 Daniel Silverstone <dsilvers@digital-scurf.org>
 - Copyright © 2006-2023 Guillem Jover <guillem@debian.org>
 - Copyright © 1994-1999, 2008 Ian Jackson <ijackson@chiark.greenend.org.uk>
 - Copyright © 2009 Romain Francoise <rfrancoise@debian.org>
 - Copyright © 2004-2005 Scott James Remnant <scott@netsplit.com>
 - Copyright © 2021 Sebastian Andrzej Siewior <sebastian@breakpoint.cc>
 - Copyright © 2007-2008 Tollef Fog Heen <tfheen@err.no>
 - Copyright © 2000-2001 Wichert Akkerman
 - Copyright © 1999-2002 Wichert Akkerman <wakkerma@debian.org>
 - Copyright © 2000-2001 Wichert Akkerman <wichert@debian.org>
 - Copyright © 2000, 2002 Wichert Akkerman <wichert@deephackmode.org>
 - Copyright © no-info-found

Package: e2fsprogs

- Licenses:
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-only](#)
 - [LGPL-2.0-only](#)

- [NTP](#)
- Copyright Notices:
 - Copyright © 2001 Alcove <http://www.alcove.com/>
 - Copyright © 2000 Andreas Dilger
 - Copyright © 1999 David Beattie
 - Copyright © 2019 Google LLC
 - Copyright © 2014-2015 Google, Inc.
 - Copyright © 2007 IBM Corporation
 - Copyright © 1997 Kaz Kylheku <kaz@ashi.footprints.net>
 - Copyright © 1997 Klee Dienes
 - Copyright © 1995-1996 Michael Nonweiler <mrn20@cam.ac.uk>
 - Copyright © 2009 NEC Software Tohoku, Ltd.
 - Copyright © 2014 Oracle, Inc.
 - Copyright © 2014 Oracle.
 - Copyright © 2014 Oracle. This file may be redistributed
 - Copyright © 1999-2000 Red Hat Software
 - Copyright © 2000 Red Hat corp
 - Copyright © 2001 Red Hat, Inc.
 - Copyright © 2022 Red Hat, Inc., Lukas Czermer <lczermer@redhat.com>
 - Copyright © 1992-1994 Remy Card <card@masi.ibp.fr>
 - Copyright © 2014 Robert Yang <liezhi.yang@windriver.com>
 - Copyright © 2009 Sun Microsystems, Inc.
 - Copyright © 2003-2007 Theodore Ts'o <tytso@mit.edu>
 - Copyright © 1993-2014 Theodore Tso
 - Copyright © 1997-1998 Theodore Tso and
 - Copyright © 1993-1994, 2001 Theodore Tso. This file may be
 - Copyright © 1993-1994, 1997, 2002, 2011-2012, 2014 Theodore Tso. This file may be redistributed
 - Copyright © 1994-2001 Theodore Tso. This file may be redistributed under the terms of
 - Copyright © 1997-2003 Yann Dirson <dirson@debian.org>
 - Copyright © no-info-found

Package: gcc-12-base

NoSourceInfoFound

Package: gpiod

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:

- Copyright © 2017-2021 Bartosz Golaszewski <bartekgola@gmail.com>
- Copyright © 2022-2023 Kent Gibson <warthog618@gmail.com>

Package: hostname

NoSourceInfoFound

Package: iproute2

- Licenses:
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 20
 - Copyright © 1996-2001 Alexey Kuznetsov <kuznet@ms2.inr.ac.ru>
 - Copyright © 2013 Cisco Systems, Inc, .
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2011 Czech Technical University in Prague
 - Copyright © 2017-2019 David Ahern <dsahern@gmail.com>
 - Copyright © 2012-2015 Eric Dumazet <edumazet@google.com>
 - Copyright © 2018 Eyal Birger <eyal.birger@gmail.com>
 - Copyright © 2011 Felix Fietkau <nbd@openwrt.org>
 - Copyright © 2012 Florian Westphal <fw@strlen.de>
 - Copyright © 2019 Gautam Ramakrishnan <gautamramk@gmail.com>
 - Copyright © 2004 Harald Welte <laforge@gnumonks.org>
 - Copyright © 2005-2006, 2008-2011, 2019, 2021 Intel Corporation.
 - Copyright © 2000-2002 J Hadi Salim <hadi@cyberus.ca>
 - Copyright © 2000-2002 Joakim Axelsson <gozem@linux.nu>
 - Copyright © 2003-2010 Jozsef Kadlec <kadlec@blackhole.kfki.hu>
 - Copyright © 2011-2012 Kathleen Nichols <nichols@pollere.com>
 - Copyright © 2019 Kevin Darbyshire-Bryant <ldir@darbyshire-bryant.me.uk>
 - Copyright © 2019 Leslie Monis <lesliemonis@gmail.com>
 - Copyright © 2001-2004 Lubomir Bulej <pallas@kadan.cz>
 - Copyright © 2012 Michael D. Taht <dave.taht@bufferbloat.net>
 - Copyright © 2019 Mohit Bhasi <mohitbhasi1998@gmail.com>
 - Copyright © 2019 Mohit P. Tahiliani <tahiliani@nitk.edu.in>
 - Copyright © 2019 Paolo Abeni <pabeni@redhat.com>
 - Copyright © 1999 Pavel Golubev <pg@ksi-linux.com>
 - Copyright © 2001 Robert Olsson <robert.olsson@its.uu.se>

- Copyright © 2019 Sachin D. Patil <sdp.sachin@gmail.com>
- Copyright © 1996-2017 Stephen Hemminger <stephen@networkplumber.org>
- Copyright © 2013 Terry Lam <vtlam@google.com>
- Copyright © 2004-2007 USAGI/WIDE Project
- Copyright © 2019 V. Saicharan <vsaicharan1998@gmail.com>
- Copyright © 2011-2012 Van Jacobson <van@pollere.com>
- Copyright © 2002-2007 Volkswagen Group Electronic Research
- Copyright © 2011 Volkswagen Group Research
- Copyright © no-info-found
- Copyright © return c→name;

Package: iptables

- Licenses:
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2005-2008 05, Pablo Neira Ayuso <pablo@eurodev.net>
 - Copyright © 2008 Adam Nielsen <a.nielsen@shikadi.net>
 - Copyright © 2007 BalaBit IT Ltd.
 - Copyright © 2007-2008 CC Computer Consultants GmbH
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2002 Don Cohen <don-netf@isis.cs3-inc.com>
 - Copyright © 2000 Emmanuel Roger <winfield@freegates.be>
 - Copyright © 2005 Evgeniy Polyakov <johnpol@2ka.mxt.ru>
 - Copyright © 2013-2014 Giuseppe Longo <giuseppelng@gmail.com>
 - Copyright © 2013 Google, Inc.
 - Copyright © 2012 Hans Schillstrom <hans.schillstrom@ericsson.com>
 - Copyright © 2000-2003 Harald Welte <laforge@gnumonks.org>
 - Copyright © 2002-2005 Harald Welte <laforge@netfilter.org>
 - Copyright © 2011 Intra2Net AG <http://www.intra2net.com>
 - Copyright © James Morris <jmorris@intercode.com.au>
 - Copyright © 2000-2002 Joakim Axelsson <gozem@linux.nu>
 - Copyright © 2000, 2003-2011 Jozsef Kadlecsek <kadlec@blackhole.kfki.hu>
 - Copyright © 2002, 2004 MARA Systems AB <http://www.marasystems.com>
 - Copyright © 2000 Marc Boucher
 - Copyright © 2001 Marc Boucher (marc@mbsi.ca).
 - Copyright © Marc Boucher <marc+nf@mbsi.ca>

- Copyright © 2000-2002 Matthew G. Marsh <mgm@paktronix.com>
- Copyright © 2010 Nokia Corporation.
- Copyright © 2009, 2011-2014 Pablo Neira Ayuso <pablo@netfilter.org>
- Copyright © 2003-2013 Patrick McHardy <kaber@trash.net>
- Copyright © Paul 'Rusty' Russell <rusty@rustcorp.com.au>
- Copyright © 1999 Paul Rusty Russell <rusty@rustcorp.com.au> and
- Copyright © 1999 Paul `Rusty' Russell & Michael J. Neuling
- Copyright © 2008 Peter Warasin <peter@endian.com>
- Copyright © 2020 Red Hat GmbH. Author: Phil Sutter <phil@nwl.cc>
- Copyright © 2010-2011 Red Hat, Inc
- Copyright © 2006 Red Hat, Inc., James Morris <jmorris@redhat.com>
- Copyright © 2007 Sven Schnelle <svens@bitebene.org>
- Copyright © 2010-2011 Thomas Graf <tgraf@redhat.com>
- Copyright © 2013 Tomasz Bursztyka <tomasz.bursztyka@linux.intel.com>
- Copyright © 2006 USAGI/WIDE Project
- Copyright © 2006 Ufo Mechanic <azez@ufomechanic.net>
- Copyright © no-info-found
- Copyright © 2000-2002 the netfilter coreteam <coreteam@netfilter.org>
- Copyright © 2000-2006 the netfilter coreteam <coreteam@netfilter.org>:

Package: klibc-utils

- Licenses:
 - [BSD-3-Clause](#)
 - [BSD-4-Clause-UC](#)
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-or-later](#)
 - [MIT](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 1998 Albert Cahalan;
 - Copyright © 1989-1992, 2001-2004 Free Software Foundation, Inc.
 - Copyright © 2004-2006 H. Peter Anvin
 - Copyright © 2004-2021 H. Peter Anvin and klibc contributors
 - Copyright © 1997-2005, 2007 Herbert Xu <herbert@gondor.apana.org.au>.
 - Copyright © 2002 Herbert Xu.
 - Copyright © 1992-1993 Jean-loup Gailly

- Copyright © 2002 Rusty Russell, IBM Corporation.
- Copyright © 2001 Rusty Russell.
- Copyright © 1989-1991, 1993, 1995 The Regents of the University of California.
- Copyright © no-info-found

Package: kmod

NoSourceInfoFound

Package: libacl1

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2007 Andreas Gruenbacher <a.gruenbacher@computer.org>
 - Copyright © 2000, 2002-2003, 2009 Andreas Gruenbacher <agruen@suse.de>
 - Copyright © 2002 Andreas Gruenbacher <agruen@suse.de>, SuSE Linux AG.
 - Copyright © 1999-2003, 2011 Andreas Gruenbacher <andreas.gruenbacher@gmail.com>
 - Copyright © 2001-2002 Silicon Graphics, Inc.

Package: libapparmor1

- Licenses:
 - [GPL-2.0-only](#)
 - [LGPL-2.1-only](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2009-2010, 2012-2017, 2020-2022 Canonical Ltd.
 - Copyright © 1999-2008 NOVELL (
 - Copyright © 2003-2008 Novell, Inc. (
 - Copyright © no-info-found

Package: libapt-pkg6.0

- Licenses:
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2018-2019 Canonical Ltd
 - Copyright © no-info-found
 - Copyright © return c + 256;

Package: libarchive-cpio

- Licenses:
 - NONE
- Copyright Notices:

Package: libarchive-tar

- Licenses:
 - NONE
- Copyright Notices:

Package: libarchive-tools

- Licenses:
 - [BSD-2-Clause](#)
 - [ISC](#)
- Copyright Notices:
 - Copyright © 2010 (c) Joerg Sonnenberger
 - Copyright © 2003-2018 (c) Tim Kientzle
 - Copyright © 2007-2010 Joerg Sonnenberger
 - Copyright © 2008-2014 Michihiro NAKAJIMA
 - Copyright © 2011-2014 Mike Kazantsev
 - Copyright © 2003-2018 Tim Kientzle

Package: libarchive13

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2009 (c) Andreas Henriksson <andreas@fatal.se>
 - Copyright © 2011 (c) Andres Mejia
 - Copyright © 2008 (c) Anselm Strauss
 - Copyright © 2015 (c) Graham Percival
 - Copyright © 2007-2010 (c) Joerg Sonnenberger
 - Copyright © 2007 (c) Kai Wang
 - Copyright © 2014 (c) Kevin Locke
 - Copyright © 2013 (c) Konrad Kleine
 - Copyright © 2013 (c) Marek Kubica
 - Copyright © 2009-2014 (c) Michihiro NAKAJIMA
 - Copyright © 2003-2008 (c) Miklos Vajna

- Copyright © 2010 (c) Nokia Corporation and/or its subsidiary(-ies).
- Copyright © 2015 (c) Okhotnikov Kirill
- Copyright © 2012 (c) Ondrej Holy
- Copyright © 2006 (c) R
- Copyright © 2003-2014 (c) Tim Kientzle
- Copyright © 2009 Andreas Henriksson <andreas@fatal.se>
- Copyright © 2011-2012 Andres Mejia
- Copyright © 2008 Anselm Strauss
- Copyright © Author: Jonas Gastal <jgastal@profusion.mobi>
- Copyright © 2018 Grzegorz Antoniak (<http://antoniak.org>)
- Copyright © 2007-2010 Joerg Sonnenberger
- Copyright © 2013 Konrad Kleine
- Copyright © 2013 Marek Kubica
- Copyright © 2016-2017, 2019-2021 Martin Matuska
- Copyright © 2008-2014 Michihiro NAKAJIMA
- Copyright © 2010 Nokia Corporation and/or its subsidiary(-ies).
- Copyright © 2015 Okhotnikov Kirill
- Copyright © 2012 Ondrej Holy
- Copyright © 2006 Rudolf Marek SYSGO s.r.o.
- Copyright © 2012 Samuel Neves <sneves@dei.uc.pt>
- Copyright © 2009-2011, 2017 Sean Purcell
- Copyright © 2014 Sebastian Freundt
- Copyright © 1998, 2001 The NetBSD Foundation, Inc.
- Copyright © 2003-2018 Tim Kientzle
- Copyright © 2003-2008 Tim Kientzle and Miklos Vajna
- Copyright © 2012-2014 Yann Collet.
- Copyright © no-info-found

Package: libargon2-1

- Licenses:
 - [Apache-2.0](#)
 - [LicenseRef-CC0](#)
- Copyright Notices:
 - Copyright © 2015 Daniel Dinu
 - Copyright © 2015 Dmitry Khovratovich
 - Copyright © 2015 Jean-Philippe Aumasson
 - Copyright © 2015 Samuel Neves

Package: libatasmart4

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2008-2011 Lennart Poettering

Package: libaudit1

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2004-2019, 2021 08, 09, 16, 19, , , Red Hat Inc., Durham, North Carolina.
 - Copyright © 2004-2022 16, 18, 20, 21, , Red Hat Inc.
 - Copyright © 2004-2018 Red Hat Inc., Durham, North Carolina.

Package: libblkid1

- Licenses:
 - [BSD-3-Clause](#)
 - [BSD-4-Clause-UC](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2013 Alejandro Martinez Ruiz <alex@nowcomputing.com>
 - Copyright © 2001 Andreas Dilger
 - Copyright © 2009-2010 Andreas Dilger <adilger@sun.com>
 - Copyright © 2010 Andrew Nayenko <resver@gmail.com>
 - Copyright © 1999, 2001 Andries Brouwer
 - Copyright © 2009 Bastian Friedrich <bastian.friedrich@collax.com>
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2009 Corentin Chary <corentincj@iksaif.net>
 - Copyright © 2010 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 2013 Eric Sandeen <sandeen@redhat.com>
 - Copyright © 2009-2010 Free Software Foundation, Inc.
 - Copyright © 2020 Gao Xiang
 - Copyright © 1986 Gary S. Brown. You may use this program, or
 - Copyright © 2018 Harry Mallon <hjmallon@gmail.com>
 - Copyright © 2017 Hewlett Packard Enterprise Development LP

- Copyright © 2010 Jeroen Oortwijn <oortwijn@gmail.com>
- Copyright © 2010 Jiro SEKIBA <jir@unicus.jp>
- Copyright © 2008-2021 Karel Zak <kzak@redhat.com>
- Copyright © 2004-2008 Kay Sievers <kay.sievers@vrfy.org>
- Copyright © 2018 Kenneth Van Alstyne <kvanals@kvanals.org>
- Copyright © 2010 Lennart Poettering
- Copyright © 2016 Micron Technology, Inc.
- Copyright © 2009 Mike Hommey <mh@glandium.org>
- Copyright © 2018 Milan Broz <gmazyland@gmail.com>
- Copyright © 2012 Milan Broz <mbroz@redhat.com>
- Copyright © 2011, 2015 Philipp Marek <philipp.marek@linbit.com>
- Copyright © 2009, 2017 Red Hat, Inc.
- Copyright © 2013 Rolf Fokkens <rolf@fokkens.nl>
- Copyright © 2012 Sami Kerola <kerolasa@iki.fi>
- Copyright © 1995, 1999-2004 Theodore Tso
- Copyright © 2001, 2003 Theodore Y. Tso
- Copyright © 2018 Tony Asleson <tasleson@redhat.com>
- Copyright © 2018 Vaclav Dolezal <vdolezal@redhat.com>
- Copyright © 2020 Western Digital Corporation or its affiliates.
- Copyright © no-info-found

Package: libblockdev-crypto2

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2014-2018, 2020 Red Hat, Inc.

Package: libblockdev-fs2

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2014-2018, 2020 Red Hat, Inc.

Package: libblockdev-loop2

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2014-2018, 2020 Red Hat, Inc.

Package: libblockdev-swap2

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2014-2018, 2020 Red Hat, Inc.

Package: libblockdev-utils2

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2014-2018, 2020 Red Hat, Inc.

Package: libblockdev2

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2014-2018, 2020 Red Hat, Inc.

Package: libbpf1

- Licenses:
 - [BSD-2-Clause](#)
 - [LGPL-2.1-only](#)
- Copyright Notices:
 - Copyright © 2013-2015 Alexei Starovoitov <ast@kernel.org>
 - Copyright © 2018-2019, 2021 Facebook
 - Copyright © 2015 Huawei Inc.
 - Copyright © 2018-2019 Intel Corporation.
 - Copyright © 2019 Isovalent, Inc.
 - Copyright © 2022 Meta Platforms, Inc. and affiliates.
 - Copyright © 2019 Netronome Systems, Inc.
 - Copyright © 2017 Nicira, Inc.
 - Copyright © 2003-2013 Thomas Graf <tgraf@suug.ch>
 - Copyright © 2015 Wang Nan <wangnan0@huawei.com>

Package: libbrotli1

- Licenses:
 - [MIT](#)
- Copyright Notices:
 - Copyright © 2010, 2013-2018 Google Inc.

