



Installing Mac OS X Developer Preview 2

 **Apple Computer, Inc.**

© 1999 Apple Computer, Inc. All rights reserved.

Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of Apple. Your rights to the software are governed by the accompanying software license agreement.

The Apple logo is a trademark of Apple Computer, Inc., registered in the U.S. and other countries. Use of the “keyboard” Apple logo (Option-Shift-K) for commercial purposes without the prior written consent of Apple may constitute trademark infringement and unfair competition in violation of federal and state laws.

Every effort has been made to ensure that the information in this manual is accurate. Apple is not responsible for printing or clerical errors.

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014-2084
408-996-1010
<http://www.apple.com>

Apple, the Apple logo, AppleTalk, AppleVision, FireWire, Mac, Macintosh, PowerBook, and Power Macintosh are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.

Disk First Aid, Finder, iMac, and Power Mac are trademarks of Apple Computer, Inc.

PostScript is a trademark of Adobe Systems, Inc. OpenGL is a registered trademark of Silicon Graphics, Inc.

Other company and product names mentioned herein are trademarks of their respective companies. Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance or use of these products.

Simultaneously published in the United States and Canada.



Contents

System Requirements	5
Preparing to Install Mac OS X	5
Installing Mac OS X Developer Preview	6
After Installing Mac OS X Developer Preview	7
Using Mac OS X	7
Assigning Passwords	7
Switching Between Mac OS Partitions	7
Troubleshooting Information	8
Before or During Installation	8
Other Problems	8
Testing or Repairing the Hard Disk	10
Supported Hardware and Features	11
Supported Development Environments	11



Installing Mac OS X Developer Preview

Welcome to Release 2 of the Mac OS X Developer Preview. This release provides an early look at the technologies that will give users a strong and flexible computing environment.

System Requirements

This version of Mac OS X works with the following computers:

- any Power Macintosh G3 computer
- any PowerBook G3 (except the original PowerBook G3)
- currently shipping iMac computers
- currently shipping Power Mac G4 computers

The computer must have

- at least 64 MB of RAM

To develop software using Mac OS X, you need at least 96 MB.

- internal video, or an Apple-supplied ixMicro or ATI video card
- a hard disk or disk partition with at least 1 gigabyte (GB) of available space

Note: You can install Mac OS X on an IDE hard disk or an external SCSI hard disk. You can also install Mac OS X on the Ultra Wide SCSI hard disk available with the “blue and white” Power Macintosh G3. (You cannot install Mac OS X on the Ultra Wide SCSI hard disk available with earlier Power Macintosh G3 computers.)

- a CD-ROM drive

Preparing to Install Mac OS X

To install Mac OS X, you need a hard disk or disk partition with a minimum of 1 GB of free space. You should install Mac OS X on a computer that has Mac OS 9 installed on its own partition or on a separate hard disk. This allows you to develop and test Carbon applications on both platforms.

To install both Mac OS X and an earlier version of the Mac OS on a single hard disk, you need to use a utility, such as Drive Setup (provided on the Mac OS X CD), to partition the disk into at least two Mac OS Extended (HFS Plus) partitions. The partition on which you install Mac OS X will be reformatted by the Mac OS X Installer. The other partitions will not be changed.

Important Be sure to install Mac OS 9 on the first partition.

Before you begin installing Mac OS X, turn off any security or virus-protection software installed on your computer.

If you have a PowerBook, plug it in and set it so it doesn't go to sleep.

Installing Mac OS X Developer Preview

Step 1: Start Up From the CD

To start up your computer from the Mac OS X Developer Preview CD, do this:

- 1** Insert the CD in the computer's CD-ROM drive.
- 2** Restart the computer while holding down the C key on your keyboard. Continue holding down the C key until you see the "Welcome to Mac OS X" message.

You'll know you've started up from the CD when your computer's desktop pattern changes to a light-colored background that says "CD."

Step 2: Open the Installer

- To open the Installer, double-click the Mac OS X Installer icon.

Note: If you see a message that your computer's firmware needs to be updated, you should update it before proceeding with the installation. The updater and instructions are available at the Apple Software Updates Web site (<http://asu.info.apple.com/>).

After a moment, a screen appears describing the installation process. Click Continue, then follow the onscreen instructions.

Need help during installation?

- Click the Help button in the upper-right corner of the Installer window.
- See "Troubleshooting Information" on page 8.

After Installing Mac OS X Developer Preview

After you install Mac OS X Developer Preview, you can easily set up your computer and prepare it to connect to the network by using the Mac OS X Setup Assistant. The assistant appears automatically after you install Mac OS X. The assistant asks questions about you, your location, and how you want your computer configured. Then it makes all the settings for you.

