Questions and Answers Regarding NeXTSTEP Release 3.0

Below is a set of questions and answers regarding NeXTSTEP™ Release 3, categorized as follows:
- General Questions
- Upgrade
- Connectivity
- ISDN
- Printers
- Global System Software
- General Developer
- Color and Imaging
- Database Kit™
- System Software
- System Administrator
- Developer

General Questions

Q: What is NeXTSTEP Release 3?
A: NeXTSTEP Release 3 is the latest evolution of NeXTSTEP, NeXT's object-oriented system software. NeXTSTEP Release 3 builds on the unquestioned industry leadership of NeXTSTEP, the only object-oriented system software currently shipping. Release 3 adds to the power and ease of use of its predecessors to provide important new benefits for users, corporate and commercial application developers, work groups and system administrators. For example, Release 3 features extensive connectivity software, tools for developing custom applications incorporating databases and three-dimensional graphics, integrated color, enhancements to NeXT's interpersonal computing capabilities, integrated foreign language support and an integrated help system.

Q: What's the difference between Release 2 and 3? What are the major enhancements?
A: Release 3 contains several major enhancements. These are Database Kit, AppleTalk® and Novell®connectivity, Object Links, 3D Graphics Kit™, Phone Kit™, ISDN, PostScript® Level 2, PANTONE® Colors, and on-line Help. Detailed features, benefits and specs are outlined in the datasheet.

Q: How does the performance of Release 3 compare to Release 2?
A: The performance of Release 3 is roughly comparable to that of Release 2 when running applications on the same processor. Running on a turbo processor will increase performance on

average by about 50% on a monochrome system, and 30% on a color system.   The performance of the application development process has also been increased through several technologies, such as pre-compiled headers.

Q: Will applications written for Release 2 run under 3?
A: Any application written under NeXTSTEP Release 2 will not only run in Release 3, but due to its object-orientation, will automatically take advantage of many Release 3 features. This compatibility is an important consideration for all current NeXTSTEP users and developers.

Q: Can files created with NeXTSTEP 2 applications be opened in 3?
A: Absolutely.

Q: On what media will NeXTSTEP Release 3 be distributed?
A: The primary distribution method for Release 3 will be on CD-ROM. New buyers of NeXT™ computers will receive one of two Release 3 configurations on their hard disks, while a backup CD-ROM containing the entire release will be included. Upgraders will receive a CD-ROM containing the entire Release 3 configuration. NeXT is moving toward using CD-ROMs exclusively for software distribution and encourages each network of customers to acquire a CD-ROM drive.

Q: When can users expect to see third party applications with Release 3 features?
A: All Release 2 applications will be automatically enhanced with many new Release 3 features - for example with PANTONE Colors and PostScript Level 2. Other new features will require a small amount of modification - for example Object Links and on-line Help. Features such as Database Kit and 3D Graphics Kit will most likely lead to a whole new generation of applications which haven't been developed yet. As third-party developers begin using Release 3.0, we will have a better idea of which major developers will modify their applications to take advantage of new features.

Q: How much disk space do the Essential and Extended releases of 3.0 require (in MBs)?
A: The Essential release requires around 60MB, just as it did in Release 2, while the Extended Release has grown to around 250MB.

Q: How much memory and disk space is recommended for 3.0?
A: NeXTSTEP Release 3 will run on any NeXT computer with a minimum of a100 MB hard disk and 8 MB of RAM. However, for optimum performance NeXT recommends that Release 3 not be run on 68030-based systems. In addition, a minimum of 12 MB of RAM is recommended on monochrome systems, and a minimum of 16 MB of RAM is recommended on color systems.

Q: Where can I get datasheets or Release Notes on 3.0 (eg, if I'm not sure I wish to upgrade immediately)?
A: To get more information on NeXTSTEP Release 3, please call 1-800-677-NeXT.

Q: Will User Manuals be bundled Release 3 products?
A: Hardcopy User Manuals will be included with all new computers and, in addition, there will be on-line help available for most NeXT applications. The Upgrade products will not include hardcopy user documentation, however. It will be sold as a separate product.

Q: *Where can I find developer documentation for Release 3?*
A: NeXTSTEP Release 3 Developer documentation will be sold by Addison-Wesley and will appear in local bookstores in October. The books will also be on-line, accessible through Digital Librarian™ bundled with the NeXTSTEP release.