Package: libbsd0

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [ISC](#)
 - [MIT](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 1997 Christos Zoulas.
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2008 Damien Miller <djm@openbsd.org>
 - Copyright © 1996 David Mazieres <dm@uun.org>
 - Copyright © 2007 Eric Anderson <anderson@FreeBSD.org>
 - Copyright © 2018 Facebook, Inc.
 - Copyright © 2001 FreeBSD Inc.
 - Copyright © 2011, 2013, 2017, 2020 Guillem Jover
 - Copyright © 2004-2006, 2008-2022 Guillem Jover <guillem@hadrons.org>
 - Copyright © 2005 Hector Garcia Alvarez
 - Copyright © 1996 Internet Software Consortium.
 - Copyright © 2013 John-Mark Gurney <jmg@FreeBSD.org>
 - Copyright © 1992 Keith Muller.
 - Copyright © 1998 M. Warner Losh <imp@freebsd.org>
 - Copyright © 2013 Markus Friedl <markus@openbsd.org>
 - Copyright © 2001 Mike Barcroft <mike@FreeBSD.org>
 - Copyright © 2004, 2008, 2010-2011, 2016-2017 Otto Moerbeek <otto@drijf.net>
 - Copyright © 2005, 2007 Pawel Jakub Dawidek <pjd@FreeBSD.org>
 - Copyright © 2006 Robert Millan
 - Copyright © 1994, 1997-2000, 2002, 2008, 2010, 2014 The NetBSD Foundation, Inc.
 - Copyright © 1980, 1982, 1986, 1989-1994 The Regents of the University of California.
 - Copyright © 2014 Theo de Raadt <deraadt@openbsd.org>
 - Copyright © 1998, 2000-2002, 2007, 2010, 2015 Todd C. Miller <Todd.Miller@courtesan.com>
 - Copyright © 2004-2005, 2007, 2010, 2012-2015, 2017-2018 Todd C. Miller <Todd.Miller@sudo.ws>
 - Copyright © 2010 William Ahern

Package: libbz2-1.0

- Licenses:
 - [LicenseRef-BSD-variant](#)
- Copyright Notices:

- Copyright © 1996-2010 Julian R Seward <jseward@bzip.org>

Package: libc-bin

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-2.0-or-later](#)
 - [ISC](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
 - [Zlib](#)
- Copyright Notices:
 - Copyright © 1985, 1987-2024 02-04, 92-99, , , Free Software Foundation, Inc.
 - Copyright © 1990-2023 Free Software Foundation, Inc.
 - Copyright © 1995-1999 Internet Software Consortium.
 - Copyright © 2004 Internet Systems Consortium, Inc. ('ISC')
 - Copyright © 1991 Regents of the University of California.
 - Copyright © The GNU Toolchain Authors.
 - Copyright © 1980, 1982-1995, 2011 The Regents of the University of California.
 - Copyright © no-info-found

Package: libc6

- Licenses:
 - [BSD-3-Clause](#)
 - [ISC](#)
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
 - [None](#)
 - [Zlib](#)
- Copyright Notices:
 - Copyright © 1985, 1987-2024 02-04, 92-99, , , Free Software Foundation, Inc.
 - Copyright © 1992 Eric Young
 - Copyright © 1991-2022 Free Software Foundation, Inc.
 - Copyright © 1995-1999 Internet Software Consortium.
 - Copyright © 2004 Internet Systems Consortium, Inc. ('ISC')
 - Copyright © 2010-2012 Oracle America, Inc.
 - Copyright © 1991 Regents of the University of California.
 - Copyright © 1984, 1991, 2001 Stephen L. Moshier

- Copyright © 2001 Stephen L. Moshier (moshier@na-net.ornl.gov).
- Copyright © 2001 Stephen L. Moshier (moshier@na-net.ornl.gov).
- Copyright © 1993, 2011 Sun Microsystems, Inc.
- Copyright © The GNU Toolchain Authors.
- Copyright © 1980, 1982-1995, 2011 The Regents of the University of California.
- Copyright © 1998 WIDE Project.
- Copyright © no-info-found

Package: libcap-ng0

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2009, 2012-2017 10, 15, , , Red Hat Inc., Durham, North Carolina.
 - Copyright © 2009-2015, 2017, 2020-2022 Red Hat Inc.

Package: libcap2

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 1997-2016 Andrew G. Morgan <morgan@linux.kernel.org>
 - Copyright © 1997 Andrew Main <zefram@dcs.warwick.ac.uk>

Package: libcap2-bin

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 1997-2016 Andrew G. Morgan <morgan@linux.kernel.org>

Package: libcom-err2

- Licenses:
 - [BSD-3-Clause](#)
 - [NTP](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 1986-1988 MIT Information Systems and
 - Copyright © 1987-1988, 2003 MIT Student Information Processing Board
 - Copyright © 1987 the Student Information Processing Board

Package: libcrypt1

- Licenses:
 - [0BSD](#)
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2012-2018, 2021-2022 Alexander Peslyak
 - Copyright © 2001 Alexander Peslyak and it is hereby released to the
 - Copyright © 2013 Alexey Degtyarev <alexey@renatasystems.org>.
 - Copyright © 2015 Allan Jude <allanjude@FreeBSD.org>
 - Copyright © 2005-2016 Colin Percival
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 1994 David Burren
 - Copyright © 1991-2020 Free Software Foundation, Inc.
 - Copyright © 2004 Juniper Networks, Inc.
 - Copyright © 1998-2014 Solar Designer and it is hereby released to the
 - Copyright © 2007-2017 Thorsten Kukuk
 - Copyright © 2017 Zack Weinberg and it is hereby released to the
 - Copyright © 2018 Zack Weinberg.
 - Copyright © no-info-found
 - Copyright © 2018 vt@altlinux.org

Package: libcryptsetup12

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-or-later](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2004-2007 Clemens Fruhwirth <clemens@endorphin.org>
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2015 Google, Inc.
 - Copyright © 2004 Jana Saout <jana@saout.de>
 - Copyright © 2010 Lennart Poettering
 - Copyright © 2009-2023 Milan Broz

- Copyright © 2015-2023 Ondrej Kozina
- Copyright © 2016-2020 Ondrej Mosnacek
- Copyright © 2021-2022 Pavel Tobias
- Copyright © 2002, 2004 Phil Karn, KA9Q
- Copyright © 2009-2023 Red Hat, Inc.
- Copyright © 2019-2023 Vojtech Trefny

Package: libcurl4

- Licenses:
 - [BSD-3-Clause](#)
 - [ISC](#)
 - [None](#)
 - [curl](#)
- Copyright Notices:
 - Copyright © Bill Nagel <wnagel@tycoint.com>, Exacq Technologies
 - Copyright ContainsNonAsciiCharacters
 - Copyright © Daniel Stenberg, <daniel.se>, et al.
 - Copyright © Daniel Stenberg, <daniel@haxx.se>, et al.
 - Copyright © Florin Petriuc, <petriuc.florin@gmail.com>
 - Copyright © Hoi-Ho Chan, <hoiho.chan@gmail.com>
 - Copyright © Howard Chu, <hyc@highlandsun.com>
 - Copyright © Howard Chu, <hyc@openldap.org>
 - Copyright © 1996-2022 Internet Software Consortium.
 - Copyright © Jacob Hoffman-Andrews
 - Copyright © Linus Nielsen Feltzing, <linus@haxx.se>
 - Copyright © Marc Hoersken, <info@marc-hoersken.de>
 - Copyright © Mark Salisbury, <mark.salisbury@hp.com>
 - Copyright © Markus Moeller, <markus_moeller@compuserve.com>
 - Copyright © Michael Forney, <mforney@mforney.org>
 - Copyright © Nick Zitzmann, <nickzman@gmail.com>.
 - Copyright © Red Hat, Inc.
 - Copyright © Simon Josefsson, <simon@josefsson.org>, et al.
 - Copyright © Steve Holme, <steve_holme@hotmail.com>.

Package: libdb5.3

- Licenses:
 - [BSD-3-Clause](#)
 - [BSD-4-Clause-UC](#)

- [LicenseRef-public-domain](#)
- [Sleepycat](#)
- Copyright Notices:
 - Copyright © 1990, 1993-1996 Keith Bostic.
 - Copyright © 1997, 1999 Makoto Matsumoto and Takuji Nishimura.
 - Copyright © 1990, 1993-1996 Margo Seltzer.
 - Copyright © 1996-2013 Oracle and/or its affiliates.
 - Copyright © 1995-1996 The President and Fellows of Harvard University.
 - Copyright © 1982, 1986, 1990, 1993-1996 The Regents of the University of California.
 - Copyright © no-info-found

Package: libdbus-1-3

- Licenses:
 - [AFL-2.1](#)
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 1995 A. M. Kuchling
 - Copyright © 2007 Allison Lortie
 - Copyright © 2013 Chengwei Yang
 - Copyright © 2002-2003 CodeFactory AB
 - Copyright © 2006-2018 Collabora Ltd.
 - Copyright ContainsNonAsciiCharacters
 - Copyright © Intel
 - Copyright © 2009 Klaralvdalens Datakonsult AB, a KDAB Group company, info@kdab.net
 - Copyright © 2003 Mark McLoughlin
 - Copyright © 2004 Michael Meeks
 - Copyright © 2011 Nokia Corporation
 - Copyright © 2007 Ralf Habacker
 - Copyright © 2006-2014 Ralf Habacker <ralf.habacker@freenet.de>
 - Copyright © 2002-2007 Red Hat Inc.
 - Copyright © 2011 Roberto Guido

Package: libdebconfclient0

- Licenses:
 - [BSD-2-Clause](#)
- Copyright Notices:
 - Copyright © Anthony Towns <ajt@debian.org>
 - Copyright © Attilio Fiandrotti <fiandro@tiscali.it>

- Copyright © Colin Watson <cjwatson@debian.org>
- Copyright © Dan Jacobowitz <dan@debian.org>
- Copyright © David Whedon <dwhedon@gordian.com>
- Copyright © Regis Boudin <regis@debian.org>
- Copyright © Tollef Fog Heen <tfheen@debian.org>
- Copyright © 2000-2009 by Randolph Chung <tausq@debian.org>, the d-i team, and Canonical Ltd.

Package: libdevmapper1.02.1

- Licenses:
 - [LGPL-2.1-only](#)
- Copyright Notices:
 - Copyright © 2006 Rackable Systems
 - Copyright © 2004-2021 Red Hat, Inc.
 - Copyright © 2001-2004 Sistina Software, Inc.
 - Copyright © 2003 Theodore Tso.

Package: libedit2

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2015 Joerg Sonnenberger <joerg@NetBSD.org>.
 - Copyright © 1997-2014, 2017 The NetBSD Foundation, Inc.
 - Copyright © 1989-1990, 1992-1993 The Regents of the University of California.

Package: libelf1

- Licenses:
 - [LGPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 2001-2002 201, , r Red Hat, Inc.
 - Copyright © 2021-2022 Mark J. Wielaard <mark@klomp.org>
 - Copyright © 1996-2022 Red Hat, Inc.

Package: libexpat1

- Licenses:
 - [MIT](#)
- Copyright Notices:

- Copyright © 2001-2022 Expat maintainers
- Copyright © 1998-2000 Thai Open Source Software Center Ltd and Clark Cooper

Package: libext2fs2

- Licenses:
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.0-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2001 Alcove <http://www.alcove.com/>
 - Copyright © 1999 Andrea Arcangeli <andrea@suse.de>
 - Copyright © 2002 Andreas Dilger
 - Copyright © 2006-2007 Andreas Dilger <adilger@clusterfs.com>
 - Copyright © 2001 Andreas Gruenbacher, <a.gruenbacher@computer.org>
 - Copyright © 1999-2005 Andrew Tridgell
 - Copyright © 2006 Cluster File Systems, Inc.
 - Copyright © 2018 Collabora Ltd.
 - Copyright © 2001 Daniel Phillips
 - Copyright © 2002 David Woodhouse <dwmw2@infradead.org>
 - Copyright © 2007 IBM Corporation
 - Copyright © 2012 Intel Corporation.
 - Copyright © 2015 Jan Kara.
 - Copyright © 2000-2006 Jeremy Allison
 - Copyright © 1997 Klee Dienes
 - Copyright © 1995-1996 Michael Nonweiler <mrn20@cam.ac.uk>
 - Copyright © 2014 Oracle
 - Copyright © 2000 Paul `Rusty` Russell
 - Copyright © 2010 Red Hat, Inc., Lukas Czermer <lczerner@redhat.com>
 - Copyright © 1992-1994 Remy Card <card@masi.ibp.fr>
 - Copyright © 2014 SGI.
 - Copyright © 2004 Sam Hocevar <sam@hocevar.net>
 - Copyright © 2003-2007 Theodore Ts'o <tytso@mit.edu>
 - Copyright © 1993-2008, 2010-2011 Theodore Tso
 - Copyright © 1995-1997, 1999, 2002, 2004-2006 Theodore Tso <tytso@mit.edu>
 - Copyright © 2003 VMware, Inc.

- Copyright © 2011 Whamcloud, Inc.
- Copyright © 1997-2003 Yann Dirson <dirson@debian.org>
- Copyright © 2012 Zheng Liu <wenqing.lz@taobao.com>
- Copyright © abandoned. Code was
- Copyright © no-info-found

Package: libfdisk1

- Licenses:
 - [BSD-3-Clause](#)
 - [BSD-4-Clause-UC](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2010-2012 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 2009-2010 Free Software Foundation, Inc.
 - Copyright © 1986 Gary S. Brown. You may use this program, or
 - Copyright © 2006-2021 Karel Zak <kzak@redhat.com>
 - Copyright © 2010 Lennart Poettering
 - Copyright © 2012 Sami Kerola <kerolasa@iki.fi>
 - Copyright © no-info-found

Package: libffi8

- Licenses:
 - [MIT](#)
- Copyright Notices:
 - Copyright © 2009-2012 ARM Ltd.
 - Copyright © 2011-2012, 2019, 2021-2022 Anthony Green
 - Copyright © 2007, 2009-2010 Free Software Foundation, Inc
 - Copyright © 2020 Madhavan T. Venkataraman
 - Copyright © 2022 Oracle and/or its affiliates.
 - Copyright © 2011 Plausible Labs Cooperative, Inc.
 - Copyright © 1996, 1998-2000, 2003-2005, 2007-2010, 2014 Red Hat, Inc.

Package: libgcc-s1

- Licenses:
 - [GPL-3.0-or-later WITH GCC-exception-3.1](#)

- Copyright Notices:
 - Copyright © 1989-2022 Free Software Foundation, Inc.
 - Copyright © no-info-found

Package: libgcrypt20

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-1.0-or-later](#)
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
 - [MIT](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2020 Alibaba Group.
 - Copyright © 2013 Christian Grothoff
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2013 Dmitry Eremin-Solenikov
 - Copyright © 2012 Dmitry Kasatkin
 - Copyright © 1989, 1991-2020 Free Software Foundation, Inc.
 - Copyright © 2012 Intel Corporation
 - Copyright © 2017 Jia Zhang
 - Copyright © 2013-2022 Jussi Kivilinna
 - Copyright © 2012-2022 Jussi Kivilinna <jussi.kivilinna@iki.fi>
 - Copyright © 2006-2007 NTT (Nippon Telegraph and Telephone Corporation).
 - Copyright © 2003 Nikos Mavroyanopoulos
 - Copyright © 2012 Simon Josefsson
 - Copyright © 2014 Stephan Mueller <smueller@chronox.de>
 - Copyright © 2020 Tianjia Zhang
 - Copyright © 2020 Tianjia Zhang <tianjia.zhang@linux.alibaba.com>
 - Copyright © 1997-1999, 2001 Werner Koch (dd9jn)
 - Copyright © 2002-2004, 2010-2022 g10 Code GmbH

Package: libglib2.0-0

- Licenses:
 - [AFL-2.0](#)
 - [LGPL-2.0-or-later](#)
 - [LGPL-2.1-only](#)

- [LGPL-2.1-or-later](#)
- [LicenseRef-public-domain](#)
- [None](#)
- Copyright Notices:
 - Copyright © 2004 200, , Matthias Clasen <mclasen@redhat.com>
 - Copyright © 1991 92, 95-99, , Free Software Foundation, Inc.
 - Copyright © 2006 Alexander Larsson <alexl@redhat.com>
 - Copyright © 2021 Alexandros Theodotou
 - Copyright © 2004 Anders Carlsson <andersca@gnome.org>
 - Copyright © 2009 Benjamin Otte <otte@gnome.org>
 - Copyright © 2011-2015, 2019 Canonical Limited
 - Copyright © 2011-2020, 2022 Canonical Ltd
 - Copyright © 2015-2022 Christian Hergert <christian@hergert.me>
 - Copyright © 2010 Christian Kellner
 - Copyright © 2008 Christian Kellner, Samuel Cormier-Iijima
 - Copyright © 2010 Christian Persch
 - Copyright © 2008 Clemens N. Buss <cebuzz@gmail.com>
 - Copyright © 2008-2012 Codethink Limited
 - Copyright © 2017-2018 Collabora Inc.
 - Copyright © 2008-2011, 2013, 2015-2022 Collabora Ltd
 - Copyright © 2012 Collabora Ltd. <http://www.collabora.co.uk/>
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2002-2022 Debian contributors as listed in debian/changelog
 - Copyright © 2000 Eazel, Inc.
 - Copyright © 2005-2006, 2018 Emmanuele Bassi
 - Copyright © 2007 Emmanuele Bassi <ebassi@gnome.org>
 - Copyright © 2016-2020 Endless Mobile, Inc.
 - Copyright © 2017-2022 Endless OS Foundation, LLC
 - Copyright © 1991-1992, 1996-1997, 1999-2006 Free Software Foundation, Inc.
 - Copyright © 2015 Garrett Regier <garrettreger@gmail.com>
 - Copyright © 2001 Hans Breuer
 - Copyright © 2018, 2021 Igalia S.L.
 - Copyright © 2005-2007 Imendio AB
 - Copyright © 2010 Intel Corp.
 - Copyright © 2005-2007 John McCutchan
 - Copyright © 2003-2004 Jonathan Blandford <jrb@alum.mit.edu>
 - Copyright © 2013, 2015 Lars Uebernickel

