To guarantee the integrity of the fixes included in this patch, you should only install this software when received from an authorized NeXT representative.   Your existing NeXT Software License Agreement governs the use of this software update.

INSTALLING THE NEXTSTEP RELEASE 3.3 PATCH UPDATE

This document describes how to install the *NEXTSTEP Release 3.3 Patch Update* and describes the fixes contained in the update.   This update is to be installed *only* on computers running *NEXTSTEP Release 3.3*.

The *NEXTSTEP Release 3.3 Patch Update* consists of two User Patch packages:

3.3Intel68kPatch.pkgPContains updated system software for Intel PCs or NeXT computers running *NEXTSTEP Release 3.3*.

3.3HPPASPARCPatch.pkgPContains updated system software for Sun or HP workstations running *NEXTSTEP Release 3.3*.

and one Developer Patch package:

3.3DeveloperPatch.pkgPContains updated developer tools for all types of computers running *NEXTSTEP Developer Release 3.3*.

Note the following points before you install the Patch Update packages:

Install just one package at a time.   Install the User Patch package first; afterwards, install the Developer Patch package (if you're running *NEXTSTEP Developer Release 3.3*).

If you plan to use Emacs, be sure you've already installed the contents of the **Emacs.pkg** (contained on the *NEXTSTEP Release 3.3* CD-ROM) *before* installing the User Patch package.

When installing the Release 3.3 Patch Update packages, select the same architectures and languages as you did when originally installing the *NEXTSTEP Release 3.3* and *NEXTSTEP Developer Release 3.3* software.

Installing the NEXTSTEP Release 3.3 Patch Update Packages

Follow these instructions to install the *NEXTSTEP Release 3.3 Patch Update*.

1. Log in as **root**. (If you're not sure how to log in as **root**, see your system administrator.)

2. Make sure your computer is running *NEXTSTEP Release 3.3*. (You can find the NEXTSTEP version number with the Workspace Manager application's Info Panel command.)

    Warning: Installing the *NEXTSTEP Release 3.3 Patch Update* on a computer that isn't running *NEXTSTEP Release 3.3* will result in unexpected problems.

3. Double-click the **3.3Intel68kPatch.pkg** file or the **3.3HPPASPARCPatch.pkg** file (be sure to choose the one that corresponds to the type of computer you're installing the package on).

4. Click the Install button in the Installer package window.
    An Install Package panel opens.   Use this panel to select the same architecture and languages as you did when originally installing the *NEXTSTEP Release 3.3* software.

5. Click Install in the Install Package panel, and if prompted for confirmation, click OK to proceed. The Installer window displays information about the progress of the installation, which may take several minutes.

6. After Installer finishes installing the User Patch package:

192201_smBlksquare.tiff ,   If you *haven't* previously installed *NEXTSTEP Developer Release 3.3* on the computer, you're donePlog out and restart the computer.

340938_smBlksquare.tiff ,   If you *have* previously installed *NEXTSTEP Developer Release 3.3* on the computer, install the Developer Patch package by double-clicking the **3.3DeveloperPatch.pkg** file and repeating steps 4 and 5 (remember to select the same architectures as you did when originally installing the *NEXTSTEP Developer Release 3.3* software).   Afterwards, log out and

restart the computer.

NEXTSTEP Release 3.3 Patch Update Release Notes

The remainder of this file describes the new features and bug fixes that comprise the *NEXTSTEP Release 3.3 Patch Update*.

New Features

The following new features have been introduced in this update:

Faster HPPA compiler.   A faster compiler for NEXTSTEP for PA-RISC workstations has been included in this release.

Problems Fixed in This Release

The following problems have been fixed in this update:

Drivers

Reference: 45838, 54418, 54461, 54462
Problem: HCRX & HCRX24 cards are not supported.
Fix: The new Hyperdrive graphics cards (HCRX and HCRX24) are now supported. Note that although the HCRX card is only 8 bits deep, it can be run in "color-recovery" mode as a 24-bit device. If you are running the HCRX card as the console boot device in 8-bit color mode, turn off boot graphics in your configuration to obtain the proper color map.