Using Mac OS X

Assigning Passwords

Mac OS X is a multi-user operating system. To access the computer, you must log in with a user name and password. When you use the Mac OS X Setup Assistant, you specify a password for the Administrator. You can also create other user accounts using the Setup Assistant. To create user accounts, you must know the Administrator password.

Warning This version of Mac OS X has not been security-qualified and is not recommended for deployment on the Internet or other public access networks.

If you select the Automatic Login option in the Setup Assistant, the computer automatically logs in to the account you specified without asking for a password every time it starts up.

To temporarily disable automatic login so that you can log in with a different account, restart the computer while holding down the mouse button, then release the mouse button when the login window appears.

Switching Between Mac OS Partitions

If you need to start up your computer using either the Mac OS X or Mac OS 9 partitions, follow these instructions.

Starting Up Your Computer Using Mac OS 9

To start up your computer using Mac OS 9, follow these steps:

- 1 In the Finder, open the File menu and choose Log Out, then click Restart.
- 2 Hold down the Option key until you see the message “Welcome to Mac OS.”

Starting Up Your Computer Using Mac OS X

To start up your computer using Mac OS X from Mac OS 9, follow these steps:

- 1 Open the System Disk application.
The System Disk application is in the Utilities folder on the Mac OS X Developer Preview CD.
- 2 Select the Mac OS X icon and click Save.

- 3 Restart your computer.

Troubleshooting Information

Before or During Installation

The Installer cannot repair your hard disk.

- If you see a message that the disk can't be fixed because a file is open, quit all programs. If file sharing is on, turn it off. Then try installing again.
- If you still get the message, use Disk First Aid, provided on the Mac OS X CD, to see if it can repair the disk.
- If you can't repair the disk, you may need to reinitialize it. First, back up your hard disk because reinitializing erases all the files on the disk. Then use the Drive Setup utility program, provided on the Mac OS X CD, to initialize the disk. For help with Drive Setup, open the program, then look in the Help menu. After you've initialized the disk, use the Mac OS X Installer to install the software again, then reinstall your application programs and your documents from your backup copy.

You see a message about updating the firmware.

If you see a message that you need to update your computer's firmware, you should do so before proceeding with the installation. The updater and instructions are available at the Apple Software Updates Web site (<http://asu.info.apple.com/>).

The Installer cannot update the hard disk driver.

The Installer cannot update non-Apple hard disks. Use the disk utility recommended by the manufacturer of your hard disk to update your drivers before installing Mac OS X. Make sure to get a version of the utility that is compatible with the software you are installing. An old utility will not be able to update your disk with the most current driver.

You see a message that the installation was not successful.

Make sure that you've started up your computer using the Mac OS X CD. If you can't start up from the CD, make sure any security and virus-protection software is turned off.

Other Problems

The onscreen Help system has answers to many of your questions. Open the Help menu, then choose Mac Help. Type some words that relate to your question, then click Search.

The computer begins to start up, then won't respond.

Mac OS X may be looking for a NetInfo server. Follow these steps:

- 1 Disconnect the computer's Ethernet connection.

- 2 When asked if you want to continue in non-network mode, enter Y.
- 3 Log in as Administrator.
- 4 Open the Apple menu and choose Mac OS Preferences, then choose Network.
- 5 In the NetInfo panel, make sure “Connect to parent NetInfo server at startup” is not selected.

The monitor screen is black.

Try these solutions:

- Press any key to wake up the computer.
- Make sure the monitor is properly connected and adjusted. See the manual that came with your monitor for more information.
- Make sure the resolution is set properly for your monitor. To set the resolution, shut down your computer and restart using Mac OS 9. Then open the Monitors & Sound or Monitors control panel to set the resolution to one supported by your monitor, and set the Color Depth to Thousands.
- If you have an unsupported video card in your computer, you may need to remove it, even if no monitor is attached to the card.
- If you have an AppleVision monitor, its ADB cable must be connected to the ADB port on the back of the computer. See the manual that came with your monitor.

You can't log in to your computer.

Try these solutions:

- Make sure you are entering your password correctly, using the same capitalization and punctuation that you originally used. If you still can't log in, log in as Administrator and reset the password for your user account using the Mac OS X Setup Assistant.
- If you are using automatic login, temporarily bypass it by holding down the mouse button when you start up your computer. To turn off automatic login, see “You want to turn off the automatic login feature,” later in this section.

Network services don't seem to be working.