- Copyright © 2005-2007 Marco Barisione <marco@barisione.org>
- Copyright © 2022 Marco Trevisan <marco.trevisan@canonical.com>
- Copyright © 2005 Matthias Clasen
- Copyright © 2004-2005 Matthias Clasen <mclasen@redhat.com>
- Copyright © 2014 NICE s.r.l.
- Copyright © 2008-2009 Nokia Corporation
- Copyright © 2010 Novell, Inc.
- Copyright © 1998 Owen Taylor
- Copyright © 1995-1997, 1999, 2002 Peter Mattis, Red Hat, Inc.
- Copyright © 1995-1998 Peter Mattis, Spencer Kimball and Josh MacDonald
- Copyright © 1998-2001, 2003-2022 Red Hat Inc.
- Copyright © 1999, 2003 Red Hat Software
- Copyright © 2007-2011, 2015 Ryan Lortie
- Copyright © 2007-2008 Ryan Lortie <desrt@desrt.ca>
- Copyright © 1999-2000 Scott Wimer
- Copyright © 1998, 2000 Sebastian Wilhelmi; University of Karlsruhe
- Copyright © 2016-2021 Simon McVittie
- Copyright © 2002-2007 Soeren Sandmann (sandmann@daimi.au.dk)
- Copyright © 1997-1998, 2000, 2005 Tim Janik
- Copyright © 1997-2001 Tim Janik and Red Hat, Inc.
- Copyright © 1999-2000 Tom Tromey
- Copyright © 2000, 2004 Tor Lillqvist
- Copyright © 2018 Will Thompson
- Copyright © 2020 William Manley
- Copyright © 2000-2004 Ximian Inc.
- Copyright © 2008-2009 codethink
- Copyright © no-info-found
- Copyright © 2011-2022 systemd contributors

Package: libglib2.0-bin

- Licenses:
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2011, 2013-2015, 2019 Canonical Limited
 - Copyright © 2008-2012 Codethink Limited
 - Copyright © 2020-2021 Frederic Martinsons
 - Copyright © 1998-2001, 2003-2022 Red Hat, Inc

- Copyright © no-info-found

Package: libgmp10

- Licenses:
 - [LGPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 1991-2020 20010, Free Software Foundation, Inc.
 - Copyright © 1991-2015, 2017-2019 Free
 - Copyright © 1991-2020 Free Software
 - Copyright © 1991-2019 Free Software Foundation

Package: libgnutls30

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [GPL-1.0-or-later](#)
 - [GPL-3.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-NoLicenseInfoFound](#)
 - [MIT](#)
- Copyright Notices:
 - Copyright © 2016-2018 ARPA2 project
 - Copyright © 2009-2012 Aleksey Kravchenko <rhash.admin@gmail.com>
 - Copyright © 2008 Alexander von Gernler.
 - Copyright © 2002 Andrew McDonald
 - Copyright © 2011-2016 Andy Polyakov <appro@openssl.org>
 - Copyright © 2011 Bardenheuer GmbH, Munich and Bundesdruckerei GmbH, Berlin
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2013-2018 Dmitry Eremin-Solenikov
 - Copyright © 2015-2017 Dmitry Eremin-Solenikov <dbaryshkov@gmail.com>
 - Copyright © 2013 Frank Morgner
 - Copyright © 1990-2022 Free Software
 - Copyright © 1990, 1995, 1998-1999, 2001-2021 Free Software Foundation
 - Copyright © 1990-2022 Free Software Foundation, Inc.
 - Copyright © 2012 INRIA Paris-Rocquencourt
 - Copyright © 2008-2012 Intel Corporation.
 - Copyright © 2008 Joe Orton <joe@manyfish.co.uk>

- Copyright © 2000-2001 Markus Friedl.
- Copyright © 2012-2018 Nikos Mavrogiannopoulos
- Copyright © 2015 Nikos Mavrogiannopoulos, Inc.
- Copyright © 2013-2018 Red Hat
- Copyright © 2014-2022 Red Hat, Inc.
- Copyright © 2017 Stephan Mueller <smueller@chronox.de>
- Copyright © 2022 Tobias Heider <tobias.heider@canonical.com>
- Copyright © no-info-found
- NoCopyrightInfoFound

Package: libgpg-error0

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 2001-2004, 2010, 2012-2018 g10 Code GmbH

Package: libgpiod3

- Licenses:
 - [LGPL-2.1-only](#)
- Copyright Notices:
 - Copyright © 2017-2022 Bartosz Golaszewski <bartekgola@gmail.com>
 - Copyright © 2017-2022 Bartosz Golaszewski <brgl@bgdev.pl>

Package: libgssapi-krb5-2

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [MIT](#)
 - [NTP](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 1987-1989, 1997, 2007 Massachusetts Institute of Technology
 - Copyright © 1993-1995 OpenVision Technologies, Inc.
 - Copyright © 2011-2018 PADL Software Pty Ltd.
 - Copyright © 2011, 2013, 2015 Red Hat, Inc.
 - Copyright © 1995-1997, 2003-2005, 2008-2009 Sun Microsystems, Inc.
 - Copyright © no-info-found
 - Copyright © 2000, 2002-2003, 2007-2008 the Massachusetts Institute of
 - Copyright © 1985-2023 the Massachusetts Institute of Technology

Package: libgudev-1.0-0

- Licenses:
 - [LGPL-2.1-only](#)
- Copyright Notices:
 - Copyright © 2008-2010 David Zeuthen <davidz@redhat.com>

Package: libhogweed6

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-3.0-or-later](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2017, 2020 Daiki Ueno
 - Copyright © 2016-2020 Dmitry Eremin-Solenikov
 - Copyright © 2012-2013, 2017-2018 Nikos Mavrogiannopoulos
 - Copyright © 2017 Red Hat, Inc.

Package: libidn2-0

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [LGPL-3.0-or-later](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 1990, 1992, 1994-2022 Free Software
 - Copyright © 1987-2022 Free Software Foundation, Inc.
 - Copyright © 2011-2022 Simon Josefsson
 - Copyright © 2017-2022 Tim Ruehsen
 - Copyright © no-info-found

Package: libip4tc2

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © Harald Welte <laforge@gnumonks.org>
 - Copyright © James Morris <jmorris@intercode.com.au>
 - Copyright © Jozsef Kadlecsek <kadlec@blackhole.kfki.hu>

- Copyright © Marc Boucher <marc+nf@mbsi.ca>
- Copyright © Paul 'Rusty' Russell <rusty@rustcorp.com.au>
- Copyright © 2000-2002 the netfilter coreteam <coreteam@netfilter.org>

Package: libip6tc2

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © Harald Welte <laforge@gnumonks.org>
 - Copyright © James Morris <jmorris@intercode.com.au>
 - Copyright © Jozsef Kadlecsek <kadlec@blackhole.kfki.hu>
 - Copyright © Marc Boucher <marc+nf@mbsi.ca>
 - Copyright © Paul 'Rusty' Russell <rusty@rustcorp.com.au>
 - Copyright © 2000-2002 the netfilter coreteam <coreteam@netfilter.org>

Package: libjson-c5

NoSourceInfoFound

Package: libk5crypto3

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [MIT](#)
 - [NTP](#)
- Copyright Notices:
 - Copyright © 1998-2013 Brian Gladman, Worcester, UK.
 - Copyright © 2000 Computer Science Laboratory
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 1995 Lehman Brothers, Inc.
 - Copyright © 2006-2007, 2009 NTT (Nippon Telegraph and Telephone Corporation) .
 - Copyright © 1990 RSA Data Security, Inc.
 - Copyright © 2013-2014, 2016-2017, 2020-2021 Red Hat, Inc.
 - Copyright © 1995 Richard P. Basch.
 - Copyright © 2006 The Regents of the University of Michigan
 - Copyright © no-info-found
 - Copyright © 1998 the FundsXpress, INC.
 - Copyright © 1985-1988, 1990-1991, 2000-2001, 2006-2010, 2013, 2016 the Massachusetts Institute
 - Copyright © 1987-1988, 1990-1991, 1995-2010, 2016-2017 the Massachusetts Institute of
 - Copyright © 1987-2023 the Massachusetts Institute of Technology.

- Copyright © 1995, 2003, 2008-2009, 2011-2012, 2015 the Massachusetts Institute of Technology. All

Package: libkeyutils1

- Licenses:
 - [LGPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2005, 2011 Red Hat, Inc.

Package: libklibc

- Licenses:
 - [BSD-4-Clause-UC](#)
 - [GPL-2.0-only](#)
 - [MIT](#)
 - [Zlib](#)
- Copyright Notices:
 - Copyright © 1995-2005 Jean-loup Gailly
 - Copyright © 1995-2005 Mark Adler
 - Copyright © The Regents of the University of California.
 - Copyright © no-info-found

Package: libkmod2

NoSourceInfoFound

Package: libkrb5-3

- Licenses:
 - [BSD-2-Clause](#)
 - [GPL-3.0-or-later WITH Bison-exception-2.2](#)
 - [ISC](#)
 - [MIT](#)
 - [NTP](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2017 Cloudera, Inc.
 - Copyright © 1994 CyberSAFE Corporation.
 - Copyright © 1995 Cygnus Support.
 - Copyright © 1984, 1989-1990, 2000-2015 Free Software Foundation, Inc.
 - Copyright © 1991 Hewlett-Packard Company
 - Copyright © 1990, 2000-2008 Massachusetts Institute of
 - Copyright © 1990-1994, 1996, 1998-2009 Massachusetts Institute of Technology.

- Copyright © 2011 NORDUnet A/S.
- Copyright © 1993-1995 OpenVision Technologies, Inc.
- Copyright © 2011-2014, 2016-2017, 2020-2021 Red Hat, Inc.
- Copyright © 2007, 2009 Secure Endpoints Inc.
- Copyright © 1998-2008 The OpenLDAP Foundation.
- Copyright © 2006 The Regents of the University of Michigan
- Copyright © no-info-found
- Copyright © 1998 the FundsXpress, INC.
- Copyright © 1989-1991, 1995, 2000-2004, 2007-2008, 2011, 2013 the Massachusetts
- Copyright © 1990-1991, 1993, 2002, 2007-2009, 2013, 2015 the Massachusetts Institute
- Copyright © 1987-1988, 1990-1991, 1995-2010, 2016-2017, 2019 the Massachusetts Institute of
- Copyright © 1985-2023 the Massachusetts Institute of Technology
- Copyright © 1995, 2003, 2008-2009, 2011-2012, 2015 the Massachusetts Institute of Technology. All
- Copyright © 2013 the Massachusetts Institute of Technology. All rights
- Copyright © 2015-2016 the fiat-crypto authors (see the AUTHORS file).

Package: libkrb5support0

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [ISC](#)
 - [LicenseRef-public-domain](#)
 - [MIT](#)
 - [NTP](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 1996, 1998-2009 Massachusetts Institute of Technology.
 - Copyright © 1998 Todd C. Miller <Todd.Miller@courtesan.com>
 - Copyright © no-info-found
 - Copyright © 1987-1988, 1990-1991, 1995-2010, 2016-2017 the Massachusetts Institute of
 - Copyright © 1987-2023 the Massachusetts Institute of Technology

Package: libldap-2.5-0

- Licenses:
 - [NTP](#)
 - [None](#)
 - [OLDAP-2.8](#)
- Copyright Notices:

- Copyright © 1998 A. Hartgers.
- Copyright © Bastian Blank <waldi@debian.org>
- Copyright © Ben Collins <bcollins@debian.org>
- Copyright © Giuseppe Iuculano <iuculano@debian.org>
- Copyright © 2006 Hans Leidekker
- Copyright © Helmut Grohne <helmut@subdivi.de>
- Copyright © 2004 Hewlett-Packard Company.
- Copyright © 2004-2005, 2007-2009, 2015 Howard Chu, Symas Corp.
- Copyright © 2018 Howard Chu.
- Copyright © 1997, 2002-2004 IBM Corporation.
- Copyright © Jelmer Vernooij <jelmer@debian.org>
- Copyright © 1998-2003 Kurt D. Zeilenga.
- Copyright © 1999 Lars Uffmann.
- Copyright © Matthijs Möhlmann <matthijs@cacholong.nl>
- Copyright © Michael Gilbert <mgilbert@debian.org>
- Copyright © Nico Golde <nion@debian.org>
- Copyright © Petter Reinholdtsen <pere@debian.org>
- Copyright © 2007-2008 Pierangelo Masarati.
- Copyright © Roland Bauerschmidt <rb@debian.org>
- Copyright © Russ Allbery <rra@de>
- Copyright © 2005-2006 SysNet s.n.c.
- Copyright © 1998-2022 The OpenLDAP Foundation.

Package: liblocale-gettext-perl

- Licenses:
 - [Artistic-1.0-Perl](#)
 - [GPL-1.0-or-later](#)
 - [LicenseRef-perl.5](#)
- Copyright Notices:
 - Copyright © Kim Vandry <vandry.ORG>

Package: liblz4-1

- Licenses:
 - [BSD-2-Clause](#)
- Copyright Notices:
 - Copyright © 2022 Xiaomi Inc.
 - Copyright © 2011-2020 Yann Collet

Package: liblzma5

- Licenses:
 - [LicenseRef-PD](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters

Package: libmd0

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [Beerware](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2000-2001 Aaron D. Gifford
 - Copyright © 2001 Markus Friedl.
 - Copyright © 2001 The NetBSD Foundation, Inc.
 - Copyright © no-info-found

Package: libmnl0

- Licenses:
 - [LGPL-2.1-only](#)
- Copyright Notices:
 - Copyright © 2008-2012 Pablo Neira Ayuso <pablo@netfilter.org>

Package: libmount1

- Licenses:
 - [BSD-3-Clause](#)
 - [BSD-4-Clause-UC](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2016 David Sterba <dsterba@suse.cz>
 - Copyright © 2010 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 2009-2010 Free Software Foundation, Inc.
 - Copyright © 1986 Gary S. Brown. You may use this program, or
 - Copyright © 2008-2021 Karel Zak <kzak@redhat.com>

- Copyright © 2010 Lennart Poettering
- Copyright © 2019 Microsoft Corporation
- Copyright © 2012 Sami Kerola <kerolasa@iki.fi>
- Copyright © 2016 Stanislav Brabec <sbrabec@suse.cz>
- Copyright © no-info-found

Package: libncursesw6

- Licenses:
 - [LicenseRef-MIT-X11](#)
- Copyright Notices:
 - Copyright © 1998-2018 Free Software Foundation, Inc.
 - Copyright © 2001 Pradeep Padala
 - Copyright © 1996-2021 Thomas E. Dickey

Package: libnetfilter-contrack3

- Licenses:
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2005-2012 Pablo Neira Ayuso <pablo@netfilter.org>
 - Copyright © 2012 Vyatta Inc. <http://www.vyatta.com>

Package: libnettle8

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-or-later](#)
 - [LGPL-3.0-or-later](#)
 - [LicenseRef-NoLicenseInfoFound](#)
 - [MIT](#)
- Copyright Notices:
 - Copyright © 2009-2012 Aleksey Kravchenko <rhash.admin@gmail.com>
 - Copyright © 2011 Andres Mejia
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2017, 2020 Daiki Ueno
 - Copyright © 2011 Daniel Kahn Gillmor
 - Copyright © 2020 Dmitry Baryshkov
 - Copyright © 2016-2020 Dmitry Eremin-Solenikov
 - Copyright © 2019 Dmitry Eremin-Solenikov <dbaryshkov@gmail.com>
 - Copyright © 2014 Exegin Technologies Limited
 - Copyright © 1991-2020 Free Software Foundation, Inc.

- Copyright © 2012 Jeremy Allison
- Copyright © 2017 Jia Zhang
- Copyright © 2020-2022 Mamone Tarsha
- Copyright © 2012 Michael Adam
- Copyright © 2021 Nicolas Mora
- Copyright © 2012-2013, 2017-2018 Nikos Mavrogiannopoulos
- Copyright © 2014 Owen Kirby
- Copyright © 2017-2018 Red Hat Inc.
- Copyright © 2012 Simon Josefsson
- Copyright © 2012 Stefan Metzmacher
- Copyright © 2020 Stephen R. van den Berg
- Copyright © 2021 Tianjia Zhang <tianjia.zhang@linux.alibaba.com>
- NoCopyrightInfoFound

Package: libnfnetwork0

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 2004 Astaro AG, written Harald Welte <hwelte@astaro.com>
 - Copyright © 2002-2006 Harald Welte <laforge@gnumonks.org>
 - Copyright © 2006-2011 Pablo Neira Ayuso <pablo@netfilter.org>

Package: libnftnl11

- Licenses:
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2013 Pablo Neira Ayuso <pablo@netfilter.org>

Package: libnghttp2-14

- Licenses:
 - [MIT](#)
- Copyright Notices:
 - Copyright © 2012-2016, 2021 Tatsuhiro Tsujikawa
 - Copyright © 2012, 2014-2016, 2019, 2022-2023 nghttp2 contributors
 - Copyright © 2022 nghttp3 contributors
 - Copyright © 2017 ngtcp2 contributors
 - Copyright © the
 - Copyright © will still be owned the

Package: libnginx-mod-http-echo

- Licenses:
 - [BSD-2-Clause](#)
- Copyright Notices:
 - Copyright © 2009-2018 Yichun 'agentzh' Zhang <agentzh@gmail.com>.