Q: *Encryption was originally announced as being featured in Release 3.0, yet it is not shipping — what happened?*
A: NeXT feels very strongly about producing hardware and software which can be used around the world. Unfortunately, the United States Government will not allow us to export our encryption system outside the U.S., and we will not market a different version of the software in the U.S. and abroad. We choose to do this because our customers are global corporations with world-wide networks, and they cannot afford the incompatibilities arising from software with different capabilities. We have not cancelled our plans to include worldwide encryption capabilities in NeXTSTEP, but cannot commit to a scheduled release date at this point.

For an indication of how geographically-limited software would cause incompatibilities and problems, imagine sending an encrypted mail message to a colleague who is normally based in Chicago, but is reading mail in Paris this week — the message could not be read, and would cause much frustration. Or imagine having an encrypted file on your networked file system, which is encrypted such that it can be read by the Vice Presidents in the company — but one of the Vice Presidents is from your European operations. Given these scenarios, you can see that marketing encryption software only in the United States is not a viable option.

Upgrade Questions

Q: *Who should upgrade to Release 3 and why?*
A: In general, the class of current users who will want to upgrade will be those who have heterogeneous networks, utilize databases, speak non-English language, and develop custom applications. Users who upgrade from Release 2 to Release 3 will be able to take advantage of new features such as Novell/AppleShare® connectivity, integrated on-line help, integrated foreign language support, etc. Developers will be enthusiastic about new application tools such as Database Kit, 3D Graphics Kit, Indexing Kit™, and Phone Kit.

Q: *How much will upgrading to NeXTSTEP Release 3 cost?*
A: All NeXT computers ship with NeXTSTEP Release 3 installed on the hard drive and included on a CD-ROM disk for back-up. Current owners of NeXTSTEP Release 2 can upgrade to Release 3 Extended by purchasing either a CD-ROM disk (#N5527) or Right-to-use License (#N5531) product. The upgrade price will be $295 for registered users. These upgrades will be available from NeXT and its resellers.

Q: *Given that CD-ROM disks are so inexpensive to produce, why does the Release 3 upgrade cost more than the Release 2 upgrade?*
A: NeXT considers a 68040 computer running Release 2 to be the baseline standard for usable

NeXTSTEP platforms. We wanted all of our customers to upgrade to this configuration, and thus offered Release 2 and 68040 upgrades at a price very close to our cost. Along with our new hardware, Release 3 adds significant value over Release 2 and is priced to reflect that value. NeXTSTEP is still significantly less expensive than upgrades to competitive software environments.

Q: Do I have to upgrade to 3.0? Who should upgrade to 3.0? Why?
A: NeXT expects customers to upgrade between major release, in other words between Release 2 and Release 3. However, whether a customer upgraded from Release 2.0 or Release 2.1 is irrelevant since no features were added. All users who want to take advantage of the great new features in Release 3, such as Novell and AppleShare connectivity or Database Kit or Object Links, should upgrade to Release 3.

Q: I don't have a CD-ROM player; how can I upgrade to 3.0?
A: NeXT Authorized Service Centers will have CD-ROM drives and many will install upgrades as a service for customers who have purchased the CD-ROM upgrade product. Many User Groups have committed to buying drives and permitting their members to borrow the drive for upgrading.

Q: Will I be able to upgrade my computer across a network?
A: Yes. The Release 3 upgrade application will work across a network as well as with a local CD-ROM drive. CD-ROM drives will also be "exportable" as network resources so network upgrades may use a server's hard disk or CD-ROM drive.

Q: I purchased NeXTSTEP Release 2 licenses for a lab of NeXT computers in order to save money on media costs. Can I purchase licenses for Release 3?
A: Yes, there is a Right-to-use License upgrade product for Release 3. In addition, Higher Education institutions qualify for discounts of up to 70% on volume purchases of CD-ROM and license upgrades especially designed for lab usage. Note that the suggested retail price of the Right-to-use License is identical to that of the CD-ROM upgrade product since the cost for the media is minimal.

Q: Is there a registration form that I must return?
A: Yes, there is a user registration form inside all NeXTSTEP products. You should return this card with the appropriate information if you would like to receive discounts on upgrades to future products, would like to receive any free upgrades to products, or would like to be notified of new products and their availability. User Registration has taken on a new importance at NeXT, and we expect to regularly communicate with our customers through this channel.

Q: Is the upgrade process incremental (will I need to reinitialize my disk/file system)?
A: The upgrade process from Release 2 to Release 3 is completely incremental such that files which you have created on your hard disk will not be overwritten.