Try these solutions:

- Make sure that one end of the Ethernet cable is plugged into the Ethernet port on the computer and the other end is plugged into a working Ethernet connector.
- Use DiskFirstAid to make sure your hard disk is working properly.
- Check your computer's AppleTalk and TCP/IP configurations and see if you can access AppleTalk devices or IP services on the network.
- Make sure the appropriate server processes are running. See your server administrator for more information.

- Restart your computer.
- If you've exhausted all solutions, you may need to reinstall Mac OS X. When you reinstall the software, you will lose documents and data. If you have backed up your computer, you can restore the data you backed up.

You can't quit an application.

If you can't quit an application, you may need to force it to quit. Open the Application menu (at the right end of the menu bar) and choose Show Processes. Select the program you want to stop and click the Force Quit button.

You want to turn off the automatic login feature.

The Mac OS X Setup Assistant allows you to specify a user name and password to log in automatically when you start up the computer. To temporarily bypass automatic login, hold down the mouse button when you start up your computer. To turn off this option, open the Setup Assistant and click the right arrow button until you see the Automatic Login panel. Click "Show login window at startup" to select it, then enter the Administrator's password.

You can't restart or shut down the computer.

If you can, choose Log Out from the File menu, then click Restart. If this doesn't work, try these solutions:

- Log in as Administrator, open the Apple menu and choose Computer Settings, then choose Login Window. If the Disable Restart & Power Off setting is selected, remove the checkmark.
- Make sure there is enough space available on the startup disk to save the information necessary to shut down the computer. Delete files you no longer need.

If neither solution works, you can force the computer to restart.

Warning Forcing your computer to restart may result in data loss or disk corruption. You should only use this procedure as a last resort. If possible, save any open documents, then quit all applications and processes before following these instructions. Make sure no other users are connected to your computer before you restart it.

To force your computer to restart, do this:

- Hold down the ⌘ and Control keys and press the Power key.

After forcing your computer to restart, you may want to test and repair the hard disk (see "Testing or Repairing the Hard Disk," next).

Testing or Repairing the Hard Disk

Use DiskFirstAid to make sure your hard disk is working properly.

Supported Hardware and Features

Feature	Supported?
Serial port	No
Mouse	Yes
USB keyboard and mouse	Yes (on computers with built-in USB ports)
More than one monitor	No
SCSI or IDE hard disk ¹	Yes
CD-ROM drive	Yes
Floppy disk drive	No
Removable storage ²	Yes
Printing ³	Yes
Ethernet TCP/IP	Yes
AppleTalk	Yes
FireWire	No
Power management	No
G3 upgrade cards	No

¹ With this version of Mac OS X, you can save files on any Ultra Wide SCSI hard disk.

² Removable media must be present when the computer starts up and cannot be removed until the computer is shut down or restarted.

³ Carbon and Cocoa applications can print to networked PostScript™ printers.

Supported Development Environments

Environment	Supported?
Carbon applications	Yes
Cocoa applications	Yes
Application-level networking	Yes
System-level networking	No
Sound	No
Drivers	No
OpenGL®	No

Acknowledgments

Portions of Mac OS X utilize the following copyrighted material, the use of which is hereby acknowledged.

Adobe Systems (font metrics)

Copyright © 1985-1992 Adobe Systems Incorporated. All rights reserved.

ITC Bookman is a registered trademark of International Typeface Corporation.

ITC Avant Garde Gothic is a registered trademark of International Typeface Corporation.

Helvetica is a trademark of Linotype AG and/or its subsidiaries.

Palatino is a trademark of Linotype AG and/or its subsidiaries.

Times is a trademark of Linotype AG and/or its subsidiaries.

ITC Zapf Chancery is a registered trademark of International Typeface Corporation.

Alice Group (BSD Kernel)

Copyright © 1993 Allen K. Briggs, Chris P. Caputo, Michael L. Finch, Bradley A. Grantham, and Lawrence A. Kesteloot. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. All advertising materials mentioning features or use of this software must display the following acknowledgement: This product includes software developed by the Alice Group. 4. The names of the Alice Group or any of its members may not be used to endorse or promote products derived from this software without specific prior written permission.

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

Apache Group (Apache)

Copyright © 1995-1999 The Apache Group. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the Apache Group for use in the Apache HTTP server project (<http://www.apache.org/>)."

4. The names "Apache Server" and "Apache Group" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact apache@apache.org.

5. Products derived from this software may not be called "Apache" nor may "Apache" appear in their names without prior written permission of the Apache Group.

6. Redistributions of any form whatsoever must retain the following acknowledgment: "This product includes software developed by the Apache Group for use in the Apache HTTP server project (<http://www.apache.org/>)."

THIS SOFTWARE IS PROVIDED BY THE APACHE GROUP "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 APACHE GROUP 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.

