

## Mac OS Release Strategy

- **Mac OS presentation**
  - ☰ Mac OS Release Strategy
    - ▢ David Harrington  
Components Evangelist  
Apple Computer, Inc.
  - ☰ Mac OS Strategy
    - ▢ Make complex technology easy to use
    - ▢ Make the Internet part of the OS
      - ▢ Build on flexible component-based technology
    - ▢ Extend multimedia leadership
      - ▢ Audio, Video, 3D, VR, Video Conferencing
    - ▢ Advance the total user experience
      - ▢ Improve productivity and efficiency
    - ▢ Continuously improve the OS
      - ▢ through regularly scheduled Mac OS releases
  - ☰ Mac OS Release Strategy
    - - ▢ In his keynote address at Macworld Boston 1996, Apple CEO Gil Amelio announced that Apple is changing its Mac® OS strategy to deliver new functionality through regularly scheduled releases.
      - ▢ This new strategy of regular and more-frequent releases lets Apple get new software developments out to customers more quickly. Apple's release strategy gives customers a convenient way to keep up with the accelerated pace of change in technology.

## Mac OS Release Strategy

- ▣ Many customers may already have found versions of some of Apple's updated software technologies by other means, such as the Internet. However, the predictable availability of a reference release that's easily installed, integrates all of the latest software technologies, and is stable and reliable should help customers in managing their computer system(s).
- ▣ Regularly scheduled Mac OS releases
  - ▣ Major reference releases every six months beginning January 1997
  - ▣ 2-3 disk system updates between releases
- ▣ Integrate latest core technologies
  - ▣ Apple does system integration not customer
  - ▣ Enables developer to better plan, test, & implement
- ▣ Deliver compelling technologies from Mac OS 8 sooner
- ▣ Mac OS Roadmap
  - ▣ Apple will deliver complete reference releases that integrate the latest software technologies and features twice yearly, in January and July. In addition, Apple will continue its delivery of incremental system updates between reference releases, and targeted rapid-response releases as needed.

## Mac OS Release Strategy

- ▣ The upcoming Harmony release of the Mac OS represents the first step in Apple's new strategy of delivering state-of-the-art operating system functionality to customers on a regular—semiannual—basis. Harmony will unite many Apple technologies that have recently become available with additional features and functionality, to offer customers improved productivity, efficiency, and PC file compatibility.
- ☰ System 7.5.5 Update
  - ▢ Continuous Improvement Model
  - ▢ Improved Virtual Memory
    - ▢ Better performance for launching & booting
  - ▢ Universal System Folder, 2-3 disk model
  - ▢ Clear version naming scheme
  - ▢ Addresses pressing customer issues
    - ▢ Bug fixes for type 11 error, floppy use on DOS compatible, floppy formatting, sound applications, Open Transport support on 5400/6400
- ☰ Harmony
  - ▢
- ☰ Harmony
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    - ▣ Harmony is being designed to be installed with minimal disruption. It is based on the System 7 foundation, which will provide excellent compatibility with existing applications.

## Mac OS Release Strategy

- ☐ Harmony will run on Macintosh systems introduced nearly ten years ago, so long as they contain a 32-bit clean Motorola 68030 or later processor. Older Macintosh models will continue to be supported by Macintosh System 7.5.5.
- ☐ Harmony will also run on Mac OS compatible systems from a variety of manufacturers.
- ☐
  - ☐ System 7-based
    - ☐ Excellent backward compatibility
  - ☐ CPU support:
    - ☐ 32-bit clean '030, '040, PPC, incl. compatibles
  - ☐ Default installs
    - ☐ OpenDoc & Cyberdog , QD3D, QTVR, QT 2.5, Apple System Profiler ('040 and up), CFM 68K, & MP software
- ☐ Harmony
  - ☐
    - ☐ Changes to Finder
      - ☐ Bigger RAM footprint (~50K)
      - ☐ Will break patches to jump tables!
    - ☐ No 24-bit support - special case the code
    - ☐ Modern Memory Manager - always on
    - ☐ VM - default is on
      - ☐ Physical +1M, 16M minimum
      - ☐ affects multimedia apps, Photoshop, RAM Doubler
- ☐ Harmony
  - ☐
    - ☐ Open Transport-only
      - ☐ Compatibility layers available, but with a speed hit

