



Installation Instructions and Release Notes

OPENSTEP 4.2 Patch 4

OPENSTEP Enterprise 4.2 Patch 4

OPENSTEP 4.2 Developer Patch 4

OPENSTEP Enterprise 4.2 Developer Patch 4

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 Apple Computer, Inc.

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Introduction

This document describes Apple's Patch 4 fixes for OPENSTEP 4.2 for Mach and OPENSTEP Enterprise 4.2. This patch set includes fixes that address the Year 2000 compliance issue (century rollover). Apple recommends that all users of OPENSTEP install the appropriate patch set. These Release Notes also document the issues found in Enterprise Objects Framework (EOF) 1.2 and 2.1.

What This Patch Covers

This patch affects the following products:

- OPENSTEP 4.2 for Mach for Intel, NeXT-branded Motorola, and SPARC hardware
- OPENSTEP 4.2 Developer for Mach
- OPENSTEP Enterprise 4.2 for Windows NT, Solaris, and HP-UX
- OPENSTEP Enterprise 4.2 Developer for Windows NT
- Enterprise Objects Framework (EOF) Release 1.2
- Enterprise Objects Framework (EOF) Release 2.1

This Patch set does NOT apply to OPENSTEP 4.2J (Japanese language version). Do not install OPENSTEP 4.2 Patch 4 on any system with OPENSTEP 4.2J installed.

Apple has tested OPENSTEP 4.2, OPENSTEP Enterprise 4.2, and EOF 1.2, and 2.1 with Patch 4 installed and has determined based on the results that the software meets Apple's standard of Year 2000 compliance*. This includes the use of the database adaptors included with EOF, when used through EOF. It has been determined that the direct use of client library API, custom SQL statements, or other use of the database adaptors or software other than through the EOF APIs may produce results that do not meet Apple's standard of Year 2000 compliance.

** For Apple, Year 2000 compliance means that the software does not produce errors processing date data in connection with the year change from December 31, 1999 to January 1, 2000, when using accurate date data in accordance with its documentation, provided all other products used with it properly exchange date data with the Enterprise Software product.*

What Is Not Covered

Resetting System Date on Intel Platform Machines

OPENSTEP systems on Intel hardware platforms may not have the year set correctly when booting for the first time after December 31, 1999. This problem may appear the first time you shut down, restart, or start up your system after the December 31, 1999-January 1, 2000 transition. To correct this problem, you will have to use your system's SETUP mode to set the correct year the first time the system is booted or rebooted in the year 2000.

Third Party Software Applications

Apple has not performed testing on certain third party software applications that shipped with OPENSTEP 4.2 and earlier versions. Accordingly, these applications may or may not have Year 2000 compliance issues. These third-party applications include but are not limited to:

- Sybase client libraries
- TeX and Metafont
- Emacs
- perl
- Novell Netware client software

About this Document

This document is divided into the following sections:

- Section 1: Installation Notes and Instructions
- Section 2: Issues - OPENSTEP 4.2 for Mach
- Section 3: Issues - OPENSTEP 4.2 for Mach Developer
- Section 4: Issues - OPENSTEP Enterprise 4.2
- Section 5: Issues - OPENSTEP Enterprise 4.2 Developer
- Section 6: Issues - Enterprise Objects Framework

Section 1: Installation Notes and Instructions

OPENSTEP 4.2 Patch 4 supercedes all previous general patches for OPENSTEP 4.2. If you have already installed a previous OPENSTEP patch on your system, you can install Patch 4 over it. If you have not installed any previous patch, you do not need to; this patch contains all fixes from previous patches. This patch does not include fixes from the Sybase DBKit Adaptor Patch; if you are using DBKit with a Sybase database, you should install this patch separately.