Q: Will the 3.0 upgrade application support upgrades across the network?
A: Yes, The Release 3 upgrade application will work across a network as well as with a local CD-ROM drive. Your CD-ROM drive will be accessible over the network, and the Upgrader application will upgrade servers and clients.

Q: What software has been unbundled since Release 2.0 and what has happened to it?
A: The following software has been unbundled since Release 2.0:

- WriteNow®: In order to level the playing field for our third-party developers, we unbundled this word processing application in Release 2.1. It is now distributed, supported, and further developed by Appsoft.
- Music Kit™, Ensemble: Since NeXT has not provided the support that our small, but devoted Music market has desired, we feel it would be best for a third-party to support and distribute this software for free. Thus Stanford's world-renown computer music group, CCRMA, will do just that.
- Icon: This demo has been replaced by a new application, IconBuilder, and the original application will be marketed by a third party.
- DSP Development Tools (Bug56™): These tools are not utilized by a broad base of users, thus the needs of these who use it extensively will be better filled by a third-party. Thus we are talking with CCRMA to take over the distribution, support, further development of tools. In order not to burden CCRMA with any cost for distributing the software, NeXT will continue to distribute the assembler. Note that these are simply development tools, NeXT fully stands behind all the software needed to run the DSP-using applications.
- Date: The source code for this demo can be licensed by a third party such that they can improve it further or simply read in datebook files.
- DataViz/Bridge™: DataViz will distribute Bridge themselves.
- Demos (Automata, Balancer, BreakApp, Circuit Builder, Crop, For Your Eyes Only, FractalTrees, Gourmet, GuidedTour, Improv Demo, Poker, RealTimeAlgebra, Saturn, ScorePlayer, ShowAndTell, StatLab, Stealth, TopologyLab): These are simply disappearing due to lack of broad-base usage. Many of them will appear on a Public Domain CD-ROM for Education, sponsored by the Higher Education Marketing Group (David Spitzler).

Q: Why is the Date demonstration application being unbundled with Release 3?
A: Date is unbundled because several great third-party calendaring applications are coming to market. We are unbundling our demonstration application, because NeXTSTEP users should be utilizing a fully-featured, supported calendaring application if they need that functionality. We have found that our minimal demo application now just serves to frustrate customers who expect it to be a fully-features application. We encourage third party developers to support Datebook files, and have already worked with several who will be coming out with products which do so.

Q: Why is Music Kit being unbundled with Release 3?
A: The unbundling of Music Kit ia a very positive move for all NeXTSTEP customers, especially the small, but fervent group who actively utilize the Kit. Surveying the NeXT customers, you'd find that they ask for better sound and MIDI support, whereas Music Kit is lower on the priority list. Based on this info, NeXT decided to focus future efforts on better sound and MIDI support. As a result, Release 3 will support real-time mixing of sounds and support for MIDI time code (and thus SMPTE).

The customers repeatedly ask for important new features in Music Kit, and we are unable to keep up with their requests and make Sound & MIDI improvements. NeXT cannot support Music Kit customers as well as they'd like, and we feel a third party will be better able to serve them. Thus we have given Music Kit to CCRMA (the Stanford Computer Music Group) who will distribute and support the software for free, and who will be able to improve the software at a faster rate than NeXT. It is

reasonable to expect that by giving CCRMA the unbundled Music Kit, you will see: more and better unit generators, more source code examples, more freely available source code, more frequent updates and bug fixes.

In light of Release 3 binary compatibility, Release 2 applications utilizing Music Kit will still run in Release 3, although development of Music Kit applications will no longer be possible without the software from a third-party.

Q: Will WriteNow work under Release 3? Am I licensed to run it?
A: Yes, your NeXTSTEP Release 2 copy of WriteNow will run in Release 3, and you will always have the right to run the copy of WriteNow which you received with NeXTSTEP. You do not have any rights, however, to receive free upgrades to this application.

Connectivity

Q: What new networking and connectivity features have been added to Release 3?
A: Release 3 includes many new features that bring NeXT closer to the goal of communicating with everything, from mainframes to Macintoshes and database servers to DOS computers. For personal computer users there are several important additions for connectivity between NeXT and PC and Mac networks. Both Novell and AppleTalk client software are bundled with Release 3 so that NeXT users can share PostScript printers and files over a Novell NetWare® network or an EtherTalk® network. File servers and printers on either network appear in the NeXTSTEP Browser like any NFS® file server or NeXT printer. Release 3 also supports the Macintosh® file system, along with DOS. Macintosh disks now appear in the browser just as DOS, NeXT and UNIX® disks did under Release 2.