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- future improvements only in Open Transport
- Large volume support - up to 2 terabytes
  - be ready for large volumes, create fewer files
- ☰ Harmony
  - 
  - APPCs - new with Harmony
    - Load init code at startup, auto-routed to CP folder, they launch as app, design HI as Control Panel
  - Removing "Macintosh" for licensees
    - About this Computer..., Mac OS Easy Open, Mac OS Guide, no more "Welcome to Macintosh"
  - Memory control panel
    - fixed the pop-up menu's appearance
    - fixed conflict between RAM disk & Virtual Memory
- ☰ Harmony & the Internet
  - - By including the latest versions of OpenDoc, Cyberdog, and Open Transport software—as well as key connectivity tools such as TCP/IP, PPP, and ARA—Harmony makes it easy to connect to the Internet and its vast communications and information resources, including both local and remote networks.
    - For example, the combination of Cyberdog and OpenDoc lets users actually bring the Internet into their applications—embedding live web links in their documents as easily as they would text or graphics.
    - Harmony also lets users save and launch URLs from the Finder, in the same way that opening a document automatically launches the appropriate application.
  - Easy Internet access

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- Brings Live Object Internet links to applications and the desktop
  - URLs are double-clickable items in the Finder
  - Powerful built-in email services with Cyberdog
- Simplified Internet set-up & access
  - TCP/IP, PPP, and Apple Remote Access by default
- Standards support
  - SMTP, FTP, HTML, JPEG, GIF w/Cyberdog
- ☰ Configuration & Ease-of-Use Improved
  - - Extending Apple's leadership in ease of use to new levels, Harmony will provide new features and enhancements that speed basic and frequently performed tasks.
    - Harmony provides faster, easier networking (through the latest version of Open Transport networking software) and printing (through the latest version of LaserWriter® printing and QuickDraw GX imaging software). The new LaserWriter 8.4 driver, for example, simplifies setup, speeds printing, and offers enhanced printing capabilities including n-up printing.
    - Harmony will include an improved Installer that combines a number of separate tasks (such as reviewing ReadMe files, updating hard disk drivers, and inspecting the disk's file system) in a single utility program. A new Extensions Manager makes it easy to get and share extension information (as well as to turn extensions off for troubleshooting), and Harmony will include improved virtual memory and other system enhancements that improve overall performance.

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- ☐ A revised version of virtual memory that can result in significantly better performance when performing some tasks, such as launching an application, especially for PowerPC-based systems using SCSI drives. The amount of improvement will vary greatly depending on the amount of RAM installed in the system, the amount of virtual memory allocated, and the applications being used.
- ☐ For example, Harmony incorporates the OpenDoc component software architecture, which lets users mix and match Live Objects' software features to suit their needs. It also includes Live Objects Essentials, a starter kit of OpenDoc components for drawing and multimedia.
- ☐ Live Objects is the consumer brand name & logo for OpenDoc technology-based products that meet the CI Labs compatibility tests. An easy way to think of this is that OpenDoc is an enabling technology & architecture; Live Objects indicates a consumer product that is based on OpenDoc technology.
- ☐ New ways to work better and faster
- ☐ LaserWriter 8.4.1 - less modal, more flexible
- ☐ Easier, better install
  - ☐ New Installer technology - unified step-by-step process
  - ☐ Forces running DFA, promotes hard disk driver update
- ☐ More effective system management
  - ☐ Extensions Manager improves control & organization
    - ☐ Provides information about files - CCI™ resource
    - ☐ Can group as package - uses 'vers' 2 resource