AT&T (libc)

The author of this software is David M. Gay.

Copyright © 1991 by AT&T.

Permission to use, copy, modify, and distribute this software for any purpose without fee is hereby granted, provided that this entire notice is included in all copies of any software which is or includes a copy or modification of this software and in all copies of the supporting documentation for such software.

THIS SOFTWARE IS BEING PROVIDED "AS IS", WITHOUT ANY EXPRESS OR IMPLIED WARRANTY. IN PARTICULAR, NEITHER THE AUTHOR NOR AT&T MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND CONCERNING THE MERCHANTABILITY OF THIS SOFTWARE OR ITS FITNESS FOR ANY PARTICULAR PURPOSE.

Carnegie-Mellon University (Mach Operating System)

Copyright © 1991 Carnegie Mellon University. All rights reserved.

Permission to use, copy, modify and distribute this software and its documentation is hereby granted, provided that both the copyright notice and this permission notice appear in all copies of the software, derivative works or modified versions, and any portions thereof, and that both notices appear in supporting documentation.

CARNEGIE MELLON ALLOWS FREE USE OF THIS SOFTWARE IN ITS "AS IS" CONDITION. CARNEGIE MELLON DISCLAIMS ANY LIABILITY OF ANY KIND FOR ANY DAMAGES WHATSOEVER RESULTING FROM THE USE OF THIS SOFTWARE.

Carnegie Mellon requests users of this software to return to Software.Distribution@CS.CMU.EDU; or Software Distribution Coordinator, School of Computer Science, Carnegie Mellon University, Pittsburgh PA 15213-3890; any improvements or extensions that they make and grant Carnegie Mellon the rights to redistribute these changes.

James Clark (expat)

This product contains software provided by James Clark under the Mozilla Public License Version 1.1. The Original Code is expat. The Initial Developer of the Original Code is James Clark. Portions created by James Clark are Copyright © 1998, 1999 James Clark. All rights reserved.

Ian F. Darwin (file)

Copyright © 1987 Ian F. Darwin. Written by Ian F. Darwin.

This software is not subject to any license of the American Telephone and Telegraph Company or of the Regents of the University of California. Permission is granted to anyone to use this software for any purpose on any computer system, and to alter it and redistribute it freely, subject to the following restrictions: 1. The author is not responsible for the consequences of use of this software, no matter how awful, even if they arise from flaws in it. 2. The origin of this software must not be misrepresented, either by explicit claim or by omission. Since few users ever read sources, credits must appear in the documentation. 3. Altered versions must be plainly marked as such, and must not be misrepresented as being the original software. Since few users ever read sources, credits must appear in the documentation. 4. This notice may not be removed or altered.

Digital Equipment Corporation (bind, BSD Kernel)

Portions Copyright © 1993 by Digital Equipment Corporation.

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, and that the name of Digital Equipment Corporation not be used in advertising or publicity pertaining to distribution of the document or software without specific, written prior permission.

THE SOFTWARE IS PROVIDED "AS IS" AND DIGITAL EQUIPMENT CORP. DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL DIGITAL EQUIPMENT CORPORATION 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.

Julian Elischer (devfs)

Copyright © 1997,1998 Julian Elischer. All rights reserved. julian@freebsd.org

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 COPYRIGHT HOLDER "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE 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.

Paul Falstad (zsh)

Copyright © 1992-1996 Paul Falstad. All rights reserved.

Permission is hereby granted, without written agreement and without license or royalty fees, to use, copy, modify, and distribute this software and to distribute modified versions of this software for any purpose, provided that the above copyright notice and the following two paragraphs appear in all copies of this software.

In no event shall Paul Falstad or the Zsh Development Group be liable to any party for direct, indirect, special, incidental, or consequential damages arising out of the use of this software and its documentation, even if Paul Falstad and the Zsh Development Group have been advised of the possibility of such damage. Paul Falstad and the Zsh Development Group specifically disclaim any warranties, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The software provided hereunder is on an "as is" basis, and Paul Falstad and the Zsh Development Group have no obligation to provide maintenance, support, updates, enhancements, or modifications.

FreeBSD (BSD Operating System)

This product contains software provided by FreeBSD, Inc. and its contributors.

Free Software Foundation (GNU Tools)

Copyright © 1988-1999 Free Software Foundation, Inc. ("FSF")

Parts of this product contain certain software owned by the FSF and licensed by Apple. You may obtain a complete machine-readable copy of the source code for the FSF software under the terms of GNU General Public License ("GPL"), without charge except for the cost of media, shipping, and handling, upon written request to Apple. The FSF software 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 GPL for more details; a copy of the GPL is included with this product.

