continued

tend for internal resources, such as power, memory, or OS services; the multiprocessing clusters have the added advantages of failover security for mission-critical applications.

The heart of a Digital OSF/1-based cluster is the Load-Sharing Facility software ($1,045) the company released last October that automatically dispatches computing tasks beginning with the least loaded of up to 100 nodes. The nodes can be individual workstations, including those from other manufacturers, or a new breed of integrated systems — cluster servers.

Digital's new AdvantageCluster Compute Server ($55,000 to $1.5 million) contains 4 to 32 rack-mounted AXP system boards and supporting clustering software. And Digital's new AdvantageCluster File Server ($272,000), like Sun's SPARCcluster, is a system for high-performance Network File System (NFS) management.

Digital Equipment Corp., 146 Main St., Maynard, MA 01754, 508-493-3370. — *Bill Kennedy*

Product focus

SGI adds juice to entry Indy

By Shalini Chatterjee

Silicon Graphics Inc. (Mountain View, CA) has updated the entry-level version of its "number-one volume product," the Indy workstation. SGI claims the improved performance will double the speed of some software applications, while maintaining the Indy's original base price of $4,995.

The leap in speed comes from an optimized 100-MHz MIPS R4600PC RISC chip, replacing the MIPS R4000PC processor that shipped in the previous entry-level Indy system. The old Indy R4000PC scored 36 SPECint92 and 37 SPECfp92; the new Indy R4600PC delivers 62.8 SPECint92 and 49.9 SPECfp92, Silicon Graphics said.

Internal instruction and cache design are now doubled, which is good news particularly for those in the 2-D computing environments, such as computer-aided design, image manipulation, and desktop publishing. For example, SGI claims Adobe Photoshop test results almost double performance gains.

To further endow the new Indy with speed, SGI announced it will ship with an updated operating system. IRIX 5.2 is basically the same as IRIX 5.1, except for code optimizations that result in faster performance because IRIX 5.2 will require less memory. This improvement is important to power artists who need as much of the operating system's memory as possible. And unlike 5.1, IRIX 5.2 provides full support across the SGI product line.

The Indy supports 256 megabytes of RAM, 2 gigabytes of internal disk storage, and seven fast SCSI-2 devices. The new Indy will keep the standard IndyCam color digital-video camera. Also sticking around is the Indigo Magic user environment, a point-and-click interface designed to be simple enough so PC and Macintosh users won't be intimidated. The same optional IndyVideo add-in card is also offered.

The original Indy was announced in July 1993 and shipped that September. In January 1994, a new high-end version shipped, called the R4400SC (see "SGI's high-end Indy R4400," February 1994). Because the Indy R4600PC is the new entry level, users will not be offered upgrades from any previous machines; it is the new base model. The only way to get one is to buy one. SGI will stop selling the entry-level R4000PC this month, according to Tom McCrea, Indy product marketing manager.

Users who have those original entry-level Indys will be offered upgrades not to the new R4600PCs, but to the R4400SC, the aforementioned machine that shipped in January. If buyers of the new entry-level R4600PC eventually wish to upgrade, they will also be offered the R4400SC model.

The new entry-level Indy is also available with 32 megabytes of RAM, 535-megabyte hard drive, a 16-inch color monitor, and an updated OS, mouse, and keyboard. Like the old entry-level Indy, this beefed-up configuration costs $6,995. Entry Indy system users often work in 2-D computing environments such as computer-aided design, image manipulation, desktop publishing, and creative arts, Silicon Graphics said.

The strategy behind rolling out an entry-level machine that costs the same and works twice as hard is to get attention from other segments of the graphics market, according to Tim Bajarin, an analyst at Creative Strategies (San Jose, CA). "SGI would like nothing better than to find their way into mainstream [markets], such as the multimedia desktop [arena]. They don't want to replace traditional desktops, but where the Mac and PC are in graphics they'd [SGI] like to thwart that," he said. ■

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The new entry-level Indy, formally called the R4600PC, runs twice as fast as its predecessor, SGI claims (the R4000PC, which will be discontinued). Meanwhile, the R4600PC will cost the same as the R4000PC — $4,995.