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- - ▣ Harmony will include an improved Installer that combines a number of separate tasks (such as reviewing ReadMe files, updating hard disk drivers, and inspecting the disk's file system) in a single utility program.
  - ▣ Installer screenshot—this screen shows you the various steps which this new installer will walk you through to ensure a more trouble-free installation. If any of the recommended steps are skipped, a warning will appear. Once all of the software products to be installed are selected, the installer takes care of installing them all in one step, avoiding the hassle of having to administer multiple software installations.
- ☰ Mac OS Install Demo
  - ↳
- ☰
  - - ▣ A new Extensions Manager makes it easy to get and share extension information (as well as to turn extensions off for troubleshooting).
    - ▣ The new Extension Manager supports features clustering, and provides better information & control of extensions.
    - ▣ Extension Manager screenshot—shows how feature clustering works. For example, if you wanted to disable all of the Cyberdog components in the System Folder, all you need to do is uncheck the box next to Cyberdog. This saves you the trouble of hunting for all of the related Cyberdog parts, and disabling each one individually.



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- ▣ Developers are able to take advantage of this feature as well. And while not all Apple system software components can take advantage of clustering with the release of Harmony, many more will in with the next release.



### ▣ Improved Launch Times with VM

- ▣ Tests run on 7200/75 and 8100/80
- ▣ Microsoft Word launches up to 45% faster
- ▣ Photoshop launches up to 50% faster
- ▣ Painter launches 15% to 30% faster
- ▣ Varies by system, VM setting, and app

### ▣ OpenDoc & Live Objects



- ▣ Users can extend the usefulness of their applications by embedding new technologies--the Internet, multimedia--into their Live Objects software. And as new Apple technologies become available in the form of Live Objects, users can integrate them immediately, without having to upgrade all their software
- ▣ The Live Objects seal & brand identify OpenDoc technology-based products. They are small, reusable software components and refer to consumer-based products that can be mixed and matched.

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- ☐ When you buy software with the Live Objects seal, you'll know that it has passed a series of validation tests to ensure compatibility. Component Integration Laboratories (CI Labs), a non-profit industry association, licenses, registers, and validates all software before it can carry the Live Objects seal and brand name. So you can count on Live Objects components working together, consistently, in a predictable manner—regardless of which software manufacturer's product you're using.
  - ☐ Users can learn how to use Live Objects once, then leverage them once in many different applications. No more learning how to do the same functionality (like graphing) in four different ways in four different applications
  - ☐ Users can combat "feature creep" because they can use only the features they need and want, without the extra complexity of memory overhead of "bloatware." Users can embed a graph in their document and only take the memory hit of the actual functionality used.
- ↳
- ☐ Universal component-software technology
    - ☐ Multiplatform: Mac OS, Windows, OS/2, AIX
    - ☐ Standards-based and endorsed by OMG
  - ☐ Mix and match software components
    - ☐ Extend app functionality w/simple drag-&-drop
  - ☐ Live Objects brand & seal
    - ☐ ensures compatibility between components
- ☐ State-of-the-art Multimedia
- ☐

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- ☐ This system software release will bring together the latest versions of several of Apple's QuickTime technologies, collectively known as the QuickTime Media Layer (QTML)—which is rapidly becoming an open standard for adding and playing back media elements such as video, music, and three-dimensional graphics to documents. Harmony will include the following QTML components:
  - ☐ QuickTime, the “wrapper” that unites the QTML technologies and provides a means of working with any compression/decompression standard to control virtually any digital media content
  - ☐ QuickDraw 3D, a technology that brings real-time, workstation-class three-dimensional graphics to desktop computing
  - ☐ Apple's PlainTalk technology, which enables both speech recognition and speech synthesis, supporting applications that both talk and listen
- ☐ In addition, because Harmony will include Live Objects Essentials, users will be able to drag and drop Apple's multimedia technology into any OpenDoc document, creating high-impact communications with compelling three-dimensional images, video, sound, and animations.