If you use Enterprise Objects Framework on your system, it should be installed before you install OPENSTEP 4.2 Patch 4. Patch 4 includes fixes in system components that were originally installed by EOF. The OPENSTEP and EOF software packages should be installed in the following order:

- OPENSTEP 4.2 User
- OPENSTEP 4.2 Developer (optional)
- EOF User (optional)
- EOF Developer (optional)
- OPENSTEP 4.2 Patch 4 User package
- OPENSTEP 4.2 Patch 4 Developer package (optional)

OPENSTEP 4.2 Patch 4 comes in several packages, depending on the OPENSTEP platform:

- For **OPENSTEP for Mach** installations, the patch package is named OS42MachUserPatch4.pkg (CD version) or OS42MachUserPatch4.tar (web version).
- For **Windows NT** installations, the patch package is named OS42UserPatch4Installer.exe (CD version) or OS42_NT_User_Patch4.exe (web version).
- For **Solaris** installations, the patch package is named OS42_Solaris_Patch4.tar.Z.
- For HP-UX installations, the patch package is named OS42_HPUX_Patch4.tar.Z.

In addition, there are Developer packages for Mach and Windows NT. These patches should be installed on systems that have OPENSTEP 4.2 Developer or OPENSTEP Enterprise 4.2 Developer installed. If you are using EOF developer components as well, please read section 6 of this document carefully. There are manual steps you must take to avoid some century issues.

Installation instructions - OPENSTEP for Mach

To install OPENSTEP 4.2 for Mach Patch 4 on an OPENSTEP for Mach system, perform the following steps:

1. If you download OPENSTEP 4.2 for Mach Patch 4 from the internet, you may need to decompress the file with the command (example):

```
tar xf OS42MachDeveloperPatch4.pkg
```

This will unpack the single 'tar' file used for download into the .pkg format compound document used by the OPENSTEP for Mach installer. Your web browser or FTP client may perform this step for you.

2. Log in as root on your OPENSTEP system. If you're not sure how to log in as root, see your system administrator.
3. Make sure that there are no other OPENSTEP or EOF applications running.
4. Double-click on the OS42MachUserPatch4.pkg file.
5. Click the Install button in the Installer package window. An Install Package panel will open.
6. Make sure that there are no other OPENSTEP or EOF applications running.
7. Click 'Install' in the Install Package panel and, when prompted for confirmation, click OK to proceed. The Installer window displays information about the progress of the installation, which may take several minutes. If you do not need to install the Developer patch, skip to step 10 to complete the installation.

8. To install OPENSTEP 4.2 Developer Patch 4, double-click on the OS42MachDevPatch4.pkg file.
9. Click the Install button in the Installer package window. An Install Package panel will open.
10. Click 'Install' in the Install Package panel and, when prompted for confirmation, click OK to proceed. The Installer window displays information about the progress of the installation, which may take several minutes.
11. When the installation completes, the system must be rebooted. Log out and use the reboot button on the login panel.

Installation instructions - OPENSTEP Enterprise for Windows NT

To install OPENSTEP Enterprise 4.2 Patch 4 on a Windows NT 4 system, perform the following steps:

1. If you download OPENSTEP Enterprise 4.2 for Mach Patch 4 from the internet, run the OS42_NT_User_Patch4.exe file to uncompress the patch installer, OS42UserPatch4Intstaller.exe and the release notes.
2. Read the release note distributed with this patch.
3. Log in as a user with Administrator privileges.
4. Make sure that there are no OPENSTEP or EOF applications running.
5. Double-click on the OS42UserPatch4Intstaller.exe file to start the install process.
6. A screen will appear with some information about this patch. After you have read it, click "Next" to continue.
7. The license agreement for this patch will appear. To agree to the license and continue the installation, click "Yes".
8. The patch will now be installed on your system and you will be asked if you want to reboot. If you have OPENSTEP Enterprise 4.2 Developer

installed on your system, select “No, I will restart my computer later” and repeat steps one through seven using the Developer patch installer, OS42NTDevPatch4Installer.exe. Otherwise, proceed to step nine.

9. Select “Yes, I want to restart my computer now” to reboot your Windows NT system. The WinZip self-extractor will automatically quit and remove the temporary installation in about 20 seconds.