Jean-loup Gailly and Mark Adler (zlib)

Copyright © 1995-1998 Jean-loup Gailly and Mark Adler.

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions: 1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required. 2. Altered source versions must be plainly marked as such, and must not be

misrepresented as being the original software. 3. This notice may not be removed or altered from any source distribution.

David Hines (PC Card driver)

This product contains software provided by David Hines under the Mozilla Public License Version 1.1. The initial developer of the original code is David Hines <dhinds@hyper.stanford.edu>. Portions created by David A. Hines are Copyright © 1998 David A. Hines. All rights reserved.

IBM Corporation (BSD Kernel)

Copyright © 1987 IBM Corporation. All rights reserved.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of IBM not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

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

Intel Corporation (BSD Kernel)

Copyright © 1988, 1989 by Intel Corporation, Santa Clara, California. All rights reserved.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appears in all copies and that both the copyright notice and this permission notice appear in supporting documentation, and that the name of Intel not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

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

Lance Kurisaki (liutil)

Copyright © 1996, 1997 Lance Kurisaki. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. All advertising materials mentioning features or use of this software must display the following acknowledgement: This product includes software developed by Lance Kurisaki. 4. The name of the other may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY LANCE KURISAKI "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 LANCE KURISAKI 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.

Thomas G. Lane. (CoreGraphics—JPEG library)

Copyright © 1991-1996, Thomas G. Lane.

All rights reserved except as specified below.

The authors make NO WARRANTY or representation, either express or implied, with respect to this software, its quality, accuracy, merchantability, or fitness for a particular purpose. This software is provided "AS IS", and you, its user, assume the entire risk as to its quality and accuracy. Permission is hereby granted to use, copy, modify, and distribute this software (or portions thereof) for any purpose, without fee, subject to these conditions: (1) If any part of the source code for this software is distributed, then this README file must be included, with this copyright and no-warranty notice unaltered; and any additions, deletions, or changes to the original files must be clearly indicated in accompanying documentation. (2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group". (3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind. These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us. Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software". We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

Sam Leffler and Silicon Graphics, Inc. (AppKit, CoreGraphics—TIFF library)

Copyright © 1988-1996 Sam Leffler. Copyright © 1991-1996 Silicon Graphics, Inc.

Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that (i) the above copyright notices and this permission notice appear in all copies of the software and related documentation, and (ii) the names of Sam Leffler and Silicon Graphics may not be used in any advertising or publicity relating to the software without the specific, prior written permission of Sam Leffler and Silicon Graphics.

THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL SAM LEFFLER OR SILICON GRAPHICS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Massachusetts Institute of Technology (Kerberos, WebDAV File System)

Copyright © 1985-1999 by the Massachusetts Institute of Technology.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting. WITHIN THAT CONSTRAINT, 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 M.I.T. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. M.I.T. makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

THIS SOFTWARE IS PROVIDED BY M.I.T. "AS-IS". M.I.T. DISCLAIMS ALL EXPRESS OR IMPLIED WARRANTIES WITH REGARDS TO THIS SOFTWARE, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL M.I.T. 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.

David L. Mills (Network Time Protocol)

Copyright © 1992, 1993, 1994, 1995, 1996 David L. Mills.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appears in all copies and that both the copyright notice and this permission notice appear in supporting documentation, and that the name University of Delaware not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. The University of Delaware makes no representations about the suitability this software for any purpose. It is provided "as is" without express or implied warranty.

NetBSD (BSD Operating System)

This product contains software provided by The NetBSD Foundation, Inc. and its contributors.

Mark Nudelman (less)

Copyright © 1984,1985,1989,1994,1995,1996 Mark Nudelman. All rights reserved.

Tim Olson (BSD Kernel)

Copyright © 1993, 1994, 1995 Tim Olson.

This software is distributed absolutely without warranty. You are free to use and modify the software as you wish. You are also free to distribute the software as long as you retain the above notice, and you make clear what your modifications were. Send comments and bug reports to tim@apple.com.

OpenBSD (BSD Operating System)

This product contains software provided by OpenBSD and its contributors.

Open Software Foundation (Mach Operating System)

Copyright © 1995, 1994, 1993, 1992, 1991, 1990 Open Software Foundation, Inc.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appears in all copies and that both the copyright notice and this permission notice appear in supporting documentation, and that the name of ("OSF") or Open Software Foundation not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

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

OpenVision Technologies (Kerberos Administration System)

Copyright © 1996 OpenVision Technologies, Inc. All rights reserved.