Package: libnl-3-200

- Licenses:
 - [LGPL-2.1-only](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2012 Cumulus Networks, Inc
 - Copyright © 2003-2014 Thomas Graf <tgraf@suug.ch>
 - Copyright © no-info-found

Package: libnl-genl-3-200

- Licenses:
 - [LGPL-2.1-only](#)
- Copyright Notices:
 - Copyright © 2003-2014 Thomas Graf <tgraf@suug.ch>

Package: libnl-route-3-200

- Licenses:
 - NONE
- Copyright Notices:

Package: libnss-myhostname

- Licenses:
 - [CC0-1.0](#)
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2007-2022 Free Software Foundation, Inc.
 - Copyright © 2000 Red Hat, Inc.
 - Copyright © 1999 Tom Tromey
 - Copyright © blurb:
 - Copyright © no-info-found

Package: libp11-kit0

- Licenses:
 - [BSD-3-Clause](#)
- Copyright Notices:
 - Copyright © 2011 Collabora Ltd.
 - Copyright © 2012-2019 Red Hat, Inc.
 - Copyright © 2004-2005, 2007-2008, 2012-2013 Stefan Walter

Package: libpam-modules

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-or-later](#)
 - [ISC](#)
 - [LGPL-2.0-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 1999 Ben Collins <bcollins@debian.org>
 - Copyright © 1996-1997, 1999 Cristian Gafton <gafton@redhat.com>
 - Copyright © 2005 Darren Tucker <dtucker at zip com au>.
 - Copyright © 2020 Dmitry V. Levin <ldv@altlinux.org>
 - Copyright © 2005 IBM Corporation
 - Copyright © 2016 Keller Fuchs <kellerfuchs@hashbang.sh>
 - Copyright © 1994-1996 Olaf Kirch, <okir@lst.de>
 - Copyright © 2005 Red Hat Inc., Durham, North Carolina.
 - Copyright © 2001-2010, 2013, 2016-2017, 2019-2021 Red Hat, Inc.
 - Copyright © 2006 Ruslan Savchenko <savrus@mexmat.net>
 - Copyright © 2010 Shane Tzen <shane@ict.usc.edu>
 - Copyright © 2012-2020 Sven Hartge <sven@svenhartge.de>
 - Copyright © 1999 Theodore Tso.
 - Copyright © 2008, 2012 Thorsten Kukuk
 - Copyright © 2005-2006, 2008 Thorsten Kukuk <kukuk@suse.de>
 - Copyright © 2005-2008, 2010, 2013 Thorsten Kukuk <kukuk@thkukuk.de>
 - Copyright © 2010, 2017, 2019 Tomas Mraz <tmraz@redhat.com>
 - Copyright © 1995 Wietse Venema.
 - Copyright © message from logdaemon-5.6 (original file name DISCLAIMER)
 - Copyright © no-info-found

Package: libpam-modules-bin

- Licenses:
 - [BSD-3-Clause](#)
 - [LGPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 1996 Andrew G. Morgan, .
 - Copyright © 2001-2010, 2013, 2016-2017, 2019-2021 Red Hat, Inc.
 - Copyright © 2008 Thorsten Kukuk <kukuk@suse.de>
 - Copyright © 2010, 2017, 2019 Tomas Mraz <tmraz@redhat.com>
 - Copyright © no-info-found

Package: libpam-systemd

- Licenses:
 - [CC0-1.0](#)
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2007-2022 Free Software Foundation, Inc.
 - Copyright © 2000 Red Hat, Inc.
 - Copyright © 1999 Tom Tromey
 - Copyright © blurb:
 - Copyright © no-info-found

Package: libpam0g

- Licenses:
 - [BSD-3-Clause](#)
- Copyright Notices:
 - Copyright © 1999 Andrew G. Morgan <morgan@ftp.kernel.org>
 - Copyright © 1996-2003, 2005 Andrew G. Morgan <morgan@kernel.org>
 - Copyright © 1996-1997 Andrew G. Morgan <morgan@parc.power.net>
 - Copyright © 2005-2006 Red Hat, Inc. - Licensing details are in the COPYING
 - Copyright © 2005 Sebastien Tricaud , <toady@gscore.org>
 - Copyright © no-info-found

Package: libpcre2-8-0

- Licenses:
 - [BSD-3-Clause](#)
- Copyright Notices:
 - Copyright © 1997-2022 University of Cambridge

Package: libpcsc-lite1

- Licenses:
 - [BSD-3-Clause](#)
 - [ISC](#)
- Copyright Notices:
 - Copyright © 2003-2004 Damien Sauveron <damien.sauveron@labri.fr>
 - Copyright © 1999-2005 David Corcoran <corcoran@musclecard.com>
 - Copyright © 2009 Jean-Luc Giraud <jlgiraud@googlemail.com>
 - Copyright © 1999-2022 Ludovic Rousseau <ludovic.rousseau@free.fr>
 - Copyright © 2005 Martin Paljak <martin@paljak.pri.ee>
 - Copyright © 2007-2011 Mij <mij@bitchx.it>

Package: libpolkit-agent-1-0

- Licenses:
 - [None](#)
- Copyright Notices:
 - Copyright © 2009-2010 Andrew Psaltis
 - Copyright © 2010 Antoine Jacoutot
 - Copyright © 2016-2021 Free Software Foundation, Inc.
 - Copyright © 2011 Google Inc.
 - Copyright © 2020 Karl Ove Hufthammer
 - Copyright © 2008-2021 Red Hat, Inc.
 - Copyright © 2013 SUSE Linux GmbH
 - Copyright © 2015 Tangent Space
 - Copyright © 2019 The Meson development team
 - Copyright © 2019 Wu Xiaotian

Package: libpolkit-gobject-1-0

- Licenses:
 - [None](#)
- Copyright Notices:
 - Copyright © 2009-2010 Andrew Psaltis
 - Copyright © 2010 Antoine Jacoutot
 - Copyright © 2016-2021 Free Software Foundation, Inc.
 - Copyright © 2011 Google Inc.
 - Copyright © 2020 Karl Ove Hufthammer
 - Copyright © 2008-2021 Red Hat, Inc.
 - Copyright © 2013 SUSE Linux GmbH

- Copyright © 2015 Tangent Space
- Copyright © 2019 The Meson development team
- Copyright © 2019 Wu Xiaotian

Package: libproc2-0

- Licenses:
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 1998-2005 Albert Cahalan
 - Copyright © 1996 Charles Blake <cblake@bbn.com>
 - Copyright © 1996 Charles L. Blake.
 - Copyright © 2003 Chris Rivera
 - Copyright © 2015, 2020 Craig Small <csmall@dropbear.xyz>
 - Copyright © 2003 Fabian Frederick
 - Copyright © 1993 J. Cowley
 - Copyright © 2017-2022 James C. Warmer
 - Copyright © 2015-2022 Jim Warner <james.warner@comcast.net>
 - Copyright © 1995 Martin Schulze <joey@infodrom.north.de>
 - Copyright © 1998 Michael K. Johnson
 - Copyright © 1992-1998 Michael K. Johnson <johnsonm@redhat.com>
 - Copyright © no-info-found

Package: libpsl5

- Licenses:
 - [LicenseRef-Chromium](#)
 - [MIT](#)
- Copyright Notices:
 - Copyright © 2014-2015 The Chromium Authors
 - Copyright © 2014-2022 Tim Ruehsen

Package: libsassl2-2

- Licenses:
 - [NTP](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 1998-2017 Carnegie Mellon University.
 - Copyright © 1991-1992 RSA Data Security, Inc. Created . All

Package: libsassl2-modules-db

- Licenses:
 - [None](#)
- Copyright Notices:
 - Copyright © 1998-2017 Carnegie Mellon University.

Package: libseccomp2

- Licenses:
 - [LGPL-2.1-only](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2012 Ashley Lai <adlai@us.ibm.com>
 - Copyright © 2019-2020 Cisco Systems, Inc. <pmoore2@cisco.com>
 - Copyright © 2012 Corey Bryant <coreyb@linux.vnet.ibm.com>
 - Copyright © 2012 Eduardo Otubo <otubo@linux.vnet.ibm.com>
 - Copyright © 2012 Eric Paris <eparis@redhat.com>
 - Copyright © 2015 Freescale <bogdan.purcareata@freescale.com>
 - Copyright © 2014 Imagination Technologies Ltd.
 - Copyright © 2012 Paul Moore <pmoore@redhat.com>
 - Copyright © 2020 Red Hat <gscrivan@redhat.com>
 - Copyright © 2014 Red Hat <mjuskiewicz@redhat.com>
 - Copyright © 2012-2018, 2020 Red Hat <pmoore@redhat.com>
 - Copyright © no-info-found

Package: libselinux1

- Licenses:
 - [Unlicense](#)
- Copyright Notices:
 - Copyright © no-info-found

Package: libsemanage2

- Licenses:
 - [LGPL-2.1-or-later](#)
 - [Unlicense](#)
- Copyright Notices:
 - Copyright © 2017 Mellanox Technologies Inc
 - Copyright © 2005-2021 Red Hat Inc.
 - Copyright © 2004-2007, 2009 Tresys Technology, LLC
 - Copyright © no-info-found

Package: libsepol2

- Licenses:
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2017 Mellanox Technologies Inc.
 - Copyright © 2008 NEC Corporation
 - Copyright © 2003-2007, 2019 Red Hat Inc.
 - Copyright © 2003-2008, 2011, 2013-2015 Tresys Technology, LLC
 - Copyright © 2004-2005 Trusted Computer Solutions, Inc.

Package: libsmartcols1

- Licenses:
 - [BSD-3-Clause](#)
 - [BSD-4-Clause-UC](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2010 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 2009-2010 Free Software Foundation, Inc.
 - Copyright © 1986 Gary S. Brown. You may use this program, or
 - Copyright © 2016 Igor Gnatenko <i.gnatenko.brain@gmail.com>
 - Copyright © 2006-2021 Karel Zak <kzak@redhat.com>
 - Copyright © 2010 Lennart Poettering
 - Copyright © 2014 Ondrej Oprala <oprala@redhat.com>
 - Copyright © 2012 Sami Kerola <kerolas@iki.fi>
 - Copyright © no-info-found

Package: libss2

- Licenses:
 - [NTP](#)
- Copyright Notices:
 - Copyright © 1987-1989 MIT
 - Copyright © 1987-1989 MIT Student Information Processing

- Copyright © 1987-1988, 2003 MIT Student Information Processing Board
- Copyright © 1987-1989 Massachusetts Institute of Technology

Package: libssh2-1

- Licenses:
 - [BSD-3-Clause](#)
- Copyright Notices:
 - Copyright © 2008-2009 © Simon Josefsson
 - Copyright © 2009-2021 (c) Daniel Stenberg
 - Copyright © 2007 (c) Eli Fant <elifantu@mail.ru>
 - Copyright © 2000 (c) Markus Friedl
 - Copyright © 2015 (c) Microsoft Corp.
 - Copyright © 2005-2006 (c) Mikhail Gusarov <dottedmag@dottedmag.net>
 - Copyright © 2004-2007 (c) Sara Golemon <sarag@libssh2.org>
 - Copyright © 2006-2007 (c) The Written Word, Inc.

Package: libssl3

- Licenses:
 - [Apache-2.0](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2004-2014 Akamai Technologies.
 - Copyright © 2017 BaishanCloud.
 - Copyright © 2015 CloudFlare, Inc.
 - Copyright © 2014-2016 Cryptography Research, Inc.
 - Copyright © 2004 EdelKey Project.
 - Copyright © 1995-1998 Eric A. Young, Tim J. Hudson
 - Copyright © 2014 Intel Corporation.
 - Copyright © 2005, 2007-2020 Nokia
 - Copyright © 2002, 2017-2020 Oracle and/or its affiliates.
 - Copyright © 2019 Red Hat, Inc.
 - Copyright © 2017 Ribose Inc.
 - Copyright © 2015-2022 Siemens AG
 - Copyright © 1998-2024 The OpenSSL Project
 - Copyright © 1995-2024 The OpenSSL Project Authors.

Package: libstdc%2B%2B6

- Licenses:
 - [GPL-3.0-or-later WITH GCC-exception-3.1](#)

- [LicenseRef-AmbiguousLicenseInfoFound](#)
- [LicenseRef-NoLicenseInfoFound](#)
- [None](#)
- Copyright Notices:
 - Copyright © 1989-2022 Free Software Foundation, Inc.
 - NoCopyrightInfoFound
 - AmbiguousCopyrightInfoFound

Package: libsystemd-shared

- Licenses:
 - [CC0-1.0](#)
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2008 Alan Jenkins <alan.christopher.jenkins@googlemail.com>
 - Copyright © 2012 B. Poettering
 - Copyright © 2018 Dell Inc.
 - Copyright © 2007-2022 Free Software Foundation, Inc.
 - Copyright © 2012, 2014 Holger Hans Peter Freyther
 - Copyright © 2013 Intel Corporation
 - Copyright © 2010 Maarten Lankhorst
 - Copyright © 2010 ProFUSION embedded systems
 - Copyright © 2000, 2005 Red Hat, Inc.
 - Copyright © 2012 Roberto Sassu - Politecnico di Torino, Italy
 - Copyright © 1999-2000 Tom Tromeey
 - Copyright © blurb:
 - Copyright © break;
 - Copyright © no-info-found

Package: libsystemd0

- Licenses:
 - [CC0-1.0](#)
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
 - [None](#)

- Copyright Notices:
 - Copyright © 2008 Alan Jenkins <alan.christopher.jenkins@gmail.com>
 - Copyright © 2012 B. Poettering
 - Copyright © 2007-2022 Free Software Foundation, Inc.
 - Copyright © 2000 Red Hat, Inc.
 - Copyright © 1999 Tom Tromey
 - Copyright © blurb:
 - Copyright © no-info-found

Package: libtasn1-6

- Licenses:
 - [LGPL-2.1-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 1984, 1989-1990, 2000-2015, 2018-2021 Free Software Foundation
 - Copyright © 1987-2022 Free Software Foundation, Inc.

Package: libtext-charwidth-perl

- Licenses:
 - [None](#)
- Copyright Notices:
 - Copyright © 2003 Tomohiro KUBOTA <kubota@debian.org>

Package: libtext-iconv-perl

- Licenses:
 - [None](#)
- Copyright Notices:
 - Copyright © 2007 Michael Piotrowski.

Package: libtinfo6

- Licenses:
 - [LicenseRef-MIT-X11](#)
- Copyright Notices:
 - Copyright © 1998-2018 Free Software Foundation, Inc.
 - Copyright © 2001 Pradeep Padala
 - Copyright © 1996-2021 Thomas E. Dickey

Package: libudev1

- Licenses:

- [CC0-1.0](#)
- [LGPL-2.1-only](#)
- [LGPL-2.1-or-later](#)
- [LicenseRef-public-domain](#)
- [None](#)
- Copyright Notices:
 - Copyright © 2009 Alan Jenkins <alan-jenkins@tuffmail.co.uk>
 - Copyright © 2008 Alan Jenkins <alan.christopher.jenkins@gmail.com>
 - Copyright © 2007-2022 Free Software Foundation, Inc.
 - Copyright © 2000 Red Hat, Inc.
 - Copyright © 1999 Tom Tromey
 - Copyright © blurb:
 - Copyright © no-info-found

Package: libudisks2-0

- Licenses:
 - [LGPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 2011-2012 David Zeuthen <zeuthen@gmail.com>

Package: libunistring2

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-2.1-or-later](#)
 - [LGPL-3.0-or-later](#)
- Copyright Notices:
 - Copyright © 1990-2022 Free Software
 - Copyright © 1999-2002, 2005-2007, 2009-2022 Free Software Foundation
 - Copyright © 1990-2022 Free Software Foundation, Inc.

Package: libuuid1

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-2.0-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2017 Philip Prindeville
 - Copyright © 1996-1999, 2007 Theodore Tso.
 - Copyright © no-info-found

Package: libxtables12

- Licenses:
 - [GPL-2.0-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2011 Jan Engelhardt
 - Copyright © no-info-found
 - Copyright © 2000-2006 the netfilter coreteam <coreteam@netfilter.org>:

Package: libxxhash0

- Licenses:
 - [BSD-2-Clause](#)
- Copyright Notices:
 - Copyright © 2012-2020 Yann Collet

Package: libzstd1

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © Martin Liska
 - Copyright © Meta Platforms, Inc. and affiliates
 - Copyright © Przemyslaw Skibinski
 - Copyright © SUSE
 - Copyright © Yann Collet

Package: linux-image-6.6.74-arm64

- Licenses:
 - NONE
- Copyright Notices:

Package: linux-image-arm64

- Licenses:
 - NONE
- Copyright Notices:

Package: login

- Licenses:
 - [BSD-2-Clause](#)

- [BSD-3-Clause](#)
- [LicenseRef-Shadow-Artistic](#)
- [Unlicense](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2004 The FreeBSD Project.
 - Copyright © 1990-1995 Wietse Venema.
 - Copyright © no-info-found

Package: logsave

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 1993-2008, 2011, 2013 Theodore Tso.

Package: mawk

- Licenses:
 - [GPL-2.0-only](#)
- Copyright Notices:
 - Copyright © 1991-1996, 2008-2020 /
 - Copyright © 2005 Aleksey Cheusov
 - Copyright © 2009-2010 Jonathan Nieder
 - Copyright © 1991-1996, 2014 Michael D. Brennan
 - Copyright © 2008-2020 Thomas E. Dickey

Package: mount

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2010 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 2006-2021 Karel Zak <kzak@redhat.com>
 - Copyright © 2002-2012 Red Hat, Inc.
 - Copyright © 2012 Sami Kerola <kerolasa@iki.fi>
 - Copyright © no-info-found

Package: ncurses-bin

- Licenses:

- [LicenseRef-MIT-X11](#)
- Copyright Notices:
 - Copyright © 1998-2018 Free Software Foundation, Inc.
 - Copyright © 2001 Pradeep Padala
 - Copyright © 1996-2021 Thomas E. Dickey

Package: net-tools

- Licenses:
 - [GPL-1.0-or-later](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 1997-2000 Andi Kleen. Subject to the GPL.
 - Copyright © 1996, 1999 Bernd Eckenfels, Germany
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2001 Daniel Stodden
 - Copyright © 2000 David A. Hinds - dhinds@pcmcia.sourceforge.org
 - Copyright © 1997-2000 Donald Becker
 - Copyright © 1993 Fred Baumgarten
 - Copyright © 1994 John Paul Morrison (VE7JPM).
 - Copyright © 1988-1994 MicroWalt Corporation
 - Copyright © no-info-found

Package: nginx

- Licenses:
 - [BSD-2-Clause](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © Austin Appleby
 - Copyright © 2002-2021 Igor Sysoev
 - Copyright © 2008 Manlio Perillo (manlio.perillo@gmail.com)
 - Copyright © Maxim Dounin
 - Copyright © 2011-2022 Nginx, Inc.
 - Copyright © Roman Arutyunyan
 - Copyright © Ruslan Ermilov
 - Copyright © 2009-2010 Unbit S.a.s.
 - Copyright © Valentin V. Bartenev
 - Copyright © 2015 Vlad Krasnov

Package: openssh-client

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [ISC](#)
 - [LicenseRef-Mazieres-BSD-style](#)
 - [None](#)
 - [SSH-OpenSSH](#)
- Copyright Notices:
 - Copyright © 1999 Aaron Campbell
 - Copyright © 2008 Alexander von Gernler.
 - Copyright © Andre Lucas
 - Copyright © 2005 Anil Madhavapeddy.
 - Copyright © 2013 Aris Adamantiadis.
 - Copyright © Ben Lindstrom
 - Copyright © Chris Adams
 - Copyright © 2023 Colin Watson.
 - Copyright © Corinna Vinschen
 - Copyright © Cray Inc.
 - Copyright © 1999-2020 Damien Miller
 - Copyright © 1999-2008, 2011-2013, 2015, 2018, 2022 Damien Miller <djm@mindrot.org>
 - Copyright © 2001-2008 Damien Miller <djm@openbsd.org>
 - Copyright © Daniel Kouril
 - Copyright © 2005 Daniel Walsh <dwalsh@redhat.com>
 - Copyright © Darre
 - Copyright © 2005, 2008, 2014 Darren Tucker <dtucker@zip.com.au>
 - Copyright © 2006, 2016 Darren Tucker.
 - Copyright © 1995-1996 David Mazieres <dm@lcs.mit.edu>
 - Copyright © Denis Parker
 - Copyright © Dug Song
 - Copyright © 1983, 1995-1997 Eric P. Allman
 - Copyright © 1995-1998 Eric Young (eay@cryptsoft.com)
 - Copyright © Gert Doering
 - Copyright © 2019 Google Inc.
 - Copyright © 2019 Google LLC
 - Copyright © 2004 Henning Brauer <henning@openbsd.org>
 - Copyright © 2001-2003 Ian F. Darwin.