Installation instructions - OPENSTEP Enterprise for Solaris and HP-UX

To install OPENSTEP Enterprise 4.2 Patch 4 on a Solaris or HP-UX system, perform the following steps:

1. Log in as root. If you’re not sure how to log in as root, see your system administrator.
2. Make sure that there are no OPENSTEP or EOF applications running.
3. Change to the directory containing the patch and the patch installer, “patcher.sh”.
4. At a shell prompt, type:

```
patcher.sh -install OS42_Solaris_Patch4.tar.Z
```

or

```
patcher.sh -install OS42_HPUX_Patch4.tar.Z
```

For more information on using the “patcher.sh” program, type the following at the command prompt:

```
patcher.sh -help
```

5. Reboot your Unix system

Section 2: Issues - OPENSTEP 4.2 for Mach

This section details all issues addressed in OPENSTEP 4.2 for Mach Patch 4 and in previous patches for OPENSTEP for Mach.

Issues addressed in OPENSTEP 4.2 for Mach Patch 4

'troff' and 'nroff' macro caused incorrect modification dates before and after 1999
Apple reference #2339326

Problem: There was a problem in the 'tmac.an.new' macro used by 'nroff' and 'troff' which caused incorrect modification dates to be printed on man pages after 1999.

Resolution: The 'tmac.an.new' macro now correctly formats modification dates both before and after 1999.

'Mail.app' read receipt date parsing did not understand two-digit years less than 70
Apple reference #2340051, 2340054

Problem: The 'Mail.app' date parsing for read receipts did not understand two-digit years less than 70.

Resolution: 'Mail.app' has been modified to accept two-digit years less than 70 and treat them as within the 21st century. Two-digit years from 70-99 are interpreted as within the 20th century. Additionally, three-digit years are interpreted as an offset from the year 1900, so year '100' is taken to be 2000. Please note, however, that the literal date value from the received mail's header is still displayed within the message. If mail is received with a date in the year '100', the value '100' is displayed in the message window, but internally 'Mail.app' evaluates the year as 2000.

Active.mbox had two-digit year in the Date header

Apple reference #234005

Problem: The welcome email message from Steve Jobs had a two-digit year in the header.

Resolution: This message now contains a four-digit year.

Generated date for text pasted into new mail message incorrect for dates after 1999

Apple reference #2341576

Problem: When creating a new message in a mailbox by pasting text into the mailbox, the generated date for the message was not correct for dates after 1999.

Resolution: This problem has been corrected.

Fax software date stamps used two digit format

Apple reference #2342427

Problem: The date stamps written by the fax software used a two-digit year format, and the aging code which detected and removed old fax log files failed when the year changed from '99' to '00'.

Resolution: To avoid causing problems with any software that might parse the fax log date stamps, the two-digit year format is retained, but the aging algorithm is modified to behave correctly both before and after the year 2000.

Motorola DSP assembler output incorrect page header in year 2000

Apple reference #2343170

Problem: The Motorola 56K DSP assembler output an incorrect page header in the year 2000.

Resolution: This problem has been corrected.

Motorola DSP Librarian output incorrect library file dates after 1999

Apple reference #2343171

Problem: The Motorola 56K DSP librarian output incorrect dates in library file listings after 1999.

Resolution: This problem has been corrected.

Motorola DSP Linker output incorrect page header in 2000

Apple reference #2343172

Problem: The Motorola 56K DSP Linker output an incorrect page header in the year 2000.

Resolution: This problem has been corrected.

rmail date parsing only allowed 20th-century year values

Apple reference #2343173

Problem: Date parsing in the Emaes rmail subsystem only allowed years of the form 19xx.

Resolution: rmail has been modified to allow either 19xx or 20xx.

'encrypt' command displayed incorrect year in file timestamp after 1999

Apple reference #2343174

Problem: The 'encrypt' command has an option that prints a file's timestamp as a page header. This header displayed an incorrect year after 1999.

Resolution: This problem has been corrected.

Verbose file listing from 'tp' command printed incorrect two-digit dates after 1999

Apple reference #2343228

Problem: The verbose file listing from the 'tp' command printed two-digit years which were incorrect after 1999.

Resolution: The 'tp' command has been modified to always output a four-digit date.

'zsh' command could have displayed incorrect date in command prompt after 1999

Apple reference #2343229

Problem: The 'zsh' command can be configured to display the date in the command prompt. This date display did not function correctly after 1999.

Resolution: This problem has been corrected.