Sendmail, Inc. (sendmail)

Copyright © 1998 Sendmail, Inc. All rights reserved.

Use, Modification and Redistribution (including distribution of any modified or derived work) in source and binary forms is permitted only if each of the following conditions is met: 1. Redistributions qualify as "freeware" or "Open Source Software" under one of the following terms: (a) Redistributions are made at no charge beyond the reasonable cost of materials and delivery. (b) Redistributions are accompanied by a copy of the Source Code or by an irrevocable offer to provide a copy of the Source Code for up to three years at the cost of materials and delivery. Such redistributions must allow further use, modification, and redistribution of the Source Code under substantially the same terms as this license. For the purposes of redistribution "Source Code" means the complete source code of sendmail including all modifications. Other forms of redistribution are allowed only under a separate royalty-free agreement permitting such redistribution subject to standard commercial terms and conditions. A copy of such agreement may be obtained from Sendmail, Inc. at the above address. 2. Redistributions of source code must retain the copyright notices as they appear in each source code file, these license terms, and the disclaimer/limitation of liability set forth as paragraph 6 below. 3. Redistributions in binary form must reproduce the Copyright Notice, these license terms, and the disclaimer/limitation of liability set forth as paragraph 6 below, in the documentation and/or other materials provided with the distribution. For the purposes of binary distribution the "Copyright

Notice” refers to the following language: “Copyright (c) 1998 Sendmail, Inc. All rights reserved.” 4. Neither the name of Sendmail, Inc. nor the University of California nor the names of their contributors may be used to endorse or promote products derived from this software without specific prior written permission. The name “sendmail” is a trademark of Sendmail, Inc. 5. All redistributions must comply with the conditions imposed by the University of California on certain embedded code, whose copyright notice and conditions for redistribution are as follows: (a) Copyright (c) 1988, 1993 The Regents of the University of California. All rights reserved. (b) Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: (i) Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. (ii) 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. (iii) All advertising materials mentioning features or use of this software must display the following acknowledgment: “This product includes software developed by the University of California, Berkeley and its contributors.” (iv) 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. 6. Disclaimer/Limitation of Liability: THIS SOFTWARE IS PROVIDED BY SENDMAIL, INC. 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 SENDMAIL, INC., THE REGENTS OF THE UNIVERSITY OF CALIFORNIA 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 DAMAGES.

Greg Stein (Apache mod_dav)

Copyright © 1998-1999 Greg Stein. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. All advertising materials mentioning features or use of this software must display the following acknowledgment: This product includes software developed by Greg Stein <gstein@lyra.org> for use in the mod_dav module for Apache (http://www.webdav.org/mod_dav/). 4. Products derived from this software may not be called “mod_dav” nor may “mod_dav” appear in their names without prior written permission of Greg Stein. For written permission, please contact gstein@lyra.org. 5. Redistributions of any form whatsoever must retain the following acknowledgment: This product includes software developed by Greg Stein <gstein@lyra.org> for use in the mod_dav module for Apache (http://www.webdav.org/mod_dav/).

THIS SOFTWARE IS PROVIDED BY GREG STEIN “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 GREG STEIN OR THE SOFTWARE'S 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.

Sun Microsystems (Sun RPC)

Sun RPC is a product of Sun Microsystems, Inc. and is provided for unrestricted use provided that this legend is included on all tape media and as a part of the software program in whole or part. Users may copy or modify Sun RPC without charge, but are not authorized to license or distribute it to anyone else except as part of a product or program developed by the user or with the express written consent of Sun Microsystems, Inc. Sun RPC is provided

with no support and without any obligation on the part of Sun Microsystems, Inc. to assist in its use, correction, modification or enhancement.

SUN RPC IS PROVIDED AS IS WITH NO WARRANTIES OF ANY KIND INCLUDING THE WARRANTIES OF DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE. SUN MICROSYSTEMS, INC. SHALL HAVE NO LIABILITY WITH RESPECT TO THE INFRINGEMENT OF COPYRIGHTS, TRADE SECRETS OR ANY PATENTS BY SUN RPC OR ANY PART THEREOF.

In no event will Sun Microsystems, Inc. be liable for any lost revenue or profits or other special, indirect and consequential damages, even if Sun has been advised of the possibility of such damages. Sun Microsystems, Inc. 2550 Garcia Avenue Mountain View, California 94043

Sun Microsystems (libm)

Copyright © 1993 by Sun Microsystems, Inc. All rights reserved.

Developed at SunPro, a Sun Microsystems, Inc. business. Permission to use, copy, modify, and distribute this software is freely granted, provided that this notice is preserved.

