# Macintosh Sandovs 95

# #14 OpenDoc

# Summary

In the 1980s, the graphical user interface revolutionized personal computing, enabling big leaps in user productivity and ultimately making obsolete all the applications standards of the day. In the 1990s, Apple believes the next major software revolution will be component software. Apple's software for components is called OpenDoc.<sup>®</sup> It's an open standard co-developed with IBM, Novell, and many other computing companies, and it will be a springboard for innovation on the Macintosh<sup>®</sup> platform in the future.

This is part of a series of short reports on the contrasts between an Apple<sup>®</sup> Macintosh computer and a PC with Windows 95. To see previous entries in the series, visit us on the Internet at http://www.apple.com/whymac/

## The Macintosh Advantage

Personal computer operating systems are like giant plates of spaghetti. Anytime you touch anything on the plate, everything else slithers around. In other words, any time the vendor adds a new feature, it has to spend most of the time fixing bugs introduced by that new feature. The more features are added, the worse the bugs become, and the longer the bug fixes take. People installing Windows 95 today are just the latest example of this process.

The same thing has occurred in applications—today's major suite programs are themselves like big plates of spaghetti, making them very hard to create and maintain, let alone advance.

The net result of this is slower innovation. New operating systems are routinely late coming to market as debugging eats up more and more time; and software companies are being forced out of personal computing, as fewer and fewer of them can afford the investment necessary to create and maintain an entire suite. If the current process continues, most of the computer industry will choke to death on its own infrastructure. There will be much less competition, slower change, and many fewer choices for customers.

Apple thinks this would be a disaster for personal computing. The way out of it is component software (also called object software by many people). Whereas current software is like spaghetti, component software is like Lego-brand building blocks. It's composed of a series of small software programs (or components) that fit together. New pieces can be mixed and matched without disturbing the overall structure, and you can make a huge variety of different things with it. It's something like the plug-ins for a program called Adobe Illustrator—except that everything can be plugged into everything else.

Apple's path to component software is called OpenDoc. It's software that sits on top of the Mac<sup>™</sup> OS and supervises the software components. These components, regardless of who developed them, will work together as if they were written by a single developer. This consistency will be ensured by CI Labs, an independent OpenDoc industry association supported by Apple, IBM, Adobe, Novell, and many other computing companies.

OpenDoc is extremely open. The source code to it is available through CI Labs and the CI Labs partners are porting it to operating systems other than the Mac OS.

OpenDoc will make life easier for anyone who writes software. Application developers will be able to focus on writing small programs that do specific things, rather than creating entire suites. This will make it much easier for small, innovative software companies to get back in the industry. OpenDoc will also make it easier for system integrators, corporate developers and VARs to quickly snap together custom software and hardware products that specifically meet customer needs.



OpenDoc applications will be sold the way applications are sold today, and through the same channels. But as with any new technology, additional channels will evolve to capitalize on the technology's strengths. It is likely that over time on-line component warehouses will be used to distribute some OpenDoc applications. Interesting new on-line applications and services will be enabled by OpenDoc.

Microsoft is also working on component-related software, called OLE (Object Linking and Embedding). Unlike OpenDoc, OLE started out as a technology to extend the functionality of Microsoft's Office applications. Its source code is held privately by Microsoft, and it is not controlled by an open, independent group the way OpenDoc is. The Office suite of applications is still the OLE design center and Microsoft has made no secret of its desire to push developers to adding value to Office and Backoffice rather than competing with these Microsoft applications.

Nevertheless, Apple is not trying to kill OLE. Apple wants customers to be free to make an open choice of whichever component system is best for them. So OpenDoc has been designed as a superset of OLE, with interoperability between them provided by Component Glue technology.

Microsoft has acknowledged OpenDoc as an acceptable way for developers to provide OLE support in Windows 95.

#### What It Means For Users

OpenDoc as a technology is targeted at developers, both software vendors and in-house corporate developers. But OpenDoc will benefit customers in several important ways.

- Apple will use OpenDoc as a springboard for innovation on the Macintosh platform. Because it makes software development much easier, it will allow Apple and developers to add new software and hardware features to the Macintosh much more quickly.
- Users will benefit from the highly integrated nature of OpenDoc applications, even when those applications are created by different software companies. OpenDoc applications let users focus on their task rather than on getting their applications to work together.

- Over time, users will be able to purchase functionality as they need it rather than being forced to get overwhelmingly large applications with features they don't need or want.
- Users will be able to purchase solution suites aimed at their particular needs, whether they're a home user, educator, publisher, real estate agent, or whatever.

Apple believes these benefits will happen first on the Macintosh platform because of Apple's strong commitment to OpenDoc and its encouragement of developers to adopt component software.

In the end, Apple believes people will choose to use OpenDoc not because they want component software technology, but simply because it will help them get more done.

#### What About the Future?

OpenDoc for Macintosh is already in the hands of developers. The user version is expected to ship this fall, and the first OpenDoc applications are expected to appear before the end of 1995. Developers worldwide are already creating OpenDoc applications. In 1996, Apple expects to see OpenDoc solutions for Macintosh personal computers that provide unprecedented flexibility and customization based on user needs.

### **Questions or Comments?**

You can send e-mail to the Macintosh Platform Marketing team at competition@applelink.apple.com

For more information on topics mentioned in this note, use the Internet:

CI Labs home page: http://www.cilabs.org/

Apple OpenDoc home page: http://www.info.apple.com/opendoc/

IBM OpenDoc information: http://www.austin.ibm.com/developer/objects/od1.html