'/usr/ucb/w' displayed year values later than 1999 incorrectly as three-digit values

Apple reference #2343231

Problem: The '/usr/ucb/w' command displayed the year value in date stamps after 1999 as three digits, i.e., the year 2000 displayed as "100" rather than "00".

Resolution: '/usr/ucb/w' now outputs two-digit years after 1999. Although the use of a two-digit year format is not preferred practice, changing the date format to use four-digit years could cause errors in programs that call the 'w' command. It is the responsibility of the calling program to resolve the ambiguity of the two-digit year values in the 'w' command's output.

Leap year calculation in 'at' command didn't include 400-year rule

Apple reference #2343234

Problem: The leap year calculation in the 'at' command failed to take into account the 400-year rule, resulting in incorrect behavior after leap day in the year 2000.

Resolution: This calculation has been corrected.

Leap year calculation in ‘atq’ command didn’t include 400-year rule

Apple reference #2343235

Problem: The leap year calculation in the ‘atq’ command failed to take into account the 400-year rule, resulting in incorrect behavior after leap day in the year 2000.

Resolution: This calculation has been corrected.

NeXTSTEP compatibility version of NSDate’s two-digit year format returned three-digit years after 1999

Apple reference #2343620

Problem: The two-digit year format (%y) of the NeXTSTEP 3.3 compatibility version of NSDate’s **+descriptionWithCalendarFormat:** method returned three-digit years after 1999. For example, “2000” was displayed as “100”, rather than “00”. This problem only affects NeXTSTEP 3.3 applications running on OPENSTEP 4.2.

Resolution: This method now returns an appropriate two-digit year when the %y format is employed. Users are strongly cautioned that two-digit year values are inherently ambiguous and can result in serious software errors.

NeXTSTEP compatibility version of NSDate’s calendar format methods interpreted all two-digit dates as in 20th century

Apple reference #2343621

Problem: The NeXTSTEP 3.3 compatibility version of NSDate’s **-dateWithString:calendarFormat:** and **-initWithString:calendarFormat:** methods interpreted all two-digit dates as being in the 20th century; i.e., “00” was interpreted as “1900”. This problem only affects NeXTSTEP 3.3 applications running on OPENSTEP 4.2.

Resolution: These methods now follow the Microsoft Excel™ convention used in later versions of Foundation, where two-digit dates less than 30 are interpreted as 21st century dates (2000-2029) and two digit dates 30 and greater are interpreted as 20th century dates (1930-1999). Users are strongly cautioned that two-digit year values are inherently ambiguous and can result in serious software errors.

‘gnutar’ command didn’t accept dates later than 1999

Apple reference #2343670

Problem: The ‘gnutar’ command has an option to only write files newer than a given date, but version 1.11.2, the version shipped with OPENSTEP 4.2, didn’t accept dates past the end of 1999, even using four-digit years.

Resolution: ‘gnutar’ has been updated to version 1.12, which accepts dates after 1999.

/usr/bin/refer command assumed all references had dates in 20th century

Apple reference #2347961

Problem: The ‘nroff’ and ‘troff’ preprocessor, ‘/usr/bin/refer’, discarded references with dates whose century was not ‘19’ in certain circumstances.

Resolution: The ‘refer’ command now recognizes bibliographic references in any century.

‘at’ command sometimes scheduled jobs incorrectly after February 29 in leap years

Apple reference #2348073

Problem: A calculation in the ‘at’ command used to determine the day of the year that a job should execute didn’t properly account for the additional day in leap years when the user entered the job in the year prior to a leap year.

For example, if a user scheduled a job for March 2, 2000 in June of 1999, with the syntax ‘at 8am Mar 2’, the job was incorrectly scheduled for March 1, 2000.

Resolution: The day-of-year calculation used by the ‘at’ command for scheduling jobs in the next year has been corrected to account properly for leap years.

Issues addressed in OPENSTEP 4.2 for Mach Patch 3

Permissions issues in system files

Apple reference #2318668

Problem: Certain system files included in OPENSTEP 4.2 Patch 2 had incorrect permissions settings. This caused issues with sendmail and some other system resources.

Resolution: These permissions have been corrected in this patch.