- Copyright © 2016 Ingo Schwarze <schwarze@openbsd.org>
- Copyright © 1996 Internet Software Consortium.
- Copyright © 2001, 2003 Jakob Schlyter
- Copyright © Jason Downs
- Copyright © 2015 Joyent, Inc
- Copyright © Juha Yrjölä
- Copyright © Kevin Steves
- Copyright © 1999-2004, 2008, 2010, 2012-2014, 2017, 2019 Markus Friedl
- Copyright © 2000, 2003, 2013 Markus Friedl <markus@openbsd.org>
- Copyright © Michael Stone
- Copyright © Networks Associates Technology, Inc.
- Copyright © 2000 Niels Provos
- Copyright © 2000-2002 Niels Provos <provos@citi.umich.edu>
- Copyright © 1997 Niels Provos <provos@physnet.uni-hamburg.de>
- Copyright © 2002-2003 Nils Nordman
- Copyright © 2004, 2008, 2010-2011, 2016-2017 Otto Moerbeek <otto@drijf.net>
- Copyright © 2014, 2020 Pedro Martelletto
- Copyright © Per Allansson
- Copyright © 1994 Phil Karn <karn@qualcomm.com>
- Copyright © 1999-2020 Philip Hands <phil@hands.com>
- Copyright © 2005 Reyk Floeter <reyk@openbsd.org>
- Copyright © 2001-2009 Simon Wilkinson
- Copyright © Solar Designer
- Copyright © 1995 Tatu Ylonen <ylo@cs.hut.fi>, Espoo, Finland
- Copyright © 2013 Ted Unangst <tedu@openbsd.org>
- Copyright © 2004 Ted Unangst and Todd Miller
- Copyright © 1983, 1988-1993 The Regents of the University of California.
- Copyright © 1995-1999, 2008 Theo de Raadt
- Copyright © Tim Rice
- Copyright © 1997, 2008-2009 Todd C. Miller
- Copyright © 1997-1998, 2000-2002, 2004-2005, 2007, 2010 Todd C. Miller
<Todd.Miller@courtesan.com>
- Copyright © Wayne Schroeder
- Copyright © 2003 Wesley Griffin
- Copyright © 1996-1998, 2003 William Allen Simpson <wsimpson@greendragon.com>
- Copyright © William Jones

Package: openssh-server

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [ISC](#)
 - [None](#)
 - [SSH-OpenSSH](#)
- Copyright Notices:
 - Copyright © Aaron Campbell
 - Copyright © 2008 Alexander von Gernler.
 - Copyright © 2000 Andre Lucas
 - Copyright © 2005 Anil Madhavapeddy.
 - Copyright © 2013 Aris Adamantiadis.
 - Copyright © 2000-2001, 2003 Ben Lindstrom
 - Copyright © 2002 Chris Adams
 - Copyright © 2023 Colin Watson.
 - Copyright © 2003 Constantin S. Svintsoff <kostik@iclub.nsu.ru>
 - Copyright © Corinna Vinschen
 - Copyright © Cray Inc.
 - Copyright © 2011 Dag-Erling Smorgrav
 - Copyright © 1999-2020 Damien Miller
 - Copyright © 1999-2008, 2011-2013, 2015, 2018, 2022 Damien Miller <djm@mindrot.org>
 - Copyright © 2006 Damien Miller <djm@openbsd.org>
 - Copyright © 2002 Daniel Kouril
 - Copyright © 2005 Daniel Walsh <dwalsh@redhat.com>
 - Copyright © Darre
 - Copyright © 2020 Darren Tucker <dtucker@openbsd.org>
 - Copyright © 2005, 2008, 2014 Darren Tucker <dtucker@zip.com.au>
 - Copyright © 2004-2006, 2016 Darren Tucker.
 - Copyright © Denis Parker
 - Copyright © Dug Song
 - Copyright © 1983, 1995-1997 Eric P. Allman
 - Copyright © 1995-1998 Eric Young (ey@cryptsoft.com)
 - Copyright © Gert Doering
 - Copyright © 2019 Google Inc.
 - Copyright © 2019 Google LLC
 - Copyright © 2004 Henning Brauer <henning@openbsd.org>
 - Copyright © 2001-2003 Ian F. Darwin.

- Copyright © 2016 Ingo Schwarze <schwarze@openbsd.org>
- Copyright © 1996 Internet Software Consortium.
- Copyright © Jakob Schlyter
- Copyright © 1996 Jason Downs
- Copyright © 2015 Joyent, Inc
- Copyright © Juha Yrjölä
- Copyright © 2001 Kevin Steves
- Copyright © 1999-2004, 2008, 2010, 2012-2014, 2017, 2019 Markus Friedl
- Copyright © 2000, 2002-2003, 2013 Markus Friedl <markus@openbsd.org>
- Copyright © Michael Stone
- Copyright © 2002 Networks Associates Technology, Inc.
- Copyright © 2000 Niels Provos
- Copyright © 2001-2002 Niels Provos <provos@citi.umich.edu>
- Copyright © 1997 Niels Provos <provos@physnet.uni-hamburg.de>
- Copyright © Nils Nordman
- Copyright © 2004, 2008, 2010-2011, 2016-2017 Otto Moerbeek <otto@drijf.net>
- Copyright © 2001 Per Allansson
- Copyright © 2010 Red Hat, Inc.
- Copyright © 2005 Reyk Floeter <reyk@openbsd.org>
- Copyright © 2001-2009 Simon Wilkinson
- Copyright © Solar Designer
- Copyright © 1988-2002 Sun Microsystems, Inc.
- Copyright © 1995 Tatu Ylonen <ylo@cs.hut.fi>, Espoo, Finland
- Copyright © 2013 Ted Unangst <tedu@openbsd.org>
- Copyright © 2004 Ted Unangst and Todd Miller
- Copyright © 1983, 1988-1993 The Regents of the University of California.
- Copyright © 1995-1999, 2008 Theo de Raadt
- Copyright © 2015 Theo de Raadt <deraadt@openbsd.org>
- Copyright © Tim Rice
- Copyright © 1997-1998, 2008-2009 Todd C. Miller
- Copyright © 1997-1998, 2000-2002, 2004-2005, 2007, 2010 Todd C. Miller
<Todd.Miller@courtesan.com>
- Copyright © Wayne Schroeder
- Copyright © Wesley Griffin
- Copyright © 2012 Will Drewry <wad@dataspill.org>
- Copyright © William Jones

Package: openssh-sftp-server

- Licenses:
 - [BSD-2-Clause](#)
 - [BSD-3-Clause](#)
 - [ISC](#)
 - [None](#)
 - [SSH-OpenSSH](#)
- Copyright Notices:
 - Copyright © Aaron Campbell
 - Copyright © Andre Lucas
 - Copyright © 2005 Anil Madhavapeddy.
 - Copyright © Ben Lindstrom
 - Copyright © Chris Adams
 - Copyright © 2003 Constantin S. Svintsoff <kostik@iclub.nsu.ru>
 - Copyright © Corinna Vinschen
 - Copyright © Cray Inc.
 - Copyright © 1999-2020 Damien Miller
 - Copyright © 1999-2008, 2011-2013, 2015, 2018, 2022 Damien Miller <djm@mindrot.org>
 - Copyright © Daniel Kouril
 - Copyright © Darre
 - Copyright © 2006, 2016 Darren Tucker.
 - Copyright © Denis Parker
 - Copyright © Dug Song
 - Copyright © Gert Doering
 - Copyright © 2004 Henning Brauer <henning@openbsd.org>
 - Copyright © 2001-2003 Ian F. Darwin.
 - Copyright © 1996 Internet Software Consortium.
 - Copyright © Jakob Schlyter
 - Copyright © Jason Downs
 - Copyright © 2015 Joyent, Inc
 - Copyright © Juha Yrjölä
 - Copyright © Kevin Steves
 - Copyright © 1999-2004, 2008, 2010, 2012-2014, 2017, 2019 Markus Friedl
 - Copyright © Michael Stone
 - Copyright © Networks Associates Technology, Inc.
 - Copyright © Niels Provos
 - Copyright © Nils Nordman
 - Copyright © 2004, 2008, 2010-2011, 2016-2017 Otto Moerbeek <otto@drijf.net>

- Copyright © Per Allansson
- Copyright © 2005 Reyk Floeter <reyk@openbsd.org>
- Copyright © Simon Wilkinson
- Copyright © Solar Designer
- Copyright © 1995 Tatu Ylonen <ylo@cs.hut.fi>, Espoo, Finland
- Copyright © 2004 Ted Unangst and Todd Miller
- Copyright © 1983, 1989-1993 The Regents of the University of California.
- Copyright © 1995, 1999 Theo de Raadt
- Copyright © Tim Rice
- Copyright © Todd C. Miller
- Copyright © 1997-1998, 2000-2002, 2004-2005, 2007, 2010 Todd C. Miller
<Todd.Miller@courtesan.com>
- Copyright © Wayne Schroeder
- Copyright © Wesley Griffin
- Copyright © William Jones

Package: openssl

- Licenses:
 - [Apache-2.0](#)
 - [OpenSSL](#)
- Copyright Notices:
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2004 EdelKey Project.
 - Copyright © 1995-1998 Eric A. Young, Tim J. Hudson
 - Copyright © 2005, 2007-2020 Nokia
 - Copyright © 2002, 2017-2020 Oracle and/or its affiliates.
 - Copyright © 2015-2020 Siemens AG
 - Copyright © 1998-2024 The OpenSSL Project
 - Copyright © 1995-2024 The OpenSSL Project Authors.
 - Copyright © no-info-found

Package: passwd

- Licenses:
 - [BSD-3-Clause](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LicenseRef-Shadow-Artistic](#)
 - [None](#)
 - [Unlicense](#)

- Copyright Notices:
 - Copyright © 2021 Alejandro Colomar <alx.manpages@gmail.com>
 - Copyright © 2017 Chris Lamb
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 2012-2013 Eric Biederman
 - Copyright © 1984, 1989-1990, 2000-2015, 2018-2021 Free Software Foundation
 - Copyright © 1997 Guy Maor <maor@ece.utexas.edu>
 - Copyright © J.T. Conklin <jtc@netbsd.org>
 - Copyright © 2010 Jakub Hrozek <jhrozek@redhat.com>
 - Copyright © 2011 Jonathan Nieder
 - Copyright © Marek Michalkiewicz <marekm@i17linuxb.ists.pwr.wroc.pl>
 - Copyright © 2011 Peter Vrabec <pvrabec@redhat.com>
 - Copyright © 1999 Stephen Frost <sfrost@snowman.net>
 - Copyright © no-info-found

Package: perl-base

- Licenses:
 - [GPL-1.0-or-later](#)
 - [LicenseRef-Artistic](#)
 - [LicenseRef-GPL-1.0-or-later-WITH-Bison-exception-1.24](#)
 - [MIT](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2007 Brandon L Black
 - Copyright © 1996-2009 Graham Barr <gbarr@pobox.com>.
 - Copyright © 1991-2009 Larry Wall
 - Copyright © 1991-2022 Larry Wall and others
 - Copyright © 2007-2008 Michael G Schwern
 - Copyright © 1996-2006 Nick Ing-Simmons
 - Copyright © 2021 Paul Evans and others
 - Copyright © 1986 University of Toronto.
 - Copyright © no-info-found
 - Copyright © perl5-porters@perl.org
 - Copyright © 1994 the
 - Copyright © 2004 the Perl 5 Porters.
 - Copyright © unknown
 - Perl is Copyright © 1987-2022 by Larry Wall and others. All rights reserved.

Package: procps

- Licenses:
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-or-later](#)
 - [LGPL-2.1-or-later](#)
- Copyright Notices:
 - Copyright © 1998-2004 Albert Cahalan
 - Copyright © 1992-2012 Albert Cahalan / , Robert Love /
 - Copyright © 1992 Branko Lankester
 - Copyright © 2003 Chris Rivera
 - Copyright © 2012-2016 Craig Small <csmall@dropbear.xyz>
 - Copyright © 2010 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 1999 George Staikos
 - Copyright © 1994 Henry Ware <al172@yfn.ysu.edu>. Copyleft same year.'
 - Copyright © 2002-2022 Jim Warner <james.warner@comcast.net>
 - Copyright © 2010 Karel Zak <kzak@redhat.com>
 - Copyright © 2000 Kjetil Torgrim Homme <kjetilho@ifi.uio.no>
 - Copyright © 2004 Nicholas Miell
 - Copyright © 2017 Werner Fink
 - Copyright © no-info-found

Package: rust-coreutils

- Licenses:
 - [GPL-3.0-or-later](#)
 - [MIT](#)
- Copyright Notices:
 - Copyright © 2020 Debian Rust Maintainers <pkg-rust-maintainers@alioth-lists.debian.net>
 - Copyright © Jordi Boggiano and many others
 - Copyright © 2020 Sylvestre Ledru <sylvestre@debian.org>
 - Copyright © 2018-2021 utils developers
 - Copyright © 2015 utils project.

Package: rust-findutils

- Licenses:
 - [MIT](#)
- Copyright Notices:
 - Copyright © Google Inc.
 - Copyright © 2017-2023 utils developers

Package: sq

- Licenses:
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © Azul <azul@sequoia-pgp.org>
 - Copyright © 1989, 1991 Free Software Foundation, Inc.
 - Copyright © Justus Winter <justus@sequoia-pgp.org>
 - Copyright © Kai Michaelis <kai@sequoia-pgp.org>
 - Copyright © Neal H. Walfield <neal@sequoia-pgp.org>
 - Copyright © Nora Wieddecke <nora@sequoia-pgp.org>
 - Copyright © Wiktor Kwapisiewicz <wiktor@sequoia-pgp.org>

Package: sqv

- Licenses:
 - [GPL-2.0-or-later](#)
- Copyright Notices:
 - Copyright © 1989, 1991 Free Software Foundation, Inc.
 - Copyright © Justus Winter <justus@sequoia-pgp.org>
 - Copyright © Neal H. Walfield <neal@sequoia-pgp.org>

Package: sudo

- Licenses:
 - [BSD-2-Clause](#)
 - [ISC](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2014 Bob Beck <beck@obtuse.com>
 - Copyright © 2008 Damien Miller <djm@openbsd.org>
 - Copyright © 2008 Dan Walsh <dwalsh@redhat.com>
 - Copyright © 2011 Daniel Kopecek <dkopecek@redhat.com>
 - Copyright © 2008-2022 Dave Benson and the protobuf-c authors.
 - Copyright © 1996 David Mazieres <dm@uun.org>
 - Copyright © 1984, 1989-1990, 2000-2015, 2018-2021 Free Software Foundation
 - Copyright © 2013 Markus Friedl <markus@openbsd.org>
 - Copyright © 2008 Otto Moerbeek <otto@drijf.net>
 - Copyright © 2014 Theo de Raadt <deraadt@openbsd.org>
 - Copyright © 1993-1996, 1998-2023 Todd C. Miller <Todd.Miller@sudo.ws>

Package: systemd

- Licenses:

- [CC0-1.0](#)
- [GPL-2.0-only](#)
- [LGPL-2.1-only](#)
- [LGPL-2.1-or-later](#)
- [LicenseRef-public-domain](#)
- [None](#)
- Copyright Notices:
 - Copyright © 2014 Axis Communications AB.
 - Copyright © 2012 B. Poettering
 - Copyright © 2016 BSDN GmbH.
 - Copyright © 2010-2017 Canonical
 - Copyright © 2018 Dell Inc.
 - Copyright © 2017 Felipe Sateler
 - Copyright © 1989, 1991, 1999, 2007-2022 Free Software Foundation, Inc.
 - Copyright © 2012, 2014 Holger Hans Peter Freyther
 - Copyright © 2013-2015, 2017 Intel Corporation
 - Copyright © 2015-2017 Jason A. Donenfeld <Jason@zx2c4.com>.
 - Copyright © 2019 Oracle and/or its affiliates.
 - Copyright © 2010 ProFUSION embedded systems
 - Copyright © 2010 Ran Benita
 - Copyright © 2000, 2005 Red Hat, Inc.
 - Copyright © 2013 Simon Peeters
 - Copyright © 1999-2000 Tom Tromey
 - Copyright © 2019-2020 VMware, Inc.
 - Copyright © 2014 Vinay Kulkarni <kulkarniv@vmware.com>
 - Copyright © 2015 Werner Fink
 - Copyright © blurb:
 - Copyright © no-info-found

Package: systemd-sysv

- Licenses:
 - NONE
- Copyright Notices:

Package: sysvinit-utils

- Licenses:
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)

- Copyright Notices:
 - Copyright © 1991-2005 Miquel van Smoorenburg.
 - Copyright © 2006 Red Hat, Inc.