- ☐ Latest QuickTime technologies
  - ☐ For digital video, music, 3D graphics, & speech
  - ☐ QuickTime 2.5, QuickDraw 3D 1.0.6, QuickTime VR viewer, PICT, GIF, JPEG, TIFF, Draw, Button, Audio, etc.
- ☐ Expanded multimedia content support

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- within OpenDoc-aware documents & apps
- ☰ Improved PC Interoperability
  - - ▣ PC file compatibility is a key requirement for many users. Although previous versions of the Mac OS included cross-platform compatibility tools, many users remain unaware of these capabilities.
    - ▣ Building on the strong foundation of the existing software—PC Exchange and Mac OS Easy Open, as well as DataViz MacLinkPlus translators—Harmony will provide better support for opening, viewing, and saving files from DOS and Windows media into either Macintosh or PC formats, so users can share files easily, regardless of platform.
    - ▣ Harmony adds support for the DMF file format used by Windows 95 floppies to its existing support of DOS & Windows 3.x files and media. This means users can read & write to PC floppy disks, SCSI drives & removeable media from their Macs.
    - ▣ Users will find that they can open most Mac OS and Windows files without the application in which those files were created. And Harmony will offer enhanced support for Windows 95.
  - - Open, view, & save Windows 95, Windows 3.x, & DOS files
    - Open Mac OS & Windows files without the original application
    - Read and write to PC-formatted floppies, Syquest cartridges, & SCSI drives

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- Long filename support should arrive in July
- ☰ What's in Harmony
  - - ☑ We've done a lot of work to improve and enhance the Harmony release -- here is an incomplete listing of some of the changes we'll include.
  - ↳
- ☰ Tempo
- ☰ Tempo
  - ↳ July 1997 Mac OS release
    - 
    - Feature set is subject to change
    - System 7-based
      - Builds on Harmony & update
      - Excellent backward compatibility
    - Latest versions of core technologies
    - Continue to improve reliability & stability
    - Supports 68040 & PowerPC
      - Exception: any 68030 w/PowerPC or 68040 upgrade card
- ☰ Productivity and Efficiency
  - ↳ Deliver visible Mac OS 8 user value
  - New appearance
    - Grayscale appearance of Mac OS 8
    - Several applications now implement spec
  - Improved Color Picker
    - Apple Crayon, HTML, & CMYK pickers as well as an eye-dropper tool
  - Assistants Simplify Complex Tasks
    - Not a replacement for control panels interface

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- Internet Setup Assistant
  - First time internet configuration
- Mac OS Setup Assistant
  - Date & Time, Sharing Setup, etc.
- ☰ Internet Integration
  - ↳
  - Easy Internet setup and configuration
    - Include key connectivity tools
    - Internet Setup Assistant and Apple Internet Connection Kit (AICK) library
  - Built-in communication & info access
    - Cyberdog 2.0: Enhanced web browser
    - Mac OS Runtime for Java (a.k.a. MRJ)
  - Pervasive access
    - Finder level e-mail and browser access points
- ☰ Performance
  - ↳
  - ? Bug fixes, as prioritized by CSD and DTS
  - ? Integration of Drive Setup and DFA in Installer
  - Performance tuning where it counts most
    - More PowerPC native code
    - I/O throughput
    - System startup time
    - Application launch time
- ☰ Additional enhancements
  - ↳
  - Additional OpenDoc integration
    - Auto-routing of Editors
    - OpenDoc documents in Recent Documents folder

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- ▣ PowerPC Platform (PPCP/CHRP) support
- ▣ Hard drive allocation block size
- ▣ DVD volume support
- ☰ Finder 8.0
  - ▣ Evolution of the Mac OS 8 Finder
  - ▣ Multi-threaded: perform tasks concurrently
  - ▣ PowerPC native: improved performance
  - ▣ New navigation & info management features
  - ▣ New menu items
    - ▣ Find Original, Move to Trash, etc.
  - ▣ Contextual menus
  - ▣ and many more...
- ☰