Q: What NetWare services will I be able to access with NeXT's Novell client software?
A: The NetWare client software in Release 3 will provide access to NetWare 286 and NetWare 386 file servers and will be able to take advantage of the UNIX file system option under NetWare 386, which overcomes the DOS file system limitations. NeXT computers will also be able to print to Novell connected PostScript printers. These include any printers for which the Novell server acts as a spooler including AppleTalk printers. No special hardware or software is required to use these services as long as the Novell network is Ethernet-based.

Q: What AppleTalk services will I be able to access with NeXT's AppleTalk client software?
A: The AppleTalk client software in Release 3 will provide access to AppleShare file servers, including the "personal file share" service which is a part of System 7. NeXT computers will also be able to print to PostScript printers connected to AppleTalk. No special hardware or software is required to use these services as long as the Apple® network is EtherTalk-based or has a gateway connection to Ethernet. Unfortunately, NeXT printers will not be accessible to Macintosh computers in Release 3.

Q: How much configuration and administration is required to access NetWare and AppleTalk file services?
A: Very little. Both networks will require a simple application to be run by the user or system

administrator to enable the service. Once enabled, the appropriate servers will simply appear in the File Viewer in subdirectories under /Net much as AppleShare servers appear in the Macintosh chooser. As the user selects a server for first-time access for the first time, he or she will be prompted for a login password. Once logged in, NetWare and AppleShare files will be accessible much as NFS files are. This presumes that the NetWare and/or AppleTalk networks and servers have already been configured.

Q: What about printing?
A: A system administrator will be able to configure which NetWare and AppleTalk printers should be available to the network (i.e. create NetInfo™ entries for these printers). For AppleTalk printers, the PrintManager application will provide an AppleTalk browser which will allow the user or administrator to choose and configure AppleTalk printers. For NetWare printers, there will be a separate application which will be used to create entries in the NetInfo database. Once configured, AppleTalk and NetWare printers will appear in users' print panels just like any other printer.

Q: What types of Macintosh disks will I be able to read and write with Release 3?
A: Release 3 will provide access to 1.44 MB Macintosh floppy disks via the internal NeXT floppy disk drive and most external SCSI floppy drives. It will also support most Macintosh formatted SCSI devices such as hard disks, Syquest® cartridges, and CD-ROMs. While the software has been tested against a variety of devices, NeXT does not guarantee to support all possible configurations.

Q: Can NeXT computers run Macintosh programs as well as read Macintosh files?
A: No. The new feature in Release 3 is support for the Macintosh file format so that user can read files on a Macintosh floppy. NeXTSTEP does not inherently provide a full Macintosh System Software emulation, which would be required to run Macintosh applications. There is a product from one of our third-parties, however, which will allow NeXT computers to run Macintosh programs — see our Software & Peripherals Guide.

Q: Can NeXT Computers run DOS applications?
A: With the use of SoftPC® from Insignia Solutions, NeXT users can run DOS applications within a NeXTSTEP window.

Q: Can NeXT Computers run Windows applications?
A: With the use of SoftPC from Insignia Solutions, NeXT users can run DOS applications within a NeXTSTEP window. As far as Windows™ applications, you'd have to talk to Insignia Solutions about whether or not they plan to add Windows support in the future.

Q: Are there any system administration changes in Release 3?
A: There are two new system administration applications in Release 3: Simple Network Starter, and NFSManager. Simple Network Starter is an application which quickly configures everything necessary to set up a small to medium-sized NeXT-only network. This includes NetInfo servers, mail and home directory configuration, and automatic host addition. NFSManager manages mounting and exporting of NFS volumes on a NeXT network. In addition, NetManager has become HostManager and is more focused on configuring specific information about computers.

Q: Can a NeXT computer be integrated with an existing Ethernet network?
A: Yes, any NeXT Computer can be attached directly to existing Ethernet networks that support twisted-pair or thin Ethernet.

Q: Can NeXT computers be Novell NetWare servers?
A: No. The NetWare client software allows NeXT computers to connect to NetWare servers, but not to run NetWare server software.

Q: Can NeXT computers function as AppleShare servers?
A: No, but they can share resources on an AppleShare server.