University of California, et. al. (BSD Operating System)

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

Copyright © 1980-1997 The Regents of the University of California

Copyright © 1998 by Apple Computer, Inc.

Copyright © 1986 by Robert V. Baron

Copyright © 1991, 1992, 1993, 1994, 1995, 1996 Keith Bostic

Copyright © 1992, 1993 John Brezak

Copyright © 1988, 1989 by Adam de Boor

Copyright © 1994 Christopher G. Demetriou.

Copyright © 1992,1993 Theo de Raadt <deraadt@fsa.ca>

Copyright © 1994, Simon J. Gerraty

Copyright © 1994-97 Mats O Jansson <moj@stacken.kth.se>

Copyright © 1993 by Thomas Koenig

Copyright © 1993 by Adrian Mariano (adrian@cam.cornell.edu)

Copyright © 1993 Andrew Moore, Talke Studio

Copyright © 1992 Keith Muller

Copyright © 1995 Bill Paul <wpaul@ctr.columbia.edu>

Copyright © 1993 David Parsons

Copyright © 1990, 1992 Jan-Simon Pendry

Copyright © 1994-1996 Wolfram Schneider <wosch@FreeBSD.org>, Berlin

Copyright © 1991, 1994 Wolfgang Solfrank

Copyright © 1989 by Berkeley Softworks

Copyright © 1996 Ignatios Souvatzis.

Copyright © 1992 Diomidis Spinellis

Copyright © 1985 Sun Microsystems, Inc.

Copyright © 1991, 1994 TooLs GmbH

Copyright © 1988, 1992 The University of Utah and the Center for Software Science (CSS)

Copyright © UNIX System Laboratories, Inc.

Copyright © 1993, 1994 Winning Strategies, Inc.

All rights reserved.

This code is derived from software contributed to Berkeley by Adam S. Moskowitz of Menlo Consulting; Adam de Boer; Asa Romberger; Atsushi Murai (amurai@spec.co.jp); Barry Brachman; Bob Toxen; Brian Hirt.; Case Larsen; Chris Newcomb; Chris Torek; Cimarron D. Taylor of the University of California, Berkeley; Darren F. Provine; Dave Taylor, of Intuitive Systems; Dave Yost; David Barto at Celerity Computer Corp.; David C. Elliott, of MIPS Computer Systems; David Goodenough; David Hitz of Auspex Systems, Inc.; Diomidis Spinellis of Imperial College, University of London; Donn Seeley at Berkeley Software Design, Inc.; Eamonn McManus of Trinity College Dublin; Ed James; Edward Sze-Tyan Wang; Edward Wang at The University of California, Berkeley; Guy Harris at Network Appliance Corp.; Henry Spencer of the University of Toronto; Herb Hasler and Rick Macklem at The University of Guelph; James A. Woods; James W. Williams of the University of Maryland and NASA Goddard Space Flight Center; Jan-Simon Pendry; Jef Poskanzer and Craig Leres of the Lawrence Berkeley Laboratory; Jerry Berkman; Jim Gillogly at The Rand Corporation; Jim R. Oldroyd at The Instruction Set and Keith Gabryelski at Commodore Business Machines; John B. Roll Jr.; Joseph Orost; Keith Muller of the University of California, San Diego and Lance Visser of Convex Computer Corporation; Ken Arnold; Ken Smith of The State University of New York at Buffalo; Kenneth Almquist; Kevin Fall; Kevin Ruddy; Kim Letkeman; Landon Curt Noll; Marciano Pitargue; Michael Fischbein; Michael Rendell of the Memorial University of Newfoundland; Michiro Hikida; Mike Hibler; Mike Muuss; Mike Olson; Muffy Barkocy; Ozan Yigit at York University; Pace Willisson (pace@blitz.com); Ralph Campbell; Rich \$alz of BBN Inc.; Rick Adams; Rick Macklem at The University of Guelph; Robert Corbett; Robert Elz at The University of Melbourne; Robert Paul Corbett; Spencer Thomas; Stephen Deering of Stanford University; Steve Hayman of the Indiana University Computer Science Department; Sun Microsystems, Inc.; Symmetric Computer Systems; Timothy C. Stoehr; Tony Nardo of the Johns Hopkins University/Applied Physics Lab; and the Systems Programming Group of the University of Utah Computer Science Department.

The United States Government has rights in parts of this work pursuant to contract no. DE-AC03-76SF00098 between the United States Department of Energy and the University of California.