Reference: 50481
Problem: MIDI driver doesn't load.
Fix: This has been fixed.

Reference: 52993
Problem: When an HP computer running NEXTSTEP Release 3.3 boots with the serial driver
              configured, a getty turned on for a serial port, and the modem connected and turned on,
              the system panics.
Fix: This has been fixed.

Reference: 54419
Problem: On HPPA machines, choosing 8-bit color leads to color glitches.
Fix: 8-bit color modes had problems with bad color map entries. This has been fixed. Note,
              however, that a related bug (#54420) has not been fixed. This bug arises when you
              change the brightness on multi-headed HP 715'sPit causes color map glitches on 8-bit
              displays. The problem seems to occur only after power cycling and booting with boot
              graphics. Booting verbosely should avoid the problem.

gdb

Reference: 24436
Problem: gdb does not interpret floating point numbers correctly when specified as message
              arguments.
Fix: This has been fixed.

Reference: 50727, 54401
Problem: gdb occasionally hangs or panics when used with certain applications.
Fix: This has been fixed.

Reference: 52634
Problem: gdb's *step: command behaves like *next.:
Fix: *step: now steps *into* methods, instead of stepping over them.

Reference: 54968
Problem: Stack frames in gdb's browser are reversed.
Fix: Between NEXTSTEP Release 3.2 and Release 3.3 the top-to-bottom order in which stack
              frames are listed in the Edit/Browser tool were inadvertently reversed, so that the

outermost function appeared at the bottom instead of the top.   This was not done in an internally consistent way, so that if you clicked on the third stack frame from the bottom, for instance, Edit took you to the third one from the top. This has been fixed so that it works the way it did in NEXTSTEP 3.2.

Kernel

Reference: 51192
Problem: Cached kmsgs are not properly initialized
Fix: When using a cached kmsg, the ikm_delta field was not being initialized.   This is especially important in the exception handing code when sending the exception message. Cached kmsgs are now properly initialized.

Reference: 54071
Problem: Certain procedures can cause the kernel to hang due to an ipc hash leak.
Fix: This has been fixed.

Libraries

Reference: 54173, 54399
Problem: libc's exp() gives incorrect results on Intel-based computers.
Fix: This has been fixed.

Reference: 54226
Problem: _openDefaults can leak 1024 bytes per invocation.
Fix: This has been fixed.

Reference: 54674
Problem: longjmp should preserve the FPU control word across fninit
Fix: This has been fixed.

Networking and Networking Tools

Reference: 54180
Problem: Packet size negotiation logic is flawed.
Fix: NetWare performs packet size negotiation during the server discovery process. This negotiation process is flawed. For example, suppose that the client station first sent its favorite packet size (1024 bytes for Ethernet, for example) to the server on the other side of a LAN switch. The server would then send back its favorite packet size (say, 4096 for FDDI) which the client simply accepted as the negotiated block sizePdespite the fact that this size is illegal for Ethernet. This problem arose because neither the server nor the client are aware of the existence of the LAN switch that is bridging the FDDI and Ethernet LANs.

The patch causes the workstation to ignore negotiated packet sizes larger than what its immediate medium can support. This should be sufficient until such time as NeXT implements "burst mode" transfers.

Reference: 54216
Problem: Network socket `bind' fails to detect *address in use.:
Fix: A bug was introduced during the porting of Stanford's IP Multicast code that allowed multiple local clients to bind to the same IP address (that is, the code failed to detect that the address was in use). This patch corrects that error.