Q: Can I use any non-NeXT computer as a file server?
A: Yes, as long as it supports NFS, any system can be used as a file server for a NeXT network. In fact, many of our customers use Sun® workstations as NFS file servers for their NeXT networks.

Q: With the AppleShare client software, can Macs print to the NeXT Printers? NeXTs to Mac LaserWriters®? Both?
A: NeXTs can print to Macintosh printers, but Macintoshes cannot print to NeXT printers.

ISDN

Q: How does ISDN support work in NeXTSTEP?
A: ISDN, or Integrated Services Digital Network, is a high-speed, multi-channel system that can carry both voice and data information simultaneously over the same line. It extends the benefits of local-area networking to global, on-demand wide-area networking. The PhoneKit included in NeXTSTEP Release 3 provides simple access to the Hayes® interface hardware's telephone voice and data functions. With PhoneKit, developers can quickly and easily build a new generation of telephone-based applications, such as answering machines and speed dialers, that are controlled entirely through a NeXTSTEP computer. Besides requiring no additional telephone hardware, these NeXTSTEP applications can work with both POTS (plain old telephone service) and ISDN technology, automatically.

Q: What can I do with ISDN (Integrated Services Digital Network)?
A: The ISDN project will provide IP networking via ISDN on a dialup basis. This will allow users at home and in remote offices to connect to a corporate network with sufficient bandwidth to share files via NFS and exchange NeXTmail™.

Q: How available are ISDN connections?
A: In response to customer demand, the deployment of ISDN is finally accelerating in many metropolitan areas throughout the United States. As an example, the San Francisco Bay Area has approximately 50% coverage for ISDN lines. Contact your local telephone company for details.

Q: Do users need additional hardware to use ISDN?
A: Yes. Hayes has introduced a telecommunication network interface module for NeXT workstations

that provides ISDN Basic Rate Access, in addition to POTS (plain old telephone service) connectivity. The Hayes product can be used for remote LAN connections plus high-speed, digitized voice, data and multimedia applications.

Q: Where can I get an ISDN line adaptor?
A: Hayes Microcomputer will be selling the POTS/ISDN hardware line adaptor required for the Phone Kit and ISDN software. It is expected to be available through NeXT connection and other typical peripheral distribution channels, and will sell for less than $500 SRP.

Printers

Q: Will Release 3 support any non-PostScript SCSI or Ethernet-based printers ?
A: Release 3 supports all the PostScript printers which Adobe supports, our own 400 DPI and Color BubbleJet printers, along with the Epson® LQ510 and the IBM® ProPrinter 24P™ .

Q: Many people have asked for Apple DeskWriter™ support in NeXTSTEP, will that ever happen?
A: DeskWriters on AppleShare servers can be used from NeXTSTEP client machines. Currently, NeXT computers do not support the DeskWriter directly because of hardware incompatibilities. NeXT computers have a serial hardware interface, while the Apple DeskWriter has a AppleTalk interface.

Global System Software

Q: Does NeXTSTEP support for foreign languages?
A: NeXT users can run NeXTSTEP in the following languages: English, French, German, Italian, Spanish or Swedish. The choice is part of NeXTSTEP's standard Preferences menu, so users can switch back and forth at will among all the languages available. Users can even run multiple applications in different languages.

Q: What applications will appear in the chosen foreign language?
A: Workspace Manager™, including menu items, panels, sounds and everything else users see and hear through the essential NeXTSTEP system will appear in the foreign language chosen through the Preferences menu.

General - Developer

Q: Several new release features are only available in "Release-3 compliant applications." What does this mean?
A: Features such as on-line Help and Object Links are only available in applications which developers have upgraded to take advantage of those features. For example, a third-party product will not automatically acquire on-line help regarding that application when it runs in Release 3-the developer

must take time to produce the on-line help text and link the text with the user interface items to provide the context-sensitive capabilities of help.

Color and Imaging

Q: What is new in color support in Release 3?
A: Release 3 incorporates several important additions for enhanced color in NeXTSTEP applications. These new features includes the integration of Adobe's PostScript Level 2 and the bundling of the PANTONE MATCHING SYSTEM®. NeXTSTEP is the first system software to provide both of these features.

