

Silicon Graphics' Indy: a First Look

As crowds jammed showings of "Jurassic Park" this summer, Silicon Graphics Inc. bared its fangs in the low-end workstation market with sneak previews of the new Indy, an aggressively priced, multimedia-loaded workstation.

A vendor of specialty workstations best known for producing whizzy Hollywood special effects, the company hopes that it has introduced a product so technologically compelling, so *fun*, and, most importantly, so *cheap* that no workstation buyer would dare pass it up. This product is supposed to be the foot in corporate America's door that leads to business-workstation sales.

Silicon Graphics' strategy hinges on the early adopters in the CAD/CAM, business presentation, and documentation markets purchasing Indy workstations for their specialized work. The hope is that these people will use the multimedia features so frequently and publicly that even the most cautious businesspeople will want one for teleconferencing, groupware, audio and video electronic mail, and multimedia corporate presentations.

The stakes are high, and the approach sheer chutzpah. "If it works, I agree that it may be their first billion-dollar product," says Andrew Allison, industry consultant at the newsletter *RISC Management*. "And the intriguing thing about the Indy is that its lure is a lot like that of the Macintosh: Even though it's slick and fun, it's for 'everyman.' But it even costs less than the Mac did when it first came out. I think SGI views the Indy as a chance—a chance—to be the Macintosh of the three-dimensional world."

And just as the Macintosh married its ease of use and laser printers to create the desktop-publishing market and then leveraged that market to get a foothold in American business, Silicon Graphics hopes to exploit its multimedia edge.

That's why the Indy comes equipped

with a color digital video camera, the IndyCam, which can be used for teleconferencing at a slow but adequate rate of about 15 frames a minute. It's not fast enough to give you the feeling of being there, but fast enough to enable people to see what's going on at a meeting and remotely look at any document being viewed. The machine also has a digital video

port, an analog microphone, and support for six-channel digital-audio processing and Kodak's Photo CD.

Yet even if the company succeeds in recreating the Macintosh phenomenon, Silicon Graphics will have to sell into accounts where Sun Microsystems Inc. and Hewlett-Packard Co. have dominated. It is therefore critical to Indy's success that it include features not found in Sun's low-end SPARCclassic line of workstations and that it offer a superior price/performance ratio. A desktop machine based on the MIPS R4000, the Indy hits an impressive maximum of 58.5 SPECint92 and 61 SPECfp92. In addition, the system supports up to 256 megabytes of RAM, 2 gigabytes of internal disk storage, and 7 fast SCSI-II devices.

The Indy also has full two-dimensional capabilities and limited three-dimensional features. And for an X-based workstation, it has incredible imaging capabilities, delivering up to 1.4 million 10-pixel X lines per second. It can do 26,000 triangles per second in three-dimensional applications and can display either virtual 24-bit (dithered 8-bit) or true 24-bit



SGI hopes the Indy will be the business-workstation foot in corporate America's door.

color. The system also supports three color monitors: a 15-inch color monitor with 1,024 by 768 resolution, and 16-inch or 19-inch color monitors with 1,280 by 1,024 resolution. These features make it a hot machine for CAD/CAM, graphics visualization, and other technical applications.

In the connectivity arena, Indy comes with Silicon Graphics' proprietary 267-megabyte-per-second graphics I/O 64-bit system bus, a 400-megabyte-per-second memory bus, an Ethernet 10Base-T port, two serial ports, a parallel port, and an ISDN port. It also has an Ethernet attachment unit interface and two graphics I/O bus ports. Indy also supports floppy optical drives, which are a \$500 option.

Gee-Whiz

Silicon Graphics is depending on the Indy's technical gee-whiz value for initial sales into key accounts that put a premium on such things: aerospace, large chip manufacturers, and software engineering firms. That's why the company has included a suite of digital media software tools that will help users capture full-resolution, full-frame video on disk, randomly edit online video files, and capture and store still video images. Silicon Graphics hopes

By Lisa Stapleton

that both technical types and business-people will demand Indy for putting together presentations, training films, help systems, and multimedia documents.

To prove the point, Silicon Graphics has used these tools to produce a slick (but off-the-wall) video introduction that starts when the machine is first fired up. It walks you through the machine, the interface, and the installation instructions. The introduction has nice pro-

duction value, but it literally tries (and in my opinion, fails) to make users think the machine will give them the insight of Galileo coupled with the creativity of Steven Spielberg.

Silicon Graphics has also revamped its user interface—now called the Indigo Magic environment—making it easier for nontechnical types to navigate. For instance, icons now represent files, networked computers, peripherals, and

even people on the network. And these icons are different depending on the type of media used, such as software, audio, or Photo CD. Silicon Graphics also made installation easier, and printing now consists of merely dragging and dropping an icon (of a document, for instance) onto the printer icon.

Among RISC Unix vendors, Silicon Graphics has created one of the best Unix graphical interfaces, but for novice Unix users used to Windows or Macintosh, the interface isn't totally self-explanatory.

Indy can run PC and Macintosh applications through emulation. Obviously, nobody would buy an Indy for that, but for people who need access to those applications occasionally and need either the multimedia or graphics capabilities,

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The Indy could be the Macintosh of the three-dimensional world

it's a nice feature. It also answers the concerns of those who might object to a \$5,000 machine that can't deal with a Microsoft Corp. Excel or Lotus 1-2-3 spreadsheet.

And that may be the rub. Even if Silicon Graphics does succeed in creating another Macintosh phenomenon, it could still suffer from the same problem that plagues Apple: In the era of networking, Macintosh computers in large companies are still used largely for niche applications such as desktop publishing and presentation preparation.

And while whiz-bang gizmos may impress the technoids, instigating a multimedia cultural revolution in corporate America is a whole new (video) game. As Allison puts it, "My concern about SGI is that they may have fallen in love with the technology." That's the difference between the techies and the bean counters, who may insist on thinking of the machine as an exotic toy. And it remains to be seen whether any machine can be a monster hit with both audiences. ■

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