The Silicon Studio for Publishing Environment from Silicon Graphics

Overview

The Silicon Studio™ for publishing environment, is a revolutionary collaborative production and creative solution that blends the world's fastest graphics workstations and servers with leading software applications. The Silicon Studio environment establishes Silicon Graphics' binary-compatible, RISC-based systems as the open systems standard for powerful photo retouching, pre-press and media publishing solutions. The foundation of the Silicon Studio publishing environment is the company's Open Publishing Architecture™, tightly integrating software tools and peripheral devices that let developers create unique imaging applications.

New products and programs in desktop publishing, image processing, distributed production environments and on-line technical publishing build upon Silicon Graphics' significant presence in performance-hungry environments. Processes such as image manipulation, raster image processing (RIP), open pre-press interface (OPI) processing, animation, film and video production, and media publishing are vastly enhanced with Silicon Graphics advanced imaging technology.

The Silicon Studio publishing solution comes standard with a suite of collaborative media tools to enable publishing professionals in both creative and production environments to communicate simultaneously in real-time with clients, co-workers, editors and design teams in multiple locations. These capabilities result in shorter time-to-production and more streamlined design and review cycles. Silicon Graphics platforms, which include the new Indy™ and Indigo^{2}™XL desktop systems, are powerful systems engineered for demanding production applications. The Indy system is the first ever to ship with a color digital video camera.

The Silicon Studio publishing environment is designed to address five specific publishing requirements:

1) Extending the Macintosh creative environment with more power

Desktop publishing professionals working exclusively with a Macintosh™ computer are finding that they need more power. Users lose significant creative production time waiting for files to open, images to rotate or masks to apply. Such waiting destroys the creative thought process and jeopardizes revenues when billing time by the hour. With Silicon Graphics' line of performance-designed, RISC-based systems coupled with multi-tasking capabilities, users are able to perform several tasks simultaneously for significant time savings

A Silicon Graphics workstation in a creative studio provides an optimal partner to the Macintosh. Silicon Graphics system users are able to process large image files in a fraction of the time required on the Macintosh. Several popular Macintosh applications, such as Adobe's Illustrator™ and Photoshop™, and Corel's CorelDRAW™, run on Silicon Graphics systems -- requiring no user retraining. Also, files pass easily from one system to another. Silicon Graphics systems also support Kodak's PhotoCD™, giving users access to literally thousands of photographic works.

A number of additional applications, such as Alias Eclipse, Barco Creator, Dalim DalPack and Xyvision Contex provide advanced graphics and image manipulation features which exclusively leverage functionality found only on Silicon Graphics systems. These applications produce unmatched effects and can efficiently process images that are hundreds of megabytes in size. They also perform advanced functions such as color separation. Only the Silicon Studio publishing environment offers such a rich range of image manipulation solutions.

2) Improving production environments with faster OPI, RIP and image serving

The power of Silicon Graphics' technology can be easily extended to distributed, collaborative production environments that include UNIX® systems, personal computers and Macintosh systems. Performing compute-intensive functions on Silicon Graphics servers can trim hours from a production cycle. The latest server products for use in the Silicon Studio publishing environment include RipServer™, a RIP server developed by Torque based on Silicon Graphics server technology. The RipServer for Silicon Graphics is a turnkey solution for high-speed Adobe Postscript™ rasterization in the Macintosh environment. TorqueWare™, the software component of the solution, is the only distributed computing engine to support "shrink-wrapped" third party applications. With it, users realize instant productivity gains with no change in their local graphical user interface. TorqueWare solves the connectivity, data conversions and processor load balancing automatically for non-technical users.

Archetype Inc. also provides a server product for use in the Silicon Studio publishing environment. Image Engine, Archetype's high-speed OPI/DCS, provides PostScript productivity without the network bottlenecks. Low-resolution View Files are automatically created from high-resolution originals. These small View Files allow users of page layout and word processors to quickly place and manipulate full color, grayscale, or line art images in their documents.

3) Reducing dependency on special purpose hardware

Silicon Graphics' publishing solutions reduce the dependency on proprietary hardware built for narrow use. The benefits of owning a single-purpose specialized system for prepress are diminishing as open systems increase in price/performance and as applications become more robust in functionality. System performance can be increased through hardware upgrades, additional software applications and peripheral hardware -- virtually eliminating the obsolescence common with single-purpose, closed systems. This approach helps lower the system's lifetime costs and increases the publishing investment return.

4) Embedding high-performance technology in specialized solutions

Silicon Graphics technology is embedded in many of the industry's leading high-quality printers, imagesetters and ripping systems. Silicon Studio brings this power to all users via standard open systems servers containing the latest MIPS RISC technology. Companies such as AGFA, Canon, Ricoh and QMS integrate Silicon Graphics' high-speed processors to establish their performance superiority.