Q: What benefits does the integration of PostScript Level 2 bring to end-users?
A: PostScript Level 2 incorporates a device-independent color indexing standard called CIE, which in effect provides color calibration between the colors you see on the screen and what you get on the printed page. CIE was developed in the 1930s and is based on the psychographics of human color perception. On a more practical level, CIE can be mapped to calibrated RGB, which is also supported in PostScript Level 2.

Q: How do users gain access to PANTONE colors?
A: Under Release 3, users will be able to simulate PANTONE colors through the Color Panel, which is part of any NeXTSTEP application that uses color.

Q: What is the Color Panel?
A: The Color Panel standardizes and simplifies the way that users access and pick colors in NeXTSTEP applications. Just as the Font Panel offers users a standard way to pick fonts from within any NeXTSTEP program, the Color Panel allows users to choose colors in a consistent manner across all applications. Because the Color Panel is part of NeXT's Application Kit™, it will be built-in to NeXTSTEP applications by developers. So, unlike Macintosh users who need to learn a new way to pick colors with every application, NeXTSTEP users will only need to learn one color selection interface for all NeXTSTEP applications.

Q: What color models does NeXTSTEP support?
A: In addition to the PANTONE MATCHING SYSTEM, the Color Panel also supports RGB (Red, Green, Blue), CMYK (Cyna, Magenta, Yellow, Black) and HSB (Hue, Saturation and Brightness). Any NeXTSTEP application that uses the Color Panel provides access to all the color models supported in NeXTSTEP.

Q: How do users convert between color models?
A: The Color Panel provides automatic translation between all the color models that it supports.

Q: What graphic files formats does NeXTSTEP support?
A: NeXT supports Encapsulated PostScript, or EPS, TIFF, and RTF (Rich Text Format®) file formats. Specifically, NeXTSTEP supports the CMYK and alpha extensions to the TIFF format. EPS supports all color models.

Q: What color-specific developer tools are available?
A: Release 3 includes 3D Graphics Kit, color extensions, Color Panel, and scanner and multimedia objects. Included in 3D Graphics Kit is Pixar's RenderMan® software. RenderMan software provides the industry standard for creating computer-based pictures that contain all the qualities of real life, such as shadings, reflections, texture and motion blur. NeXTSTEP Release 3 incorporates two components of Pixar's complete family of RenderMan products: full Photorealistic RenderMan™ and Interactive RenderMan™.

Q: How do you calibrate color in NeXTSTEP?
A: NeXTSTEP supports PostScript Level 2 which in turn supports the color indexing standard, CIE. The computer industry is still struggling to set standards for color calibration. Color consistency between display and output is highly qualitative. It depends on the technology used for display and the printing device, medium and technique used for creating hard copy of a color image. Until the problems associated with these issues are solved and a standard is set, NeXT will not attempt to incorporate color calibration in its system software. However, there are several third parties currently working on color calibration products for NeXT. For now, third parties will provide solutions for color calibration.

Q: How does NeXT convert CMYK to RGB?
A: NeXT's Color Panel provides automatic translation between RGB, CMYK and HSB color models.

Q: What is the advantage of Display PostScript in color?
A: Display PostScript® provides NeXT users with an unified imaging model across all NeXT systems, both monochrome and color. For users, this means that any image created in a NeXTSTEP application can be displayed on all NeXT products. Display PostScript can display a single file in 16-bit color on NeXTstation™ Color or gray scale on a NeXTcube™. This cross-platform compatibility is one of NeXTSTEP's key features allowing NeXT users to freely exchange files and data between all NeXT products.

Q: What does the addition of the RenderMan-based 3D Graphics software mean for end users?
A: Pixar's RenderMan software provides the industry standard for creating computer-based pictures that contain all the qualities of real life, such as shadings, reflections, texture and motion blur. Applications based on 3D Graphics Kit will allow 3D graphics to blend seamlessly into a user's environment. Users will be able to do everything with 3DKit-based applications that they can do with 2D: cut, copy, paste, mail, print, use Services, draw, modify and so on. Integrated 3D graphics, as made possible by NeXTSTEP Release 3, will greatly enrich the communication potential for every NeXTSTEP individual and work group.

Q: What is Interactive RenderMan?
A: Interactive RenderMan provides a unified imaging model for 3D, just as the Display PostScript language does for 2D. Application programmers can describe their 3D scene in the same way whether the scene is being drawn interactively on the screen or rendered photorealistically for output on paper or to a film recorder. The NeXTSTEP software automatically supports printing from applications incorporating 3D graphics.