Package: u-boot-rpi

- Licenses:
 - [BSD-2-Clause](#)
 - [Beerware](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.1-only](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2000-2005, 2011-2013, 2016 /
 - Copyright © 2001-2002, 2011 / , / , Erik Mouw (J.A.K.Mouw@its.tudelft.nl)
 - Copyright © 2012-2013, 2015 / , Samsung Electronics
 - Copyright © 2001-2002 / , Sysgo Real-Time Solutions, GmbH <www.elinos.com>
 - Copyright © 2011, 2014 / , The Chromium OS Authors.
 - Copyright © 2018, 2020 AKASHI Takahiro, Linaro Limited
 - Copyright © 2018 AKASHI Takahiro, et.al.
 - Copyright © 2012-2013 Albert ARIBAUD <albert.u.boot@aribaud.net>
 - Copyright © 2016 Alexander Graf
 - Copyright © 2018 Alexander Graf <agraf@suse.de>
 - Copyright © 2016-2018 Alexander Graf et al.
 - Copyright © 2019 Amit Singh Tomar <amittomer25@gmail.com>
 - Copyright © 2005-2011 Analog Devices Inc.
 - Copyright © 1999 Andreas Gal
 - Copyright © 2022-2023 Arm Limited and/or its affiliates <open-source-office@arm.com>
 - Copyright © 2017-2019, 2021-2023 Arm Ltd.
 - Copyright © 2014, 2020 Bachmann electronic GmbH
 - Copyright © 2014-2018, 2021 Bin Meng <bmeng.cn@gmail.com>
 - Copyright © 2009-2017 Broadcom
 - Copyright © 2010-2011 Calxeda, Inc.
 - Copyright ContainsNonAsciiCharacters
 - Copyright © 1997-1998 DAVICOM Semiconductor, Inc.
 - Copyright © 2004 DENX Software Engineering, Wolfgang Denk, wd@denx.de
 - Copyright © 1997 Dan Malek (dmalek@jlc.net)

- Copyright © 2002-2004, 2006-2008 David Brownell
- Copyright © 2000 David Brownell , (kernel hotplug, usb_device_id)
- Copyright © 2013 David Feng <fenghua@phytium.com.cn>
- Copyright © 1996 David S. Miller
- Copyright © 2001 Denis Peter, MPL AG Switzerland
- Copyright © 1999 Deti Fliegl , (new USB architecture)
- Copyright © 2009 Dirk Behme, dirk.behme@googlemail.com
- Copyright © 2015, 2023 Dzmitry Sankouski <dsankouski@gmail.com> / , Google, Inc /
- Copyright © 1989-2020 Free Software Foundation, Inc.
- Copyright © 2004-2020 Freescale Semiconductor, Inc
- Copyright © 2007, 2009-2011 Freescale Semiconductor, Inc. /
- Copyright © 2000-2013 Freescale Semiconductor, Inc. / , Sysgo Real-Time Solutions, GmbH <www.elinos.com> /
- Copyright © 1995-1996 Gary Thomas (gdt@linuxppc.org)
- Copyright © 2017 General Electric Company.
- Copyright © 2010-2019, 2021, 2023 Google Inc.
- Copyright © 2001-2002, 2011, 2013 Google Inc. / , / , / , Erik Mouw (J.A.K.Mouw@its.tudelft.nl)
- Copyright © 2000-2006, 2008, 2013 Google Inc. / , Semihalf /
- Copyright © 2020-2022 Google LLC
- Copyright © 2000, 2022 Google LLC /
- Copyright © 2000-2015, 2017 Google, Inc /
- Copyright © 1999-2003, 2015 Google, Inc / , / , Denis Peter, MPL AG Switzerland / , Yggdrasil Computing, Inc. / , David L. Brown, Jr. (usb-storage@davidb.org) / , Matthew Dharm (mdharm-usb@one-eyed-alien.net) / , Michael Gee (michael@linuxspecific.com)
- Copyright © 2001-2003, 2014 Google, Inc / , / , Sysgo Real-Time Solutions, GmbH <www.elinos.com>
- Copyright © 1999 Gregory P. Smith
- Copyright © 2006 Harald Welte <hwelte@hmw-consulting.de>
- Copyright © 2017-2020 Heinrich Schuchardt
- Copyright © 2017-2022 Heinrich Schuchardt <xypron.glpk@gmx.de>
- Copyright © 1999-2005 Igor Pavlov
- Copyright © 2007-2009 Industrie Dial Face S.p.A.
- Copyright © 2008 Intel Corp.
- Copyright © 1999-2001 Johannes Erdfelt
- Copyright © 2000-2001 Larry Doolittle <larry@doolittle.boa.org>
- Copyright © 2017 Leif Lindholm
- Copyright © 2011-2012, 2015, 2017-2023 Linaro Limited
- Copyright © 2020 Linaro Limited, Author: AKASHI Takahiro
- Copyright © 1991-1999 Linus Torvalds

- Copyright © 2021 Maciej W. Rozycki <macro@orcam.me.uk>
- Copyright © 2014 Marek Vasut <marex@denx.de>
- Copyright © 1996-2002 Markus Franz Xavier Johannes Oberhumer
- Copyright © 2011 Marvell Semiconductor Inc.
- Copyright © 2014-2018 Masahiro Yamada <yamada.masahiro@socionext.com>
- Copyright © 2022 Masahisa Kojima, Linaro Limited
- Copyright © 2020, 2022 Matthias Brugger <mbrugger@suse.com>
- Copyright © 2012 Michael Walle
- Copyright © 2015, 2017-2022 Microchip Technology Inc.
- Copyright © 2000 MontaVista Software Inc.
- Copyright © 2009-2019 NVIDIA CORPORATION.
- Copyright © 2003-2004, 2012 NVIDIA CORPORATION. / , /
- Copyright © 2019-2020 NXP
- Copyright © 1994-2000 Neil Russell.
- Copyright © 2016 Nelson Integration, LLC
- Copyright © 2020 Nicolas Saenz Julienne <nsaenzjulienne@suse.de>
- Copyright © 2012 Oleksandr Tymoshenko
- Copyright © 2012 Oleksandr Tymoshenko <gonzo@freebsd.org>
- Copyright © 2007 OpenMoko, Inc.
- Copyright © 2000 Paolo Scaffardi
- Copyright © 2000, 2013 Patrice Bouchand <pbfwdlist@gmail.com> /
- Copyright © 1995-1996 Paul M. Antoine
- Copyright © 1996-2005 Paul Mackerras
- Copyright © 2001 Peter Bergner.
- Copyright © 1997-2006 Ralf Baechle
- Copyright © 2000 Randy Dunlap
- Copyright © 2015-2016 Raspberry Pi (Trading) Ltd.
- Copyright © 2017 Rob Clark
- Copyright © 2000 Roland Borde
- Copyright © 2008 RuggedCom, Inc.
- Copyright © 1994-2013 Russell King
- Copyright © 2007-2008 SMSC (Steve Glendinning)
- Copyright © 2014-2023 STMicroelectronics
- Copyright © 2005-2016, 2018, 2020 Samsung Electronics
- Copyright © 2003-2004, 2011-2012 Samsung Electronics / , /
- Copyright © 2013, 2020 Samsung Electronics Co., Ltd.
- Copyright © 2000-2006, 2008 Semihalf /

- Copyright © 2000, 2009 Sergey Kubushyn <ksi@koi8.net> /
- Copyright © 2004-2005 Sergey Lyubka <valenok@gmail.com>
- Copyright © 1992 Simon Glass
- Copyright © 1997 Sten Wang
- Copyright © 1994-2001 Stephen Rothwell (sfr@canb.auug.org.au)
- Copyright © 2012-2016 Stephen Warren
- Copyright © 2000, 2004, 2016 Stephen Warren <swarren@wwwdotorg.org> / , /
- Copyright © 2000-2010 Sysgo Real-Time Solutions, GmbH <www.elinos.com> /
- Copyright © 1997-2015 T
- Copyright © 2006-2023 Texas Instruments Incorporated - <https://www.ti.com>
- Copyright © 2002, 2004, 2008 Texas Instrments / , /
- Copyright © 2011-2015 The Chromium OS Authors.
- Copyright © 2000, 2002-2006, 2011-2012 The Chromium OS Authors. / , /
- Copyright © 2016-2020, 2022 Theobroma Systems Design und Consulting GmbH
- Copyright © 1992-1994 Theodore Ts'o
- Copyright © 2011 Tigris Elektronik GmbH
- Copyright © 2012 Vikram Narayanan
- Copyright © 2001 William L. Pitts
- Copyright © 2000-2002, 2010-2013 Wolfgang Denk <wd@denx.de>
- Copyright © 2000 Yggdrasil Computing, Inc.
- Copyright © 2005, 2008-2009 for Samsung Electronics
- Copyright © no-info-found
- Copyright © 1996 okir@monad.swb.de

Package: udev

- Licenses:
 - [CC0-1.0](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.1-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2000-2002 Alan Cox <alan@redhat.com>
 - Copyright © 2008 Alan Jenkins <alan.christopher.jenkins@gmail.com>
 - Copyright © 2020 Bastien Nocera <hadess@hadess.net>
 - Copyright © 2009 Canonical Ltd.

- Copyright © 2014 Carlos Garnacho <carlosg@gnome.org>
- Copyright © 2004 Chris Friesen <chris_friesen@sympatico.ca>
- Copyright © 2009-2010 David Zeuthen <zeuthen@gmail.com>
- Copyright © 2004 David Zeuthen, <david@fubar.dk>
- Copyright © 2009 Filippo Argiolas <filippo.argiolas@gmail.com>
- Copyright © 1989, 1991, 1999, 2007-2022 Free Software Foundation, Inc.
- Copyright © 2003-2004 Greg Kroah-Hartman <greg@kroah.com>
- Copyright © 2003 IBM Corp.
- Copyright © 2013 Intel Corporation
- Copyright © 2002-2020 Jean Delvare <jdelvare@suse.de>
- Copyright © 2011 Karel Zak <kzak@redhat.com>
- Copyright © 2010 Maxim Levitsky
- Copyright © 2011 ProFUSION embedded systems
- Copyright © 2010 Ran Benita
- Copyright © 2000, 2005 Red Hat, Inc.
- Copyright © 2006 SUSE Linux Products GmbH
- Copyright © 2005 SUSE Linux Products GmbH, Germany
- Copyright © 2009 Scott James Remnant <scott@netsplit.com>
- Copyright © 1999-2000 Tom Tromey
- Copyright © blurb:
- Copyright © no-info-found

Package: udisks2

- Licenses:
 - [GPL-2.0-or-later](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2017 Andrea Azzarone <andrea.azzarone@canonical.com>
 - Copyright © 2007-2011 David Zeuthen <zeuthen@gmail.com>
 - Copyright © 2011 Martin Pitt <martin.pitt@ubuntu.com>
 - Copyright © 2015-2016 Peter Hatina <phatina@redhat.com>
 - Copyright © 2007-2011, 2013-2015, 2017 Red Hat, Inc.
 - Copyright © 2014, 2018, 2020 Tomas Bzatek <tbzatek@redhat.com>
 - Copyright © no-info-found

Package: util-linux

- Licenses:
 - [BSD-3-Clause](#)

- [BSD-4-Clause-UC](#)
- [GPL-1.0-or-later](#)
- [GPL-2.0-only](#)
- [GPL-2.0-or-later](#)
- [LGPL-2.0-only](#)
- [LGPL-2.1-or-later](#)
- [LicenseRef-public-domain](#)
- [MIT](#)
- Copyright Notices:
 - Copyright © 1994, 1996 Alessandro Rubini (rubini@ipvvis.unipv.it)
 - Copyright © 2001 Andreas Dilger
 - Copyright © 2012 Andy Lutomirski <luto@amacapital.net>
 - Copyright © 2020-2021 Arm Ltd
 - Copyright © 2008 Cai Qian <qcai@redhat.com>
 - Copyright © 1998 Danek Duvall <duvall@alumni.princeton.edu>
 - Copyright © 2010-2012 Davidlohr Bueso <dave@gnu.org>
 - Copyright © 2012-2013 Eric Biederman <ebiederm@xmission.com>
 - Copyright © 2020 FUJITSU LIMITED.
 - Copyright © 1992-2006, 2009-2010 Free Software Foundation, Inc.
 - Copyright © 1987, 1997-2005 Frodo Looijaard / , 88
 - Copyright © 1997-2014 Frodo Looijaard <frodo@frodo.looijaard.name>
 - Copyright © 1990 Gordon Irlam (gordoni@cs.ua.oz.au). Conditions of use
 - Copyright © 2003-2006 H. Peter Anvin
 - Copyright © 2010 Hajime Taira <htaira@redhat.com>
 - Copyright © 2008 Hayden A. James (hayden.james@gmail.com)
 - Copyright © 2011, 2016 IBM Corp.
 - Copyright © 1999 Jakub Jelinek <jj@ultra.linux.cz>
 - Copyright © 2010 Jason Borden <jborden@bluehost.com>
 - Copyright © 2005 Jens Axboe <jens@axboe.dk>
 - Copyright © 2008-2014 Julian Andres Klode <jak@jak-linux.org>
 - Copyright © 2004-2006 Juliane Holzt, kju -at- fqdn.org
 - Copyright © 2006-2021 Karel Zak <kzak@redhat.com>
 - Copyright © 2015 Karel Zak <ooprala@redhat.com>
 - Copyright © 2010, 2012 Lennart Poettering
 - Copyright © 1991 Linus Torvalds
 - Copyright © 1991-1992 Linus Torvalds. This file may be redistributed
 - Copyright © 1991 Linus Torvalds. This file may be redistributed as per

- Copyright © 2009 Mikhail Gusarov <dottedmag@dottedmag.net>
- Copyright © 1991-2000 Miquel van Smoorenburg <miquels@cistron.nl>
- Copyright © 1991-2004 Miquel van Smoorenburg.
- Copyright © 2012-2015 Ondrej Oprala <ooprala@redhat.com>
- Copyright © 2020-2021 Qais Yousef
- Copyright © 2002-2018, 2021 Red Hat, Inc.
- Copyright © 2018 Riku Voipio <riku.voipio@iki.fi>
- Copyright © 2004 Robert Love
- Copyright © 2008 Roy Peled, the.roy.peled -at- gmail.com
- Copyright © 2016 SUSE Linux GmbH
- Copyright © 2012 SUSE Linux Products GmbH, Nuernberg
- Copyright © 2012 Sami Kerola <kerolasa@iki.fi>
- Copyright © 2015-2016 Seagate Technology PLC
- Copyright © 2003-2005 Silicon Graphics, Inc.
- Copyright © 2011 SuSE LINUX Products GmbH
- Copyright © 1997 The Open Group
- Copyright © 1980, 1983, 1985, 1987-1994 The Regents of the University of California.
- Copyright © 1993 Theodore Tso <tytso@athena.mit.edu>
- Copyright © 1993-2005, 2008 Theodore Tso.
- Copyright © 2003-2005 Thorsten Kukuk
- Copyright © 2014 Timofey Titovets <Nefelim4ag@gmail.com>
- Copyright © 1999-2002 Transmeta Corporation
- Copyright © UNIX System Laboratories, Inc.
- Copyright © 2000 Werner Almesberger
- Copyright © 2012, 2016 Werner Fink <werner@suse.de>
- Copyright © no-info-found
- Copyright © that

Package: util-linux-extra

- Licenses:
 - [BSD-4-Clause-UC](#)
 - [GPL-2.0-only](#)
 - [GPL-2.0-or-later](#)
 - [LGPL-2.0-only](#)
 - [LGPL-2.1-or-later](#)
 - [LicenseRef-public-domain](#)
- Copyright Notices:
 - Copyright © 2010 Davidlohr Bueso <dave@gnu.org>

- Copyright © 2009-2010 Free Software Foundation, Inc.
- Copyright © 2008-2021 Karel Zak <kzak@redhat.com>
- Copyright © 2010 Lennart Poettering
- Copyright © 2021 Masatake YAMATO <yamato@redhat.com>
- Copyright © 2009-2018, 2021 Red Hat, Inc.
- Copyright © 2012 Sami Kerola <kerolasa@iki.fi>
- Copyright © no-info-found
- Copyright © 2019 zhenwei pi <pizhenwei@bytedance.com>

Package: vim-tiny

- Licenses:
 - [Vim](#)
- Copyright Notices:
 - Copyright © 2006 Benji Fisher <benji@member.ams.org>
 - Copyright © 2001 Bohdan Vlasjuk <bohdan@vstu.edu.ua>
 - Copyright © 2001-2022 Bram Moolenaar <Bram@vim.org>
 - Copyright © 1999-2021 Charles E. Campbell, Jr. <drchip@campbellfamily.biz>
 - Copyright © 2015 Christian Brabandt
 - Copyright © 2014 David Necas (Yeti)
 - Copyright © 2003-2022 Ernest Adrogué <eadroque@gmx.net>
 - Copyright © 2003 Fred Barnes
 - Copyright © 2012 Hong Xu
 - Copyright © 2005-2006, 2008, 2010 Kevin Patrick Scan
 - Copyright © 2001-2022 MURAOKA Taro <koron.kaoriya@gmail.com>
 - Copyright © 2003 Mario Schweigler
 - Copyright © 2006 Martin Krischik
 - Copyright © 2004-2008 Michael Geddes
 - Copyright © 2009-2013 Steven Oliver

Package: wpasupplicant

- Licenses:
 - [BSD-3-Clause](#)
 - [None](#)
- Copyright Notices:
 - Copyright © 2007 Andy Green <andy@warmcat.com>
 - Copyright © 2008-2011 Atheros Communications
 - Copyright © 2009 Atheros Communications, Inc.
 - Copyright © 2010 Dan Harkins <dharkins@lounge.org>

- Copyright © 2006 Dan Williams <dcbw@redhat.com> and Red Hat, Inc.
- Copyright © 2005-2006 Devicescape Software, Inc.
- Copyright © 2004 Gunter Burchardt <tira@isx.de>
- Copyright © 2002-2004 Instant802 Networks, Inc.
- Copyright © 2000-2003, 2007-2008, 2011-2012 Intel Corporation
- Copyright © 2007, 2009 Johannes Berg <johannes@sipsolutions.net>
- Copyright © 2002-2021 Jouni Malinen <j@w1.fi>
- Copyright © 2009-2012 Masashi Honma <honma@ictec.co.jp>
- Copyright © 2011-2014 Qualcomm Atheros
- Copyright © 2011-2014 Qualcomm Atheros, Inc.
- Copyright © 2006-2007 Sony Corporation
- Copyright © 2008 Ted Merrill, Atheros Communications
- Copyright © 2009-2010 Witold Sowa <witold.sowa@gmail.com>

Package: zlib1g

- Licenses:
 - [Zlib](#)
- Copyright Notices:
 - Copyright © 1995-2013 Jean-loup Gailly and Mark Adler

3. License Texts

3.1. 0BSD

Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

3.2. AFL-2.0

Academic Free License
v. 2.0

This Academic Free License (the "License") applies to any original work of authorship (the "Original Work") whose owner (the "Licensor") has placed the following notice immediately following the copyright notice for the Original Work:

Licensed under the Academic Free License version 2.0

1) Grant of Copyright License. Licensor hereby grants You a world-wide, royalty-free, non-exclusive, perpetual, sublicenseable license to do the following:

- a) to reproduce the Original Work in copies;
- b) to prepare derivative works ("Derivative Works") based upon the Original Work;
- c) to distribute copies of the Original Work and Derivative Works to the public;
- d) to perform the Original Work publicly; and
- e) to display the Original Work publicly.

2) Grant of Patent License. Licensor hereby grants You a world-wide, royalty-free, non-exclusive, perpetual, sublicenseable license, under patent claims owned or controlled by the Licensor that are embodied in the Original Work as furnished by the Licensor, to make, use, sell and offer for sale the Original Work and Derivative Works.