Issues addressed in OPENSTEP 4.2 for Mach Patch 2

adjtime() did not affect system time

Apple reference #2231714

Problem: The adjtime() system function, intended to allow the synchronization of the system clock, actually had no effect. This caused issues with network time synchronization under OPENSTEP for Mach.

Resolution: The adjtime() function now correctly adjusts the system clock.

Couldn't install OPENSTEP on partitions beginning after 4GB

Apple reference #2265513

Problem: The 'disk' command was not able to initialize an OPENSTEP for Mach partition beginning at a large offset on the drive, and would not correctly partition a large fdisk slice on EIDE drives.

Resolution: The 'disk' command can now initialize partitions at any offset.

No Euro glyph support in OPENSTEP rulebooks

Apple reference #2265773

Problem: The AppKit rulebooks did not support the Euro currency character.

Resolution: The rulebooks have been updated to provide support for the Euro currency symbol, U+20AC. The encoding tables in Foundation have also been updated to support this character. You will still need to obtain and install fonts which include the Euro character in order to generate the character itself.

No Euro symbol support in OPENSTEP

Apple reference #2265776

Problem: OPENSTEP 4.2 for Mach did not include Euro currency symbol support.

Resolution: Support was added for the Euro currency symbol. Typing a Euro currency symbol character will require a modified keyboard keymapping. The currency character is encoded as symbol 0xA0 in the keyboard symbol encoding. Use **/NextDeveloper/Demos/Keyboard.app** to bind the desired key to symbol 0xA0 in your keymapping and you will be able to type the Euro currency symbol.

Sound input gain preferences behaved oddly

Apple reference #2272986

Problem: In the OPENSTEP for Mach sound preferences panel, requests to set the right input channel gain on the sound input device were ignored. This produced strange behavior in the sound preferences panel input gain sliders.

Resolution: The sound preferences panel sliders now behave as expected.

NSDateFormatter interpreted year “00” as “Current Year”

Apple reference #2278598

Problem: NSDateFormatter interpreted year “0” or “00” as “current year”, rather than “2000”, which was inconsistent with the interpretation of two-digit years in UNIX and not Year 2000 compliant.

Resolution: NSDateFormatter now interprets “0” or “00” year values as “2000”

System panic occurred while writing disk label

Apple reference #2279630

Problem: Writing a disk label caused a kernel panic in some circumstances.

Resolution: The system has been modified to eliminate these kernel panics.

‘mkfs’ failed with write error

Apple reference #2284310

Problem: While building a new OPENSTEP for Mach filesystem, the ‘mkfs’ command failed with a write error for some combinations of disk geometry and filesystem options.

Resolution: The ‘mkfs’ command will now lay out these filesystems correctly.

Date formatter handled two digit year inappropriately

Apple reference #2290369

Problem: NSDateFormatter treated any two-digit year as a 20th century year.

Resolution: NSDateFormatter now treats two-digit year values less than 30 as 21st century years.

Restrictive nbuf limit in kernel

Apple reference #2296405

Problem: The OPENSTEP Mach kernel was restricted to using at most 255 buffers.

Resolution: This restriction has been removed. You can specify “nbuf=xxx” at the boot prompt or in the **System.config/Instance0.table** file to use any number of buffers. If no value is specified, the kernel will still be limited to 255 buffers. If you choose too large a value, your system may panic at boot time; however, as long as your system will boot, you will experience no instability as a result of a large nbuf value.

Euro glyph didn't display correctly

Apple reference #2298782

Problem: NSTextView's **-insertText:** method handled mutable attributed strings incorrectly under OPENSTEP for Mach and Windows NT. This resulted in display problems for certain characters, including the Euro currency symbol.

Resolution: This method now handles attributed strings as well as ordinary strings correctly.

'fdisk' disk cylinder limit

Apple reference #2305698

Problem: With some BIOS versions, the 'fdisk' command was unable to process disks with more than 2^{10} cylinders.

Resolution: The limit has been increased to 2^{16} cylinders.

Issues addressed in OPENSTEP 4.2 for Mach Patch 1

No four digit year entry with '/bin/date'

Apple reference #: 2179467

Problem: Certain dates could not be input using the Unix '/bin/date' command which shipped with OPENSTEP 4.2.