Some code is derived from software contributed to Berkeley by the Center for Software Science of the University of Utah Computer Science Department. CSS requests users of this software to return to css-dist@cs.utah.edu any improvements that they make and grant CSS redistribution rights.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. All advertising materials mentioning features or use of this software must display the following acknowledgement: This product includes software developed by the University of California, Berkeley and its contributors. 4. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

University of California, Sun Microsystems, and Scriptics (Tcl)

This software is copyrighted by the Regents of the University of California, Sun Microsystems, Inc., Scriptics Corporation, and other parties. The following terms apply to all files associated with the software unless explicitly disclaimed in individual files.

The authors hereby grant permission to use, copy, modify, distribute, and license this software and its documentation for any purpose, provided that existing copyright notices are retained in all copies and that this notice is included verbatim in any distributions. No written agreement, license, or royalty fee is required for any of the authorized uses. Modifications to this software may be copyrighted by their authors and need not follow the

licensing terms described here, provided that the new terms are clearly indicated on the first page of each file where they apply.

IN NO EVENT SHALL THE AUTHORS OR DISTRIBUTORS BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS SOFTWARE, ITS DOCUMENTATION, OR ANY DERIVATIVES THEREOF, EVEN IF THE AUTHORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

THE AUTHORS AND DISTRIBUTORS SPECIFICALLY DISCLAIM ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. THIS SOFTWARE IS PROVIDED ON AN "AS IS" BASIS, AND THE AUTHORS AND DISTRIBUTORS HAVE NO OBLIGATION TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.

GOVERNMENT USE: If you are acquiring this software on behalf of the U.S. government, the Government shall have only "Restricted Rights" in the software and related documentation as defined in the Federal Acquisition Regulations (FARs) in Clause 52.227.19 (c) (2). If you are acquiring the software on behalf of the Department of Defense, the software shall be classified as "Commercial Computer Software" and the Government shall have only "Restricted Rights" as defined in Clause 252.227-7013 (c) (1) of DFARS. Notwithstanding the foregoing, the authors grant the U.S. Government and others acting in its behalf permission to use and distribute the software in accordance with the terms specified in this license.

University of Washington (Pico)

Copyright © 1991-1993 University of Washington.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee to the University of Washington is hereby granted, provided that the above copyright notice appears in all copies and that both the above copyright notice and this permission notice appear in supporting documentation, and that the name of the University of Washington not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. This software is made available "as is", and THE UNIVERSITY OF WASHINGTON DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, WITH REGARD TO THIS SOFTWARE, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND IN NO EVENT SHALL THE UNIVERSITY OF WASHINGTON BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR STRICT LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Pine and Pico are trademarks of the University of Washington. No commercial use of these trademarks may be made without prior written permission of the University of Washington.

Paul Vixie (cron)

Copyright © 1988,1990,1993,1994 by Paul Vixie. All rights reserved.

Distribute freely, except: don't remove my name from the source or documentation (don't take credit for my work), mark your changes (don't get me blamed for your possible bugs), don't alter or remove this notice. May be sold if buildable source is provided to buyer. No warrantee of any kind, express or implied, is included with this software; use at your own risk, responsibility for damages (if any) to anyone resulting from the use of this software rests entirely with the user.

Larry Wall (Perl Kit)

Copyright © 1989-1997, Larry Wall. All rights reserved.

This program is free software; you can redistribute it and/or modify it under the terms of either: a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or b) the "Artistic License" which comes with this Kit.

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 either the GNU General Public License or the Artistic License for more details.

You should have received a copy of the Artistic License with this Kit, in the file named "Artistic". If not, I'll be glad to provide one. You should also 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.

For those of you that choose to use the GNU General Public License, my interpretation of the GNU General Public License is that no Perl script falls under the terms of the GPL unless you explicitly put said script under the terms of the GPL yourself. Furthermore, any object code linked with perl does not automatically fall under the terms of the GPL, provided such object code only adds definitions of subroutines and variables, and does not otherwise impair the resulting interpreter from executing any standard Perl script. I consider linking in C subroutines in this manner to be the moral equivalent of defining subroutines in the Perl language itself. You may sell such an object file as proprietary provided that you provide or offer to provide the Perl source, as specified by the GNU General Public License. (This is merely an alternate way of specifying input to the program.) You may also sell a binary produced by the dumping of a running Perl script that belongs to you, provided that you provide or offer to provide the Perl source as specified by the GPL. (The fact that a Perl interpreter and your code are in the same binary file is, in this case, a form of mere aggregation.) This is my interpretation of the GPL. If you still have concerns or difficulties understanding my intent, feel free to contact me. Of course, the Artistic License spells all this out for your protection, so you may prefer to use that.

Jean-Marc Zucconi (WebDAV File System)

Copyright © 1996 Jean-Marc Zucconi.

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 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 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.

www.apple.com