3) Grant of Source Code License. The term "Source Code" means the preferred form of the Original Work for making modifications to it and all available documentation describing how to modify the Original Work. Licensor hereby agrees to provide a machine-readable copy of the Source Code of the Original Work along with each copy of the Original Work that Licensor distributes. Licensor reserves the right to satisfy this obligation by placing a machine-readable copy of the Source Code in an information repository reasonably

calculated to permit inexpensive and convenient access by You for as long as Licensor continues to distribute the Original Work, and by publishing the address of that information repository in a notice immediately following the copyright notice that applies to the Original Work.

4) Exclusions From License Grant. Neither the names of Licensor, nor the names of any contributors to the Original Work, nor any of their trademarks or service marks, may be used to endorse or promote products derived from this Original Work without express prior written permission of the Licensor. Nothing in this License shall be deemed to grant any rights to trademarks, copyrights, patents, trade secrets or any other intellectual property of Licensor except as expressly stated herein. No patent license is granted to make, use, sell or offer to sell embodiments of any patent claims other than the licensed claims defined in Section 2. No right is granted to the trademarks of Licensor even if such marks are included in the Original Work. Nothing in this License shall be interpreted to prohibit Licensor from licensing under different terms from this License any Original Work that Licensor otherwise would have a right to license.

5) This section intentionally omitted.

6) Attribution Rights. You must retain, in the Source Code of any Derivative Works that You create, all copyright, patent or trademark notices from the Source Code of the Original Work, as well as any notices of licensing and any descriptive text identified therein as an "Attribution Notice." You must cause the Source Code for any Derivative Works that You create to carry a prominent Attribution Notice reasonably calculated to inform recipients that You have modified the Original Work.

7) Warranty of Provenance and Disclaimer of Warranty. Licensor warrants that the copyright in and to the Original Work and the patent rights granted herein by Licensor are owned by the Licensor or are sublicensed to You under the terms of this License with the permission of the contributor(s) of those copyrights and patent rights. Except as expressly stated in the immediately preceding sentence, the Original Work is provided under this License on an "AS IS" BASIS and WITHOUT WARRANTY, either express or implied, including, without limitation, the warranties of NON-INFRINGEMENT, MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY OF THE ORIGINAL WORK IS WITH YOU. This DISCLAIMER OF WARRANTY constitutes an essential part of this License. No license to Original Work is granted hereunder except under this disclaimer.

8) Limitation of Liability. Under no circumstances and under no legal theory, whether in tort (including negligence), contract, or otherwise, shall the Licensor be liable to any person for any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or the use of the Original Work including, without limitation, damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses. This limitation of liability shall not apply to liability for death or personal injury resulting from Licensor'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.

9) Acceptance and Termination. If You distribute copies of the Original Work or a Derivative Work, You must make a reasonable effort under the circumstances to obtain the express assent of recipients to the terms of this License. Nothing else but this License (or another written agreement between Licensor and You) grants You permission to create

Derivative Works based upon the Original Work or to exercise any of the rights granted in Section 1 herein, and any attempt to do so except under the terms of this License (or another written agreement between Licensor and You) is expressly prohibited by U.S. copyright law, the equivalent laws of other countries, and by international treaty. Therefore, by exercising any of the rights granted to You in Section 1 herein, You indicate Your acceptance of this License and all of its terms and conditions.

10) Termination for Patent Action. This License shall terminate automatically and You may no longer exercise any of the rights granted to You by this License as of the date You commence an action, including a cross-claim or counterclaim, for patent infringement (i) against Licensor with respect to a patent applicable to software or (ii) against any entity with respect to a patent applicable to the Original Work (but excluding combinations of the Original Work with other software or hardware).

11) Jurisdiction, Venue and Governing Law. Any action or suit relating to this License may be brought only in the courts of a jurisdiction wherein the Licensor resides or in which Licensor conducts its primary business, and under the laws of that jurisdiction excluding its conflict-of-law provisions. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any use of the Original Work outside the scope of this License or after its termination shall be subject to the requirements and penalties of the U.S. Copyright Act, 17 U.S.C. 101 et seq., the equivalent laws of other countries, and international treaty. This section shall survive the termination of this License.

12) Attorneys Fees. In any action to enforce the terms of this License or seeking damages relating thereto, the prevailing party shall be entitled to recover its costs and expenses, including, without limitation, reasonable attorneys' fees and costs incurred in connection with such action, including any appeal of such action. This section shall survive the termination of this License.

13) Miscellaneous. This License represents the complete agreement concerning the 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.

14) Definition of "You" in This License. "You" throughout this License, whether in upper or lower case, 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 that controls, is controlled by, or is under common control with you. For 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.

15) Right to Use. You may use the Original Work in all ways not otherwise restricted or conditioned by this License or by law, and Licensor promises not to interfere with or be responsible for such uses by You.

3.3. AFL-2.1

This Academic Free License (the "License") applies to any original work of authorship (the "Original Work") whose owner (the "Licensor") has placed the following notice immediately following the copyright notice for the Original Work:

Licensed under the Academic Free License version 2.1

1) Grant of Copyright License. Licensor hereby grants You a world-wide, royalty-free, non-exclusive, perpetual, sublicenseable license to do the following:

- a) to reproduce the Original Work in copies;
- b) to prepare derivative works ("Derivative Works") based upon the Original Work;
- c) to distribute copies of the Original Work and Derivative Works to the public;
- d) to perform the Original Work publicly; and
- e) to display the Original Work publicly.

2) Grant of Patent License. Licensor hereby grants You a world-wide, royalty-free, non-exclusive, perpetual, sublicenseable license, under patent claims owned or controlled by the Licensor that are embodied in the Original Work as furnished by the Licensor, to make, use, sell and offer for sale the Original Work and Derivative Works.

3) Grant of Source Code License. The term "Source Code" means the preferred form of the Original Work for making modifications to it and all available documentation describing how to modify the Original Work. Licensor hereby agrees to provide a machine-readable copy of the Source Code of the Original Work along with each copy of the Original Work that Licensor distributes. Licensor reserves the right to satisfy this obligation by placing a machine-readable copy of the Source Code in an information repository reasonably calculated to permit inexpensive and convenient access by You for as long as Licensor continues to distribute the Original Work, and by publishing the address of that information repository in a notice immediately following the copyright notice that applies to the Original Work.

4) Exclusions From License Grant. Neither the names of Licensor, nor the names of any contributors to the Original Work, nor any of their trademarks or service marks, may be used to endorse or promote products derived from this Original Work without express prior written permission of the Licensor. Nothing in this License shall be deemed to grant any rights to trademarks, copyrights, patents, trade secrets or any other intellectual property of Licensor except as expressly stated herein. No patent license is granted to make, use, sell or offer to sell embodiments of any patent claims other than the licensed claims defined in Section 2. No right is granted to the trademarks of Licensor even if such marks are included in the Original Work. Nothing in this License shall be interpreted to prohibit Licensor from licensing under different terms from this License any Original Work that Licensor otherwise would have a right to license.

5) This section intentionally omitted.

6) Attribution Rights. You must retain, in the Source Code of any Derivative Works that

You create, all copyright, patent or trademark notices from the Source Code of the Original Work, as well as any notices of licensing and any descriptive text identified therein as an "Attribution Notice." You must cause the Source Code for any Derivative Works that You create to carry a prominent Attribution Notice reasonably calculated to inform recipients that You have modified the Original Work.

7) Warranty of Provenance and Disclaimer of Warranty. Licensor warrants that the copyright in and to the Original Work and the patent rights granted herein by Licensor are owned by the Licensor or are sublicensed to You under the terms of this License with the permission of the contributor(s) of those copyrights and patent rights. Except as expressly stated in the immediately preceding sentence, the Original Work is provided under this License on an "AS IS" BASIS and WITHOUT WARRANTY, either express or implied, including, without limitation, the warranties of NON-INFRINGEMENT, MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY OF THE ORIGINAL WORK IS WITH YOU. This DISCLAIMER OF WARRANTY constitutes an essential part of this License. No license to Original Work is granted hereunder except under this disclaimer.

8) Limitation of Liability. Under no circumstances and under no legal theory, whether in tort (including negligence), contract, or otherwise, shall the Licensor be liable to any person for any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or the use of the Original Work including, without limitation, damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses. This limitation of liability shall not apply to liability for death or personal injury resulting from Licensor'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.

9) Acceptance and Termination. If You distribute copies of the Original Work or a Derivative Work, You must make a reasonable effort under the circumstances to obtain the express assent of recipients to the terms of this License. Nothing else but this License (or another written agreement between Licensor and You) grants You permission to create Derivative Works based upon the Original Work or to exercise any of the rights granted in Section 1 herein, and any attempt to do so except under the terms of this License (or another written agreement between Licensor and You) is expressly prohibited by U.S. copyright law, the equivalent laws of other countries, and by international treaty. Therefore, by exercising any of the rights granted to You in Section 1 herein, You indicate Your acceptance of this License and all of its terms and conditions.

10) Termination for Patent Action. This License shall terminate automatically and You may no longer exercise any of the rights granted to You by this License as of the date You commence an action, including a cross-claim or counterclaim, against Licensor or any licensee alleging that the Original Work infringes a patent. This termination provision shall not apply for an action alleging patent infringement by combinations of the Original Work with other software or hardware.

11) Jurisdiction, Venue and Governing Law. Any action or suit relating to this License may be brought only in the courts of a jurisdiction wherein the Licensor resides or in which Licensor conducts its primary business, and under the laws of that jurisdiction excluding its conflict-of-law provisions. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any use of the

Original Work outside the scope of this License or after its termination shall be subject to the requirements and penalties of the U.S. Copyright Act, 17 U.S.C. § 101 et seq., the equivalent laws of other countries, and international treaty. This section shall survive the termination of this License.

12) Attorneys Fees. In any action to enforce the terms of this License or seeking damages relating thereto, the prevailing party shall be entitled to recover its costs and expenses, including, without limitation, reasonable attorneys' fees and costs incurred in connection with such action, including any appeal of such action. This section shall survive the termination of this License.

13) Miscellaneous. This License represents the complete agreement concerning the 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.

14) Definition of "You" in This License. "You" throughout this License, whether in upper or lower case, 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 that controls, is controlled by, or is under common control with you. For 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.

15) Right to Use. You may use the Original Work in all ways not otherwise restricted or conditioned by this License or by law, and Licensor promises not to interfere with or be responsible for such uses by You.

This license is Copyright (C) 2003-2004 Lawrence E. Rosen. All rights reserved. Permission is hereby granted to copy and distribute this license without modification. This license may not be modified without the express written permission of its copyright owner.

3.4. Apache-2.0

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.

3.5. Artistic-1.0-Perl

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

3.6. BSD-2-Clause

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.

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 HOLDER 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.

3.7. BSD-3-Clause

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 THE COPYRIGHT HOLDER 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.

3.8. BSD-4-Clause-UC

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

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

On July 22 1999, per notice reproduced below, the advertising clause (clause 3) of this license was officially rescinded by the Director of the Office of Technology Licensing of the University of California.

This applies only to BSD Unix files copyrighted by the Regents of the University of California under this license.

From: <ftp://ftp.cs.berkeley.edu/pub/4bsd/README.Impt.License.Change> :

"July 22, 1999

To All Licensees, Distributors of Any Version of BSD:

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

Specifically, the provision reads:

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

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

William Hoskins
Director, Office of Technology Licensing
University of California, Berkeley"

Note also that in many variants of this original BSD license, both occurrences of the phrase "REGENTS AND CONTRIBUTORS" is replaced in the disclaimer section by "COPYRIGHT HOLDERS AND CONTRIBUTORS".

3.9. Beerware

"THE BEER-WARE LICENSE" (Revision 42):
<phk@FreeBSD.ORG> wrote this file. As long as you retain this notice you can do whatever you want with this stuff. If we meet some day, and you think this stuff is worth it, you can buy me a beer in return Poul-Henning Kamp

3.10. CC0-1.0

Creative Commons Legal Code

CC0 1.0 Universal

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS DOCUMENT DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION OR WORKS PROVIDED HEREUNDER.

Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer exclusive Copyright and Related Rights (defined below) upon the creator and subsequent owner(s) (each and all, an "owner") of an original work of authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the purpose of contributing to a commons of creative, cultural and scientific works ("Commons") that the public can reliably and without fear of later claims of infringement build upon, modify, incorporate in other works, reuse and redistribute as freely as possible in any form whatsoever and for any purposes, including without limitation commercial purposes. These owners may contribute to the Commons to promote the ideal of a free culture and the further production of creative, cultural and scientific works, or to gain reputation or greater distribution for their Work in part through the use and efforts of others.

For these and/or other purposes and motivations, and without any expectation of additional consideration or compensation, the person associating CC0 with a Work (the "Affirmer"), to the extent that he or she is an owner of Copyright and Related Rights in the Work, voluntarily elects to apply CC0 to the Work and publicly distribute the Work under its terms, with knowledge of his or her Copyright and Related Rights in the Work and the meaning and intended legal effect of CC0 on those rights.

1. Copyright and Related Rights. A Work made available under CC0 may be protected by copyright and related or neighboring rights ("Copyright and Related Rights"). Copyright and Related Rights include, but are not limited to, the following:

- i. the right to reproduce, adapt, distribute, perform, display, communicate, and translate a Work;
- ii. moral rights retained by the original author(s) and/or performer(s);
- iii. publicity and privacy rights pertaining to a person's image or likeness depicted in a Work;
- iv. rights protecting against unfair competition in regards to a Work, subject to the limitations in paragraph 4(a), below;
- v. rights protecting the extraction, dissemination, use and reuse of data in a Work;
- vi. database rights (such as those arising under Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, and under any national implementation thereof, including any amended or successor version of such directive); and
- vii. other similar, equivalent or corresponding rights throughout the world based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of, applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and unconditionally waives, abandons, and surrenders all of Affirmer's Copyright and Related Rights and associated claims and causes

of action, whether now known or unknown (including existing as well as future claims and causes of action), in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes the Waiver for the benefit of each member of the public at large and to the detriment of Affirmer's heirs and successors, fully intending that such Waiver shall not be subject to revocation, rescission, cancellation, termination, or any other legal or equitable action to disrupt the quiet enjoyment of the Work by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose. In addition, to the extent the Waiver is so judged Affirmer hereby grants to each affected person a royalty-free, non transferable, non sublicensable, non exclusive, irrevocable and unconditional license to exercise Affirmer's Copyright and Related Rights in the Work (i) in all territories worldwide, (ii) for the maximum duration provided by applicable law or treaty (including future time extensions), (iii) in any current or future medium and for any number of copies, and (iv) for any purpose whatsoever, including without limitation commercial, advertising or promotional purposes (the "License"). The License shall be deemed effective as of the date CC0 was applied by Affirmer to the Work. Should any part of the License for any reason be judged legally invalid or ineffective under applicable law, such partial invalidity or ineffectiveness shall not invalidate the remainder of the License, and in such case Affirmer hereby affirms that he or she will not (i) exercise any of his or her remaining Copyright and Related Rights in the Work or (ii) assert any associated claims and causes of action with respect to the Work, in either case contrary to Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

- a. No trademark or patent rights held by Affirmer are waived, abandoned, surrendered, licensed or otherwise affected by this document.
- b. Affirmer offers the Work as-is and makes no representations or warranties of any kind concerning the Work, express, implied, statutory or otherwise, including without limitation warranties of title, merchantability, fitness for a particular purpose, non infringement, or the absence of latent or other defects, accuracy, or the present or absence of errors, whether or not discoverable, all to the greatest extent permissible under applicable law.
- c. Affirmer disclaims responsibility for clearing rights of other persons that may apply to the Work or any use thereof, including without limitation any person's Copyright and Related Rights in the Work. Further, Affirmer disclaims responsibility for obtaining any necessary consents, permissions or other rights required for any use of the

Work.

- d. Affirmer understands and acknowledges that Creative Commons is not a party to this document and has no duty or obligation with respect to this CC0 or use of the Work.

3.11. GPL-1.0-or-later

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 1, 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.

GNU GENERAL PUBLIC LICENSE Version 1, February 1989

Copyright (C) 1989 Free Software Foundation, Inc.

51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

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

Preamble

The license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our 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. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, 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 a 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 tell them 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.

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 Agreement 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 work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

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 General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

- a) cause the modified files to carry prominent notices stating that you changed the files and the date of any change; and
- b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except

that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the simplest and most usual 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 General Public License.

d) 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.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 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 Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

4. You may not copy, modify, sublicense, distribute or transfer the Program except as expressly provided under this General Public License. Any attempt otherwise to copy, modify, sublicense, distribute or transfer

the Program is void, and will automatically terminate your rights to use the Program under this License. However, parties who have received copies, or rights to use copies, from you under this General Public License will not have their licenses terminated so long as such parties remain in full compliance.

5. By copying, distributing or modifying 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.

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.

7. 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 the 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 the license, you may choose any version ever published by the Free Software Foundation.

8. 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

9. 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.

10. 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 humanity, 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 1, 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) 19xx 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 a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program ``Gnomovision'` (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

That's all there is to it!

3.12. GPL-2.0-only

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.

3.13. GPL-2.0-or-later

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.

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.

3.14. GPL-3.0-or-later

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/>.

GNU GENERAL PUBLIC LICENSE Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://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 [<https://www.gnu.org/licenses/>](https://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 [<https://www.gnu.org/licenses/>](https://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 [<https://www.gnu.org/licenses/why-not-lgpl.html>](https://www.gnu.org/licenses/why-not-lgpl.html).

3.15. GPL-3.0-or-later WITH Bison-exception-2.2

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/>](http://www.gnu.org/licenses/).

GNU GENERAL PUBLIC LICENSE
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. [<https://fsf.org/>](https://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 <https://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 [<https://www.gnu.org/licenses/>](https://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 <https://www.gnu.org/licenses/why-not-lgpl.html>.

As a special exception, you may create a larger work that contains part or all of the Bison parser skeleton and distribute that work under terms of your choice, so long as that work isn't itself a parser generator using the skeleton or a modified version thereof as a parser skeleton. Alternatively, if you modify or redistribute the parser skeleton itself, you may (at your option) remove this special exception, which will cause the skeleton and the resulting Bison output files to be licensed under the GNU General Public License without this special exception.

This special exception was added by the Free Software Foundation in version 2.2 of Bison.

3.16. GPL-3.0-or-later WITH GCC-exception-3.1

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/>.

GNU GENERAL PUBLIC LICENSE Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <https://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 <https://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 [<https://www.gnu.org/licenses/>](https://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 [<https://www.gnu.org/licenses/why-not-lgpl.html>](https://www.gnu.org/licenses/why-not-lgpl.html).

GCC RUNTIME LIBRARY EXCEPTION

Version 3.1, 31 March 2009

Copyright (C) 2009 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.