Resolution: The '/bin/date' command now correctly handles 2-, 3-, and 4-digit years for dates in the valid Unix range (1 Jan 1970 - 31 Dec 2037). This patch allows four-digit year entry through '/bin/date'. In addition, input dates are now checked for validity and out-of-range dates are rejected.

New RCS package

Apple reference #: 2249097

Problem: The version of RCS which shipped with OPENSTEP 4.2 did not handle dates after 1999 correctly in some commands.

Resolution: This patch installs RCS version 5.7, a much more recent version which does not experience this date issue. Please see the RCS documentation for a complete list of new and updated features in this release.

Date handling in 'ftpd'

Apple reference #: 2251927

Problem: The ftp daemon's MDTM command did not handle dates after 1999 correctly.

Resolution: The ftp daemon has been updated to handle these dates correctly.

Hardware clock setting

Apple reference #: 2253935, 2258123

Problem: Previously, setting a date after 1999 with `/bin/date` or with the OPENSTEP Preferences application would cause an illegal value to be stored in the hardware clock of Intel and NeXT-branded Motorola hardware systems. As a result, some systems would show an incorrect year after reboot.

Resolution: With this patch, the hardware clock is now set correctly for dates after 1999.

'tmac' macro date handling

Apple reference #: 2256331

Problem: Previously, default dates generated by the `'tmac'` macros used for `'troff'` and `'nroff'` typesetting were not correct for years after 1999.

Resolution: The various `'man'`, `'me'`, and `'ms'` macros now generate default dates after 1999 correctly.

Date reporting in 'atq'

Apple reference #: 2258151

Problem: In OPENSTEP 4.2, the `'atq'` command displayed the job date incorrectly for jobs created with the `at` command after 1999.

Resolution: The `'atq'` command has been modified to correctly represent jobs scheduled from 1970 through 2037.

Date display in '/usr/ucb/mail'

Apple reference #: 2259253

Problem: In OPENSTEP 4.2, the Date: header of email messages written by '/usr/lib/sendmail' used a two-digit year in the creation time. This issue affected email created and read with the '/bin/mail' and '/usr/ucb/mail' programs.

Resolution: 'sendmail' has been modified to write four-digit years in the date header.

'ntpd' error messaging

Apple reference #: 2260775

Problem: Under OPENSTEP 4.2, the error message returned by 'ntpd' when an excessive offset was encountered did not report the year correctly for years after 1999.

Resolution: This error message now reports the year correctly.

Job scheduling and execution with 'at' and 'atrun'

Apple reference #: 2263271

Problem: Under certain circumstances, 'atrun' did not correctly handle jobs scheduled with at after 1999.

Resolution: The 'at' and 'atrun' commands have been modified to correctly and consistently handle the scheduling and execution of jobs regardless of date.

Issues addressed in OPENSTEP 4.2 for Mach Fax Patch

Some applications won't allow faxes with cover pages

Apple reference # (none)

Problem: Because of a problem with the default fax cover page, Cover.draw, some applications did not allow faxing or did not allow faxing when using a cover page.

Resolution: This patch installs a new version of the Cover.draw file that corrects the problem.

Section 3: Issues - OPENSTEP 4.2 for Mach Developer

No new issues have been addressed in OPENSTEP 4.2 for Mach Developer Patch 4; this patch is functionally identical to OPENSTEP 4.2 for Mach Developer Patch 2. This patch has been provided here as a convenience for our OPENSTEP 4.2 Developer customers. If you use the ‘gprof’ tool for application profiling, you should also download the latest version of Apple’s profile libraries for use with this patch. They are available in Apple’s Tech Info Library as article 70029, at <http://til.info.apple.com/techinfo.nsf/artnum/n70029>.

Issues addressed in OPENSTEP 4.2 Developer Patch 2

IB palette has poor default date formatter

Apple reference # 2296018

Problem: By default, NSDateFormatters dragged in from the Interface Builder palette had a two-digit year format. The default should be a four-digit year format to encourage sound coding practices.

Resolution: The default has been changed to a four-digit year format.