Reference: 36740, 39778, 49580, 49585, 49607, 49899, 50175, 51088, 51809, 51944, 53423
Problem: Various netinfo bugs.
Fix: A number of bugs were fixed in netinfo. The following are some of the more notable bugs that were fixed:

39778: *If you have a second account with a uid of 0, netinfo authentication can fail.* If a netinfo domain had multiple users with the same UID, authentication for that UID would be unreliable.

49607: *lookupd should number domains starting at 1.* Minor change. When lookupd received a SIGUSR2 to log it's current connections, it numbered domains started at 0 rather than 1.

49899: *Permission denied even when _writers is* *. Directories with **_writers** * were only writable by root.

50175: *nidomain must byte-swap master's address.* This bug caused **nidomain -c** to fail to create clones on Intel-based computers.   The master's IP address was byte-swapped, resulting in an incorrect and unusable database.

51088: *Memory smasher in netinfod.* This bug would cause random netinfo crashes. It was the result of **ni_writeprop()** freeing some memory twice.

51809: *netinfod[PID]: tag test: can't get masters /machines/ip_address/I^AT*s^ directory.* The netinfo clone start-up configuration checking routine had a couple of syslog messages that were missing an argument.   If a clone was mis-configured, it would print a garbled error message.

51944: *file name is freed, then used.* A very rare bug that only occurred if a file system error occurred while the server was shutting down, and it got an error while writing the checksum file.

53423 *netinfod shouldn't call ni_error() - localization calls getpwuid()*. A rare bug that could cause netinfo to hang before printing an error message if it detected an internal error.

Reference:	54242
Problem:	NetInfoManager won't create clones on Intel-based computers.
Fix:	This bug prevented NetInfoManager from creating clone netinfo servers on Intel-based computers. The bug affected clone creation using both the *Servers: panel and the *Manage Hierarchy: panel. Clones created using NetInfoManager would have the master's Internet address reversed, and as a result database initialization and updates would fail. This has been fixed.

Reference:	54245
Problem:	SimpleNetworkStarter messes up mail server configurations.
Fix:	This bug caused SimpleNetworkStarter to install its mail-server package every time it ran. The result was that the last computer that was configured using SimpleNetworkStarter

would really be the mail server.   Confusing information would be left behind on other computers, and mail would not be correctly configured. This has been fixed.

Reference: 54920
Problem: netinfo's clone self-check has RPC problems.
Fix: This bug caused sporadic start-up problems on clone netinfo servers.   The bug was caused by errors in the clone configuration self-check routines that ran at start-up time. These self checks have been disabled in this update.

Software Localization

Reference: 49523
Problem: There is no Colors.. menu item in localized versions of Terminal.
Fix: This has been fixed: the Colors command is now present in the localized versions of Terminal.

Reference: 49525, 49559, 50876, 51668, 52463
Problem: Various cosmetic fixes are needed for localized text:

Raising the color panel from any application while you are working in a language other than English produces a *parse error: message in the console window (and the panel contains English text).

The window title that is displayed while loading Preferences is in English, even when you are working in a language other than English.

When working in French, Configure's Inspector.nib shows some English text.

When working in French, some configuration text fields aren't wide enough to contain entire sentences.

The Spanish version of Loginwindow's preferences panel is poorly formatted.
Fix: Several of the localized Preferences, Configure, and SimpleNetworkStarter files were fixed to provide cleaner UI.

Reference: 50792, 50794, 51190, 54229, 54279
Problem: UserManager has a number of bugs in the various localized versions:

     The User Info confirmation panel does not display the path of the login shell when you are working in French.

     The Program Hooks pop-up menu has no valid labels in the Group Default Configuration panel when you are working in French.

     Some fields in the Create Bulk panel aren't properly localized.

     Clicking on the User Account login name format pop-up list after creating multiple users in a domain and then reading an input file containing user names causes UserManager to crash.

     This problem still exists when running UserManager in Swedish on Intel or NeXT architectures. As a workaround, run UserManager in another language.