This GCC Runtime Library Exception ("Exception") is an additional permission under section 7 of the GNU General Public License, version 3 ("GPLv3"). It applies to a given file (the "Runtime Library") that bears a notice placed by the copyright holder of the file stating that the file is governed by GPLv3 along with this Exception.

When you use GCC to compile a program, GCC may combine portions of certain GCC header files and runtime libraries with the compiled program. The purpose of this Exception is to allow compilation of non-GPL (including proprietary) programs to use, in this way, the header files and runtime libraries covered by this Exception.

0. Definitions.

A file is an "Independent Module" if it either requires the Runtime Library for execution after a Compilation Process, or makes use of an interface provided by the Runtime Library, but is not otherwise based on the Runtime Library.

"GCC" means a version of the GNU Compiler Collection, with or without modifications, governed by version 3 (or a specified later version) of the GNU General Public License (GPL) with the option of using any subsequent versions published by the FSF.

"GPL-compatible Software" is software whose conditions of propagation, modification and use would permit combination with GCC in accord with the license of GCC.

"Target Code" refers to output from any compiler for a real or virtual target processor architecture, in executable form or suitable for input to an assembler, loader, linker and/or execution phase. Notwithstanding that, Target Code does not include data in any format that is used as a compiler intermediate representation, or used for producing a compiler intermediate representation.

The "Compilation Process" transforms code entirely represented in non-intermediate languages designed for human-written code, and/or in Java Virtual Machine byte code, into Target Code. Thus, for example, use of source code generators and preprocessors need not be considered part of the Compilation Process, since the Compilation Process can be understood as starting with the output of the generators or

preprocessors.

A Compilation Process is "Eligible" if it is done using GCC, alone or with other GPL-compatible software, or if it is done without using any work based on GCC. For example, using non-GPL-compatible Software to optimize any GCC intermediate representations would not qualify as an Eligible Compilation Process.

1. Grant of Additional Permission.

You have permission to propagate a work of Target Code formed by combining the Runtime Library with Independent Modules, even if such propagation would otherwise violate the terms of GPLv3, provided that all Target Code was generated by Eligible Compilation Processes. You may then convey such a combination under terms of your choice, consistent with the licensing of the Independent Modules.

2. No Weakening of GCC Copyleft.

The availability of this Exception does not imply any general presumption that third-party software is unaffected by the copyleft requirements of the license of GCC.

3.17. ISC

Permission to use, copy, modify, and/or 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" AND THE AUTHOR DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

3.18. LGPL-2.0-only

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 Library General Public
License as published by the Free Software Foundation; either
version 2 of the License, or (at your option) any later version.
```

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

```
You should have received a copy of the GNU Library General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 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!

3.19. LGPL-2.0-or-later

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

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

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

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 Library General Public
License as published by the Free Software Foundation; either
version 2 of the License, or (at your option) any later version.
```

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

```
You should have received a copy of the GNU Library General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 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!

3.20. LGPL-2.1-only

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!

3.21. LGPL-2.1-or-later

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

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!

3.22. LGPL-3.0-or-later

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 3.0 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

GNU LESSER GENERAL PUBLIC LICENSE Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <<https://fsf.org/>>
Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser General Public License, and the "GNU GPL" refers to version 3 of the GNU General Public License.

"The Library" refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A "Combined Work" is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the "Linked Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

- a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or
- b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from

a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the object code with a copy of the GNU GPL and this license document.

4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

- a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the Combined Work with a copy of the GNU GPL and this license document.
- c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.
- d) Do one of the following:

- 0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.

- 1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

- e) Provide Installation Information, but only if you would otherwise

be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

5. Combined Libraries.

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 that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.
- b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU 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 as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

3.23. LicenseRef-AFL

3.24. LicenseRef-AmbiguousLicenseInfoFound

3.25. LicenseRef-Artistic

3.26. LicenseRef-BSD-variant

3.27. LicenseRef-CC0

3.28. LicenseRef-Chromium

3.29. LicenseRef-GPL-1.0-or-later-WITH-Bison-exception-1.24

3.30. LicenseRef-MIT-X11

3.31. LicenseRef-Mazieres-BSD-style

3.32. LicenseRef-NoLicenseInfoFound

3.33. LicenseRef-PD

3.34. LicenseRef-Shadow-Artistic

3.35. LicenseRef-perl.5

3.36. LicenseRef-public-domain

3.37. MIT

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.

3.38. NTP

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 appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of the authors not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. The authors makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

3.39. None

3.40. OLDAP-2.8

The OpenLDAP Public License
Version 2.8, 17 August 2003

Redistribution and use of this software and associated documentation ("Software"), with or without modification, are permitted provided that the following conditions are met:

1. Redistributions in source form must retain copyright statements

and notices,

2. Redistributions in binary form must reproduce applicable copyright statements and notices, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution, and
3. Redistributions must contain a verbatim copy of this document.

The OpenLDAP Foundation may revise this license from time to time. Each revision is distinguished by a version number. You may use this Software under terms of this license revision or under the terms of any subsequent revision of the license.

THIS SOFTWARE IS PROVIDED BY THE OPENLDAP FOUNDATION AND ITS CONTRIBUTORS ``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 OPENLDAP FOUNDATION, ITS CONTRIBUTORS, OR THE AUTHOR(S) OR OWNER(S) OF THE 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.

The names of the authors and copyright holders must not be used in advertising or otherwise to promote the sale, use or other dealing in this Software without specific, written prior permission. Title to copyright in this Software shall at all times remain with copyright holders.

OpenLDAP is a registered trademark of the OpenLDAP Foundation.

Copyright 1999-2003 The OpenLDAP Foundation, Redwood City, California, USA. All Rights Reserved. Permission to copy and distribute verbatim copies of this document is granted.

3.41. OpenSSL

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

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.]

3.42. SSH-OpenSSH

This file is part of the OpenSSH software.

The licences which components of this software fall under are as follows. First, we will summarize and say that all components are under a BSD licence, or a licence more free than that.

OpenSSH contains no GPL code.

1)

```
* Copyright (c) 1995 Tatu Ylonen <ylo@cs.hut.fi>, Espoo, Finland
*                               All rights reserved
*
* As far as I am concerned, the code I have written for this software
* can be used freely for any purpose. Any derived versions of this
* software must be clearly marked as such, and if the derived work is
* incompatible with the protocol description in the RFC file, it must be
* called by a name other than "ssh" or "Secure Shell".
```

[Tatu continues]

```
* However, I am not implying to give any licenses to any patents or
* copyrights held by third parties, and the software includes parts that
* are not under my direct control. As far as I know, all included
* source code is used in accordance with the relevant license agreements
* and can be used freely for any purpose (the GNU license being the most
* restrictive); see below for details.
```

[However, none of that term is relevant at this point in time. All of these restrictively licenced software components which he talks about have been removed from OpenSSH, i.e.,

- RSA is no longer included, found in the OpenSSL library
- IDEA is no longer included, its use is deprecated
- DES is now external, in the OpenSSL library
- GMP is no longer used, and instead we call BN code from OpenSSL
- Zlib is now external, in a library
- The make-ssh-known-hosts script is no longer included
- TSS has been removed
- MD5 is now external, in the OpenSSL library
- RC4 support has been replaced with ARC4 support from OpenSSL

- Blowfish is now external, in the OpenSSL library

[The licence continues]

Note that any information and cryptographic algorithms used in this software are publicly available on the Internet and at any major bookstore, scientific library, and patent office worldwide. More information can be found e.g. at "<http://www.cs.hut.fi/crypto>".

The legal status of this program is some combination of all these permissions and restrictions. Use only at your own responsibility. You will be responsible for any legal consequences yourself; I am not making any claims whether possessing or using this is legal or not in your country, and I am not taking any responsibility on your behalf.

NO WARRANTY

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.

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.

2)

The 32-bit CRC compensation attack detector in deattack.c was contributed by CORE SDI S.A. under a BSD-style license.

```
* Cryptographic attack detector for ssh - source code
*
* Copyright (c) 1998 CORE SDI S.A., Buenos Aires, Argentina.
*
* All rights reserved. Redistribution and use in source and binary
* forms, with or without modification, are permitted provided that
* this copyright notice is retained.
*
* THIS SOFTWARE IS PROVIDED ``AS IS'' AND ANY EXPRESS OR IMPLIED
```

```
* WARRANTIES ARE DISCLAIMED. IN NO EVENT SHALL CORE SDI S.A. BE
* LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY OR
* CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR MISUSE OF THIS
* SOFTWARE.
*
* Ariel Futoransky <futo@core-sdi.com>
* <http://www.core-sdi.com>
```

3)

ssh-keyscan was contributed by David Mazieres under a BSD-style license.

```
* Copyright 1995, 1996 by David Mazieres <dm@lcs.mit.edu>.
*
* Modification and redistribution in source and binary forms is
* permitted provided that due credit is given to the author and the
* OpenBSD project by leaving this copyright notice intact.
```

4)

The Rijndael implementation by Vincent Rijmen, Antoon Bosselaers and Paulo Barreto is in the public domain and distributed with the following license:

```
* @version 3.0 (December 2000)
*
* Optimised ANSI C code for the Rijndael cipher (now AES)
*
* @author Vincent Rijmen <vincent.rijmen@esat.kuleuven.ac.be>
* @author Antoon Bosselaers <antoon.bosselaers@esat.kuleuven.ac.be>
* @author Paulo Barreto <paulo.barreto@terra.com.br>
*
* This code is hereby placed in the public domain.
*
* THIS SOFTWARE IS PROVIDED BY THE AUTHORS '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 AUTHORS 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.
```

5)

One component of the ssh source code is under a 3-clause BSD license, held by the University of California, since we pulled these parts from original Berkeley code.

```
* Copyright (c) 1983, 1990, 1992, 1993, 1995
```

* The Regents of the University of California. All rights reserved.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 * notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 * notice, this list of conditions and the following disclaimer in the
 * documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 * may be used to endorse or promote products derived from this software
 * without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.

6)

Remaining components of the software are provided under a standard
 2-term BSD licence with the following names as copyright holders:

Markus Friedl
 Theo de Raadt
 Niels Provos
 Dug Song
 Aaron Campbell
 Damien Miller
 Kevin Steves
 Daniel Kouril
 Wesley Griffin
 Per Allansson
 Nils Nordman
 Simon Wilkinson

Portable OpenSSH additionally includes code from the following copyright
 holders, also under the 2-term BSD license:

Ben Lindstrom
 Tim Rice
 Andre Lucas
 Chris Adams
 Corinna Vinschen

Cray Inc.
Denis Parker
Gert Doering
Jakob Schlyter
Jason Downs
Juha Yrjölä
Michael Stone
Networks Associates Technology, Inc.
Solar Designer
Todd C. Miller
Wayne Schroeder
William Jones
Darren Tucker
Sun Microsystems
The SCO Group
Daniel Walsh
Red Hat, Inc
Simon Vallet / Genoscope

```
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the above copyright
*   notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
*   notice, this list of conditions and the following disclaimer in the
*   documentation and/or other materials provided with the distribution.
*
* THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
* IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
* OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
* IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
* INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
* DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
* THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
* THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

8) Portable OpenSSH contains the following additional licenses:

a) md5crypt.c, md5crypt.h

```
* "THE BEER-WARE LICENSE" (Revision 42):
* <phk@login.dknet.dk> wrote this file.  As long as you retain this
* notice you can do whatever you want with this stuff.  If we meet
* some day, and you think this stuff is worth it, you can buy me a
* beer in return.  Poul-Henning Kamp
```

b) snprintf replacement

- * Copyright Patrick Powell 1995
- * This code is based on code written by Patrick Powell
- * (papowell@astart.com) It may be used for any purpose as long as this
- * notice remains intact on all source code distributions

c) Compatibility code (openbsd-compat)

Apart from the previously mentioned licenses, various pieces of code in the openbsd-compat/ subdirectory are licensed as follows:

Some code is licensed under a 3-term BSD license, to the following copyright holders:

Todd C. Miller
 Theo de Raadt
 Damien Miller
 Eric P. Allman
 The Regents of the University of California
 Constantin S. Svintsoff

- * Redistribution and use in source and binary forms, with or without
- * modification, are permitted provided that the following conditions
- * are met:
- * 1. Redistributions of source code must retain the above copyright
- * notice, this list of conditions and the following disclaimer.
- * 2. Redistributions in binary form must reproduce the above copyright
- * notice, this list of conditions and the following disclaimer in the
- * documentation and/or other materials provided with the distribution.
- * 3. Neither the name of the University nor the names of its contributors
- * may be used to endorse or promote products derived from this software
- * without specific prior written permission.
- *
- * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
- * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
- * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
- * ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
- * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
- * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
- * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
- * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
- * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
- * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
- * SUCH DAMAGE.

Some code is licensed under an ISC-style license, to the following copyright holders:

Internet Software Consortium.
 Todd C. Miller
 Reyk Floeter
 Chad Mynhier

```

* 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" AND TODD C. MILLER DISCLAIMS ALL
* WARRANTIES WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES
* OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL TODD C. MILLER BE LIABLE
* FOR ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
* WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION
* OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
* CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

```

Some code is licensed under a MIT-style license to the following copyright holders:

Free Software Foundation, Inc.

```

* 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, distribute with modifications, 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 ABOVE 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(s) of the above copyright
* holders shall not be used in advertising or otherwise to promote the
* sale, use or other dealings in this Software without prior written
* authorization.
*****/

```

\$OpenBSD: LICENCE,v 1.19 2004/08/30 09:18:08 markus Exp \$

3.43. Sleepycat

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. Redistributions in any form must be accompanied by information on how to obtain complete source code for the DB software and any accompanying software that uses the DB software. The source code must either be included in the distribution or be available for no more than the cost of distribution plus a nominal fee, and must be freely redistributable under reasonable conditions. For an executable file, complete source code means the source code for all modules it contains. It does not include source code for modules or files that typically accompany the major components of the operating system on which the executable file runs.

THIS SOFTWARE IS PROVIDED BY ORACLE CORPORATION ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT, ARE DISCLAIMED. IN NO EVENT SHALL ORACLE CORPORATION 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.

3.44. Unlicense

This is free and unencumbered software released into the public domain.

Anyone is free to copy, modify, publish, use, compile, sell, or distribute this software, either in source code form or as a compiled binary, for any purpose, commercial or non-commercial, and by any means.

In jurisdictions that recognize copyright laws, the author or authors of this software dedicate any and all copyright interest in the software to the public domain. We make this dedication for the benefit of the public at large and to the detriment of our heirs and successors. We intend this dedication to be an overt act of relinquishment in perpetuity of all present and future rights to this software under copyright law.

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 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.

For more information, please refer to <http://unlicense.org/>

3.45. Vim

VIM LICENSE

- I) There are no restrictions on distributing unmodified copies of Vim except that they must include this license text. You can also distribute unmodified parts of Vim, likewise unrestricted except that they must include this license text. You are also allowed to include executables that you made from the unmodified Vim sources, plus your own usage examples and Vim scripts.
- II) It is allowed to distribute a modified (or extended) version of Vim, including executables and/or source code, when the following four conditions are met:
- 1) This license text must be included unmodified.
 - 2) The modified Vim must be distributed in one of the following five ways:
 - a) If you make changes to Vim yourself, you must clearly describe in the distribution how to contact you. When the maintainer asks you (in any way) for a copy of the modified Vim you distributed, you must make your changes, including source code, available to the maintainer without fee. The maintainer reserves the right to include your changes in the official version of Vim. What the maintainer will do with your changes and under what license they will be distributed is negotiable. If there has been no negotiation then this license, or a later version, also applies to your changes. The current maintainer is Bram Moolenaar <Bram@vim.org>. If this changes it will be announced in appropriate places (most likely vim.sf.net, www.vim.org and/or comp.editors). When it is completely impossible to contact the maintainer, the obligation to send him your changes ceases. Once the maintainer has confirmed that he has received your changes they will not have to be sent again.
 - b) If you have received a modified Vim that was distributed as mentioned under a) you are allowed to further distribute it unmodified, as mentioned at I). If you make additional changes the text under a) applies to those changes.
 - c) Provide all the changes, including source code, with every copy of the modified Vim you distribute. This may be done in the form of a context diff. You can choose what license to use for new code you add. The changes and their license must not restrict others from making their own changes to the official version of Vim.
 - d) When you have a modified Vim which includes changes as mentioned under c), you can distribute it without the source code for the changes if the following three conditions are met:
 - The license that applies to the changes permits you to distribute the changes to the Vim maintainer without fee or restriction, and permits the Vim maintainer to include the changes in the official

version of Vim without fee or restriction.

- You keep the changes for at least three years after last distributing the corresponding modified Vim. When the maintainer or someone who you distributed the modified Vim to asks you (in any way) for the changes within this period, you must make them available to him.
- You clearly describe in the distribution how to contact you. This contact information must remain valid for at least three years after last distributing the corresponding modified Vim, or as long as possible.

e) When the GNU General Public License (GPL) applies to the changes, you can distribute the modified Vim under the GNU GPL version 2 or any later version.

- 3) A message must be added, at least in the output of the ":version" command and in the intro screen, such that the user of the modified Vim is able to see that it was modified. When distributing as mentioned under 2)e) adding the message is only required for as far as this does not conflict with the license used for the changes.
- 4) The contact information as required under 2)a) and 2)d) must not be removed or changed, except that the person himself can make corrections.

III) If you distribute a modified version of Vim, you are encouraged to use the Vim license for your changes and make them available to the maintainer, including the source code. The preferred way to do this is by e-mail or by uploading the files to a server and e-mailing the URL. If the number of changes is small (e.g., a modified Makefile) e-mailing a context diff will do. The e-mail address to be used is

<maintainer@vim.org>

IV) It is not allowed to remove this license from the distribution of the Vim sources, parts of it or from a modified version. You may use this license for previous Vim releases instead of the license that they came with, at your option.

Note:

- If you are happy with Vim, please express that by reading the rest of this file and consider helping needy children in Uganda.
- If you want to support further Vim development consider becoming a [sponsor]. The money goes to Uganda anyway.
- According to Richard Stallman the Vim license is GNU GPL compatible. A few minor changes have been made since he checked it, but that should not make a difference.
- If you link Vim with a library that goes under the GNU GPL, this limits further distribution to the GNU GPL. Also when you didn't actually change anything in Vim.

- Once a change is included that goes under the GNU GPL, this forces all further changes to also be made under the GNU GPL or a compatible license.
- If you distribute a modified version of Vim, you can include your name and contact information with the "--with-modified-by" configure argument or the MODIFIED_BY define.

3.46. Zlib

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.

3.47. bzip2-1.0.6

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.

3.48. curl

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.