Apple's Next step puts computer company on right track

Operating system to solve MacOS problems, boost industry

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Last Friday, Apple Computer Inc. said it would acquire Next Software Inc. for $400 million in a move that reunites the company with its banished cofounder Steve Jobs.

Although the Jobs-Apple reunion makes for interesting reading, the more important **News analysis** element is Apple's acquisition of Next's operating system, Next-step, which will form the basis for Apple's new Macintosh operating system, MacOS 8.0.

Forget Jobs: Apple's acquisition of Next-step is good news for Apple, good news for Macintosh users, good news for the computer industry and good news for Microsoft Corp.

For starters, Nextstep has the most user-friendly, easiest-to-use and easiest-to-program computer interface ever invented.

Nextstep – and just as important, Next's team of programmers – can really solve Apple's Macintosh operating system problems because Nextstep is everything MacOS isn't.

Nextstep is stable: I have had Nextstep running on my desktop machine for months at a time without a single crash.

It's fast: Unlike MacOS, Nextstep takes advantage of advanced memory-management features that are built into all modern microprocessors.

It's object-oriented: That makes it easy to create very powerful applications with only a small amount of work.

Nextstep is also portable. The operating system currently runs on top of four different kinds of computers: Next's original black computers; Sparc computers built by Sun Microsystems Inc.; Pa-Risc computers built by Hewlett-Packard Co.; and industry-standard PCs powered by Intel Corp.'s 486 and Pentium chips.

This portability means Apple could offer Nextstep on both the company's aging Quadra computers, which are based on the Motorola 68040 microprocessor, and the modern Power Macintosh systems, which run with the PowerPC chip that was developed jointly by Motorola Inc., IBM Corp. and Apple.

Indeed, Nextstep already runs on the 68040. The microprocessor was used in Next's black workstations.

Apple Computer cofounder Steve Jobs (right), with chief executive Gil Amelio, is returning to the company, but the real news is Apple's $400 million acquisition of Next Software.

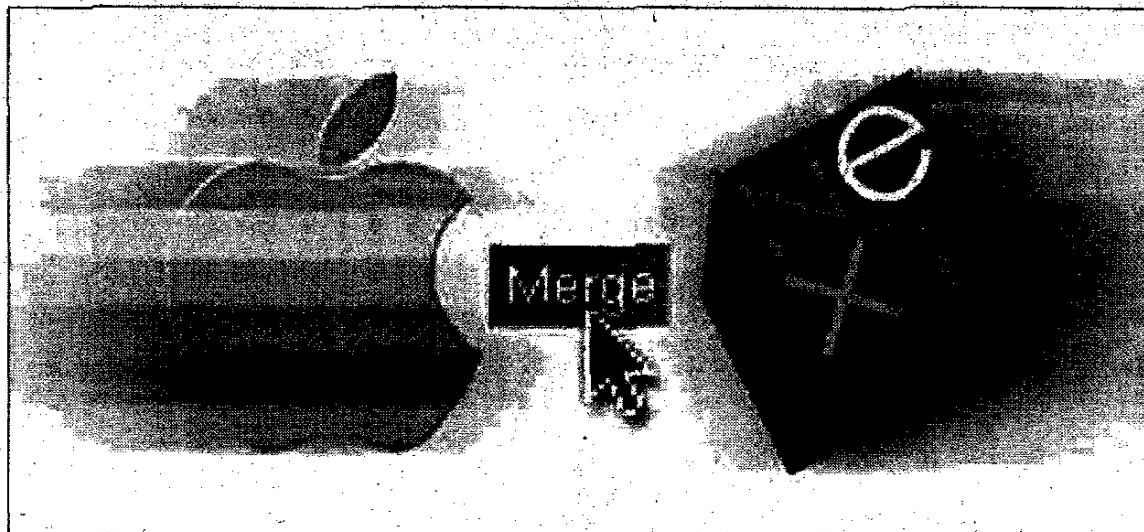# Apple's Next step puts computer company on right track

A Next engineer said recently that the operating system has already been demonstrated on PowerPC-based machines inside Next's labs. Thus, much of the job of moving Nextstep onto the Macintosh hardware has already been done.

If Apple follows through and completes the process of making Nextstep available for both old and new Macintosh systems, then Macs sitting on people's desks all over the world will be granted new leases on life and Apple will reap millions in upgrade fees.

Surprisingly, Sun is another company that may benefit from Apple's bold move. Earlier this year, Sun bought Lighthouse Design Inc., the San Mateo, Calif.-based firm that was the largest of the Nextstep independent software vendors. Lighthouse has an entire suite of applications that run on Nextstep. Lighthouse's Diagram! may be the best technical drawing application produced for any platform. And Lighthouse's Concurrence outlining and presentation package is much easier to use than Microsoft's own Power Point. Priced appropriately, the Lighthouse applications could compete head-to-head with Microsoft's Office suite.

Nextstep is actually a union of two software systems. One is Mach, an operating system kernel that provides memory-protection, multitasking and security. The other is Open-step, the Nextstep graphic user interface that controls the display of windows and menus on the computer screen.

Over the past year, Next has taken the Openstep user interface and configured it for Windows NT and Windows 95. Sun, meanwhile, has configured Openstep for the Solaris operating system. Developers can write applications for the Openstep interface and have the program run on all of these operating systems. This is what Java, Sun's programming language, promised: write the program once, run it everywhere. The difference is that Openstep programs run considerably faster than programs written in Java. They're also much simpler to write.

Finally, Microsoft is sure to benefit from Apple's move because Microsoft may soon have some real competition in the operating system business, especially if Apple continues Next's practice of supporting PCs as well as workstations from Sun and HP. As we've seen time and time again, Microsoft does its best work when it's competing against other companies. Look forward to new innovation coming out of Redmond, Wash.

Unfortunately, Apple can't simply take Nextstep, port it to the Mac platform and send the operating system out the door. Apple needs to make sure Nextstep runs many (but not necessarily all) of the existing Macintosh applications. And Apple needs to simplify the Unix operating system on which Nextstep is built.

That means it will likely be a year or more before today's Macin-tosh computers get the operating system upgrade they so desperately need. In the meantime, Apple will continue fixing bugs in MacOS 7.5.

But it will be hard to get excited about Harmony, Apple's MacOS upgrade planned for next month, knowing Nextstep is down the road. Instead of Harmony, Apple should give away the current version of Nextstep for PCs so Apple's developers can get their feet wet with the system and begin designing applications.

Either way, the future looks bright as Apple takes its Next step.

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Apple's acquisition of Next Software gives it Next's operating system, Nextstep, which will form the basis for Apple's new Macintosh operating system, MacOS 8.0.