Issues addressed in OPENSTEP 4.2 for Mach Developer Patch 1

No Developer Patch 1 was released for OPENSTEP 4.2 for Mach. This patch number was skipped in order to provide consistent numbering for all OPENSTEP 4.2 patches.

Section 4: Issues - OPENSTEP Enterprise 4.2

This section details all issues addressed in OPENSTEP Enterprise 4.2 Patch 4 and in previous OPENSTEP Enterprise 4.2 patches.

Issues addressed in OPENSTEP Enterprise 4.2 Patch 4

'tar' and 'gnutar' commands didn't accept dates later than 1999

Apple reference #2342167, 2342424, 2342425, 2363116

Problem: The 'gnutar' and 'tar' commands have an option to only write files newer than a given date. The versions of 'gnutar' and 'tar' provided with OpenStep Enterprise 4.2 didn't accept dates past the end of 1999, nor did they accept a four-digit year format for the date argument.

Resolution: The 'gnutar' and 'tar' commands have been changed to correctly handle two- and four-digit year arguments to the -N option, and to process all dates in the valid UNIX range (1970-2068).

Issues addressed in OPENSTEP Enterprise 4.2 Patch 3

No Patch 3 was released for OPENSTEP Enterprise 4.2. This patch has been named "Patch 4" in order to provide consistent numbering for this group of patches.

Issues addressed in OPENSTEP Enterprise 4.2 Patch 2

No Euro glyph support in OPENSTEP rulebooks

Apple reference # 2265773

Problem: The AppKit rulebooks did not support the Euro currency character.

Resolution: The AppKit rulebooks have been updated to provide support for the Euro currency symbol, U+20AC. The encoding tables in Foundation have also been updated to support this character. You will still need to obtain and install fonts which include the Euro character in order to generate the character itself.

NSDateFormatter interprets year “00” as “Current Year”

Apple reference # 2278598

Problem: NSDateFormatter interpreted year “0” or “00” as “current year”, rather than “2000”, which is inconsistent with the interpretation of two-digit years in UNIX and is not Year 2000 compliant.

Resolution: NSDateFormatter now interprets “0” or “00” year values as “2000”

Date formatter handles two digit year inappropriately

Apple reference # 2290369

Problem: NSDateFormatter treated any two-digit year as a 20th century year.

Resolution: NSDateFormatter now treats two-digit year values less than 30 as 21st century years.

Euro glyph doesn't display correctly

Apple reference # 2298782

Problem: NSTextView's -insertText: method handled mutable attributed strings incorrectly under OPENSTEP for Mach and Windows NT. This resulted in display problems for certain characters, including the Euro currency symbol.

Resolution: This method now handles attributed strings as well as ordinary strings correctly.

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Section 5: Issues - OPENSTEP Enterprise 4.2 Developer

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Issues addressed in OPENSTEP Enterprise 4.2 Developer Patch 2

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Problem: By default, NSDateFormatters dragged in from the Interface Builder palette had a two-digit year format. The default should be a four-digit year format to encourage sound coding practices.

Resolution: The default has been changed to a four-digit year format.

Issues addressed in OPENSTEP Enterprise 4.2 Developer Patch 1

No Developer Patch 1 was released for OPENSTEP Enterprise 4.2. This patch number was skipped in order to provide consistent numbering for all OPENSTEP 4.2 patches.

Section 6: Issues - Enterprise Objects Framework

This section discusses century issues in Apple's Enterprise Objects Framework.

Apple is not aware of any century problems with Enterprise Objects Framework versions 1.2 or 2.1 which would affect development or deployment of EOF applications. However, some examples shipped with these versions of EOF use two-digit year formatting, which is not consistent with Apple's recommended coding practice. Instructions on how to change the EOF examples to avoid this problem can be found in Apple's Tech Info Library. For EOF 1.2, please see TIL article 70084, at:

<http://til.info.apple.com/techinfo.nsf/artnum/n70084>

For EOF 2.1, please see TIL article 70085, at:

<http://til.info.apple.com/techinfo.nsf/artnum/n70085>

OPENSTEP and EOF share many components; in order to ensure that EOF is Year 2000 compliant, you must install the appropriate OPENSTEP or OPENSTEP Enterprise patch on your system, following the install order given in section 1 of this document.