     The Group menu doesn't work when working in German.
Fix: This patch release fixes some connections in the nib files for the localized versions of UserManager so that now creating bulk accounts, creating groups, and inspecting group defaults all work properly in the localized versions.

Reference: 51223
Problem: You cannot choose a language other than English when you create a new user account.
Fix: New template files were added so that system administrators will be able to create new user accounts with certain localization defaults already set. If you are a system administrator and would like to use User Manager to create new user accounts with defaults localized for French, German, Italian, Spanish, or Swedish, you need to select all of the languages when you install the patch. This will ensure that all of the default files are available for your use in **usr/template/languages**.

Note that this will also install other updated language files that are included on the patch. If you use Preferences to select another language that has not been previously installed from the original release software, these updated files would appear in that language while the rest of the UI files in a particular application would appear in the next language

you have selected in Preferences which has been installed.

A related bug still exists, however: if you install NEXTSTEP Release 3.3 using one of the European languages and then create an English user account with UserManager, when the new user logs in Workspace will use the language that you chose during installation, instead of English. The user can work around the problem by simply choosing the proper language in Preferences and then logging out and logging back in again. Note that new user accounts are only affected in this way if English is chosen when creating the user account.

Reference: 54171
Problem: Shift-hyphen does not produce an underscore in the UK keyboard mapping.
Fix: The *alt: and *shift: keys were reversed in the UK keyboard mapping file. This has been fixed.

Reference: 54228
Problem: Selecting Fixed Pitch Font in Font Preferences while working in a language other than English causes Preferences to crash.
Fix: This has been fixed.

Window Server

Reference: 54132
Problem: The WindowServer should use vm_allocate instead of malloc for backing storePcurrently, it almost never gives VM back to the operating system.
Fix: This has been fixed.

Reference: 54134, 54138
Problem: Certain images, displayed in certain graphics modes, can crash the WindowServer.
Fix: This has been fixed.

Reference: 54137
Problem: Flushing 12-bit windows on 24-bit displays takes longer than it should.
Fix: This has been fixed.

Miscellaneous Fixes

Reference: 51555, 51785
Problem: **cu** and **tip** incorrectly set the UID.
Fix: This has been fixed.

Reference: 51590
Problem: Use of DOS filenames greater than 31 characters in length causes problems in SoftPC
Fix: This has been fixed.

Reference: 52531
Problem: pbs and appkitServer are not launched with the correct group permissions.
Fix: pbs and appkitServer now launch with the correct group permissions.

Reference: 52842, 56026
Problem: CERT Advisory: sendmail vulnerabilities.
Fix: The sendmail security vulnerabilities described in CERT Advisory CA-95:05 have been
               fixed.   Contact CERT for more details.

Reference: 54217
Problem: Services don't register in ProjectBuilder.
Fix: None of the Services items were active in the version of ProjectBuilder supplied with
               NEXTSTEP Release 3.3. For instance, third-party source code control apps such as
               DevMan didn't function as advertised. This has been fixed.

Reference: 54220
Problem: Floppy operations don't work as intended.
Fix: The floppy operations in workspace were broken.   For instance, a floppy was not
               represented by the proper DOS, MAC, or NeXT floppy icon; instead, a folder icon was
               displayed. Or, after mounting a floppy (with Check for Disks), the disk was mounted but
               the Disk menu contained Check for Disks and Eject onlyPit was missing Initialize. These
               bugs have been fixed.

Reference: 54260

Problem: rld gets internal error: *lookup_symbol() failed.:
Fix: This has been fixed.

Reference: 54428
Problem: Configure treats the last byte of the EISA id as a *don't care: byte.
Fix: This fixes a problem where Configure would show multiple instances of some devices in the *Add Devices: panel.

Reference: 55452
Problem: Failure to read multiple backups on HPPA machines.
Fix: Reading of multiple files/backups failed. Creation of multiple backups on the same tape was not a problem, but only the first backup could be read on a HP platform.