Sun Microsystems, AMD to Team Up

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Sun also plans to adapt Solaris, Linux and its Java software technology to exploit Opteron's 64-bit technology, and work with AMD to convince other software makers to target the chip. "We are going to be collaborating on a software ecosystem," said Dirk Meyer, an AMD senior vice president.

Craig Barrett, Intel's CEO, said he wasn't surprised by the alliance. Gradually reducing Sun's reliance on Sparc chips is part of Mr. [Scott McNealy]'s "slow evolution," Mr. Barrett said in an interview last week. "I'd almost say he needs a revolution rather than an evolution."

In a partnership that ties the fates of two of Silicon Valley's highest-profile underdogs, Sun Microsystems Inc. today will announce a broad alliance with Advanced Micro Devices Inc., a relationship that could have a major impact on both companies' battles against larger competitors.

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The partnership, to be formally announced by the chief executives of both companies at the annual Comdex computer-industry trade show in Las Vegas, has broader elements that are more likely to pay off than many past
technology alliances, analysts said.

For AMD, the arrangement stands to help the company make inroads against industry leader Intel in corporate computer rooms, where Sun has a major presence. For Sun, whose long-term viability is one of the hottest topics in Silicon Valley, AMD's chips provide a new weapon to counterattack against competitors such as computer titan Dell Inc.

"It really removes a lot of doubt about where Sun is going," said Nathan Brookwood, an analyst at Insight 64, a market-research firm in Saratoga, Calif.

The main battleground is over servers, the midsize computers that manage most computing chores for businesses. Sun, based in Santa Clara, Calif., built its server business around a proprietary chip line called Sparc and a version of the Unix operating system called Solaris. One selling point of Sun's chips is their ability to handle 64 bits of data at a time. That allows the use of software that taps into larger pools of memory, and is an advantage in heavy-duty computing chores over earlier 32-bit chips, which are more widely used.

But Intel, the maker of the microprocessors used in most PCs, has rapidly increased the performance of 32-bit chips. Servers using that technology, and Microsoft Corp.'s Windows or the Linux operating system, are well-suited for fast-growing applications such as managing Web sites.

Scott McNealy, Sun's chief executive, has derided rivals such as Dell for simply reselling technology developed by others. But amid a string of quarterly losses and revenue declines, Sun eventually expanded its product line with some low-end servers that use Intel chips and can run Linux or Solaris.

AMD is an attractive replacement. The Sunnyvale, Calif., company's chips are compatible with Intel's and generally less expensive. With Opteron, moreover, AMD has added a twist -- the ability to run both 32-bit and forthcoming 64-bit programs.

Starting next year, Sun plans to sell low-end servers with two or four Opteron chips in them. Few details are being disclosed yet, but Sun indicated a desire to turn the pricing weapon back on its rivals. "These products will be brought to market with very aggressive price points," said Neil Knox, Sun's executive vice president for volume systems.

The two companies will collaborate in other ways. Sun plans to help adapt Opteron for use in servers with more than four microprocessors, promote an AMD technology for connecting chips together and even help develop entirely new microprocessors, Mr. Knox said.

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Once Sun has low-end machines with 64-bit technology, its servers may have an edge on Dell and others for some applications. "I think Dell is going to have a lot of trouble competing with this," Mr. Brookwood argued.

T.R. Reid, a Dell spokesman, said it hadn't seen meaningful demand for 64-bit technology in low-end servers, but if customers demand it, "we will be there." Sun faces other fierce hardware rivals, notably International Business Machines Corp. and Hewlett-Packard Co.

Intel, meanwhile, has a line of 64-bit chips called Itanium for high-end computers that is finally beginning to gain some momentum. It also is believed to be preparing to add 64-bit features to its widely used Pentium and Xeon chips, though not until 2005, Mr. Brookwood predicts.

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But Brad Day, an analyst with Forrester Research, argued that the arrangement could help Sun make a radical shift
toward getting more revenue from software, as returns from developing proprietary hardware continue to diminish. "Sun's livelihood over the next three years will be making revenue from other parts of their portfolio," he said.