Q: What is Photorealistic RenderMan?
A: Photorealistic RenderMan creates photographic-quality images on both the computer screen and in hard-copy output. It is a rendering technology, where rendering refers to the process of generating a computer image of a three-dimensional model from a description of its geometry and other characteristics. The PhotoRealistic RenderMan bundled in Release 3 is the same software used to render Pixar's Academy Award-winning film, Tin Toy, and other groundbreaking computer animation films.

Database Kit

Q: What is the NeXT Database Kit?
A: The Database Kit, or DBKit, is a developer toolkit that provides NeXTSTEP developers with a series of object classes and methods that in turn provide a single interface to multiple databases. This single interface allows NeXTSTEP programmers to create their own graphical database-driven applications five to ten times faster than developers using other development environments.

Q: How does it work?
A: Database Kit has a layered architecture that effectively isolates an application's basic logic from the semantics of how data is stored and retrieved on a particular database. Programmers work with Database Kit, Interface Builder™ and Application Kit to create applications that provide access to databases, but they are not required to program in the logic of the database itself. Database Kit's adaptors, such as the one Teradata is offering, translate database-independent information to the access language of specific databases, such as SQL.

Q: For which databases does Database Kit provide adaptors?
A: Database Kit comes bundled with adaptors for Sybase® and Oracle®, Teradata has announced one, and many others are under development.

Q: What specific access languages does Database Kit support in these adaptors?
A: For Oracle, Database Kit provides support for Oracle Call Interface, or OCI, and SQL*Net® which enable connections between NeXTSTEP and Oracle's RDBMS. Database Kit also provides connections to any SYBASE SQL-Server™ via Sybase's DB-Library™.

Q: Does Database Kit provide support for multiple data types?
A: Yes, a program written with Database Kit can access multiple types of date including sound and images.

Q: Will the Sybase client libraries still be bundled?
A: The Sybase® client libraries and a Sybase adaptor will be bundled in Release 3.

Q: Will Oracle client libraries be bundled?
A: Oracle's equivalent of the client libraries, Oracle Call Interface and SQL*Net, will be bundled in Release 3.

System Software

Q: What is the real extent of ADB support? Which devices are supported?
A: In Release 3.0, NeXT's ADB™ support is limited to supporting only NeXT products, thus should not be touted as a feature of NeXTSTEP. One ADB keyboard and one ADB pointer device (whether from NeXT or a third party) will be able to run concurrently. We do not support the entire ADB protocol, nor do we support the ADB API. The ADB devices that
we know will work are (note that this list may change):
- •new NeXT keyboard and mouse
- •Kensington® keyboard and trackball
- •CoStar trackball
- •Logitech MouseMan® and TrackMan®
- •Apple Mouse
- •Apple Extended Keyboard (i.e., Saratoga)

Q: What happened to NetManager?
A: It has been divided into two applications: HostManager and SimpleNetworkStarter

System Administrator

Q: Does Release 3 support netbooting?
A: Yes.

Developer

Q: Why should I develop a Release 3, when if I develop a Release 2 application which is binary compatible with Release 3, I can reach a larger audience?
A: The primary reason we encourage developers to either create new applications under Release 3 or to create Release 3 versions of their existing applications, is so that they can they can make their applications more attractive by utilizing many Release 3 features: on-line help, 3D Renderman, Object Links, Multi-media compression, Distributed Objects, and ISDN, for example. Another reason we encourage developers to utilize Release 3 is that most NeXTSTEP users will be running this latest release. We expect Release 3 sales to far outweigh our Release 2 installed base, just as Release 2 sales outweighed our Release 1 installed base by 4:1. Also, over 80% of our Release 1 customers upgraded to Release 2, and we expect similar statistics with Release 3. The upgrade is not that expensive or difficult to perform, such that if a customer really wanted your application and by some oversight not upgraded, they would be unwilling to upgrade.

Q: When 3.0 first ships, will the on-line, indexed docs be up-to-date and complete?
A: When Release 3.0 ships, there will be on-line, indexed developer documentation which will be completely updated for Release 3.0.

Q: Will my Release 2 loadable palettes work in Release 3?
A: Applications developed using Release 2 loadable palettes will run in Release 3 just as they did in Release 2. However, the loadable palette architecture, thus the palette format has changed in Release 3 to be more robust and localizable. The old palette format is not supported, so developers of palettes with have to change and distribute their palettes in the new format in order to be utilized under Release 3.

September 1, 1992