5) Media-rich electronic documentation

Silicon Graphics developed IRIS InSight™, an on-line documentation/help system to enable easy and fast electronic document delivery. IRIS InSight 2.2, builds on an already feature-rich Standard Generalized Mark-up Language-based (SGML) electronic viewer by providing tightly integrated digital media support and context-sensitive and task-oriented help as part of the new Indigo Magic™ media user interface. New features in IRIS InSight include support for real-time video, audio and Quicktime™ movies within a single document window. Also, the viewer supports 24-bit color RGB images, computer graphics metafile (CGM) graphics, bookmarks and advanced structure-based searching. IRIS InSight 2.2 uses DynaText™ 2.1, from Electronic Book Technologies, an electronic book publishing system for large SGML documents. Since IRIS InSight features SGML support, documents can be published once and delivered on many platforms by using DynaText viewers on Microsoft Windows-based PCs, Macintosh computers and other UNIX platforms. Over 50 software titles are available under IRIS InSight including third party manuals such as O'Reilly's X Windows and OSF/Motif Reference guides.

IRIS InSight complements a rich set of third-party technical publishing applications on Silicon Graphics systems including Frame and Interleaf. The newest technical publishing product comes from Passage Systems, Inc. which announced PassagePro™, an SGML-based document management and production system designed to simplify the process of working with SGML. IRIS InSight will be included among the SGML-based viewers supported by PassagePro.

The Open Publishing Architecture from Silicon Graphics

The foundation of the Silicon Studio publishing environment is the Open Publishing Architecture™, a core set of software tools that facilitates the tight integration of applications and devices by developers. It includes support for de facto-standards such as DisplayPostscript, international standards, such as ISO 8859 and SGML, as well as Silicon Graphics-developed technologies such as IRIS Impressario™ print manager and OpenGL™ application programming interface -- all built upon a scalable, compatible hardware architecture that out performs its rivals. The Open Publishing Architecture lets developers create more powerful applications as well as utilize an intuitive user interface for peripheral devices.

The components of the Open Publishing Architecture are:

IRIS Impressario™

IRIS Impressario is the backbone of the Open Publishing Architecture. IRIS Impressario is a comprehensive scanning and print management system developed by Silicon Graphics that provides a rich feature set for digital hard copy input and output, while encouraging third parties to contribute to the solutions through an application programming interface (API). Companies such as 5D Solutions, Focus Graphics, GBA Inc., GW Hannaway, Ricoh, Torque Systems, Tektronix and Xinet provide products using IRIS Impressario. IRIS Impressario simplifies the print management function through an intuitive graphical user interface. Utilizing a built-in, high-speed PostScript interpreter and powerful MIPS RISC technology IRIS Impressario renders PostScript at unprecedented speeds -- up to 250 pages per minute on the Indy system. IRIS Impressario reduces the need for expensive printers that deliver these costly features.

Now in its fourth generation, IRIS Impressario 1.2 can print 24-bit color PostScript files and supports scanning at any resolution. It also includes automatic file type recognition, so virtually any file can be printed on any printer, anywhere on the network. IRIS Impressario's built-in network ability also means that every printer and scanner is automatically networked with no additional cost or effort.

DisplayPostscript Level 2

With the IRIX™ 5.1 operating system, Silicon Graphics provides support for Adobe's Display PostScript Level 2. Level 2 Postscript is fully compatible with existing Level 1 and Level 2 PostScript programs. It includes the following powerful extensions:

- device-independent color
- support for composite or Type 0 fonts with character sets exceeding 256 characters, such as Kanji fonts
- data compression for faster transmission and printing of large PostScript files
- forms (templates) and patterns for faster printing of documents with a repetitive background
- more flexible halftoning enabling more application control
- improved mechanism for controlling printer-specific parameters

Comprehensive Font Solutions

At Fall Seybold '93, Silicon Graphics will be the first UNIX system vendor to announce the support for Adobe's Type-on-Call™ font CD as part of IRIS Impressario 1.2. Type-on-Call is a CD-ROM encyclopedia of over 1700 Adobe type faces from the Adobe Type Library. Type-on-Call is a popular vehicle for font distribution in the Macintosh community because it provides a cost effective, yet simple licensing approach to the broadest range of font alternatives in a single solution.

Silicon Graphics has been shipping 35 sets of Adobe bitmap fonts that correspond to the typefaces built into LaserWriter Plus printers and compatibles. 13 matching Adobe outline fonts, and Display PostScript with all new systems since the introduction of the IRIS Indigo™ and IRIX 4.0. An additional 22 matching Adobe outline fonts can be installed with the client option of IRIS Impressario. Adobe provides 40 other typefaces with the Silicon Graphics version of Adobe Illustrator™. Many additional bitmap fonts, Adobe Utopia outline fonts, and some Bitstream outline fonts are installed with the X Window System. Several Silicon Graphics outline fonts are installed with Showcase 3.0, a free application bundled with the Indigo Magic media user environment.

Open GL™

OpenGL application programming interface, the world's leading graphics API, supports both 2D and 3D transformations. It extends the power of Display PostScript in publishing by enabling the production of high-quality, color images of complex scenes that can include moving three-dimensional objects, light sources, textures, blending, anti-aliasing, motion blur, fog, etc. OpenGL allows subpixel positioning of characters. When the execution of OpenGL is assisted by graphics hardware technology from Silicon Graphics, characters can be displayed orders of magnitude faster than on other systems. OpenGL can be used to create flying 3D text with different textures and lighting that cannot be achieved using traditional methods. Leading software companies, including Alias and Xaos Tools, have developed their applications on Silicon Graphics to take advantage of the Graphics Library™ recognizing significant performance gains in imaging routines as well as the ability to provide unprecedented effects.

Indigo Magic -- Intuitive Media User Interface

Silicon Graphics systems come with a library of powerful yet simple-to-use digital media tools in an end-user environment called Indigo Magic. The Indigo Magic user environment has a consistent iconic interface that lets users organize their desktop environment, set up printers and connect to a network - all with icons. The digital media tools enable users to capture, create and communicate ideas through presentations. A published style guide enables developers to take full advantage of the unique capabilities of the Indigo Magic technology.

EISA bus

The EISA bus, a network standard bus prevalent in many personal computers, is supported on Indigo2™ workstations and Challenge™ M Server. Combining EISA support with the power of RISC-based technology enables many popular devices such as scanners and printers can now easily be used in the powerful Silicon Studio environment.

Powerful, Scalable Hardware

The power of the Silicon Studio environment is delivered by Silicon Graphics' broad line of binary-compatible, 64-bit MIPS RISC-based workstations and servers. Ideally suited for the publishing solutions are the Indy desktop system, the Indigo^{2}XL graphical workstation and the Challenge uniprocessing and multiprocessing servers. When combined, these systems deliver the most powerful desktop publishing solution.

Indy, the first system to shatter the conventions of personal computing, integrates an engaging media user interface, its own digital color video camera, a full suite of digital media tools, stunning pixel-fill performance and the world's fastest 2D graphics -- all in a package priced competitively with high-end PCs and Macintosh systems. Silicon Graphics has built digital video-input capability into the Indy system, bundling each of the new desktop computers with its own IndyCam™ color digital video camera. It is the entry point into Silicon Graphics' broad product line.

With the introduction of the Indigo^2, Silicon Graphics introduced the world's fastest desktop product line. The Indigo^2 product line comes standard with 24-bit color, 32MB of memory and 1280 x 1024 screen resolution. It has the largest instruction and data caches which assures top "real world" performance. The Indigo^2 provides expandability in memory, disk and graphics that can accommodate creative individuals who want to work in both print and film applications.

Silicon Graphics has been a leader in the symmetric multiprocessing (SMP) marketplace for five years. Challenge servers are Silicon Graphics' next generation products designed to be the ultimate database system. Challenge offers a balanced, general purpose architecture, with unrivaled throughput, providing outstanding solutions for commercial processing requirements. This throughput can easily be applied to publishing applications that require batch processing, massive storage or high-speed output.

New Collaborative Prepress Production Environment with IndyCam and InPerson

The Silicon Studio publishing environment delivers a powerful collaborative platform for both creative and production environments. With the Indigo Magic user environment -- the world's first media user interface -- publishing professionals can share their work using color images, audio, video, graphics and text to communicate their ideas more effectively than ever before. The Indigo Magic environment also features media mail capabilities, allowing users to "mail" to their colleagues not only standard text messages, but also large images, audio messages and even video clips. And, with the InPerson™ desktop conferencing software option, publishing professionals now are able to communicate simultaneously in real-time with clients, co-workers, editors and design teams in multiple locations. Combined with Indy's IndyCam digital video camera, it gives agencies, service bureaus and creative studios an opportunity to go beyond their traditional geographic territories and telecommunicate with clients all over the world with high-speed fiber hook ups.

Integration into existing environments

Silicon Graphics' systems can be integrated as Appleshare™ clients or servers within a Macintosh network, allowing users to transparently share files across the network. Ethernet is standard on all Silicon Graphics systems. Silicon Graphics' Indy systems also read from and write to standard-format Mac and PC floppy disks. In addition, Silicon Graphics systems support Macintosh software packages running under Quorum Equal™ and PC-based solutions under SoftPC™ 3.1.

Creative expression has no boundaries with Silicon Studio

The Silicon Studio publishing environment represents an extension of Silicon Graphics Silicon Studio for film and video production solution, a revolutionary approach to high-performance digital film and video production and post-production techniques. Launched at the National Association of Broadcasters' annual convention last April, Silicon Studio has grown to typify the broadcast industry's move from proprietary, analog, dedicated platforms powerful, digital open systems capable of supporting all phases of the production and post-production process.

Silicon Studio solutions from Silicon Graphics let creative professionals express themselves using a variety of media - without proprietary hardware, without running out of processing power - all with one integrated, open solution. Creative professionals can capture, create and communicate like never before.