Silicon Graphics Prism™ Family of Visualization Systems
At-A-Glance

The Announcement

Innovation Without Limits

On Monday, October 11, 2004, SGI announced the world's first Linux® OS-based interactive visualization system with the introduction of the Silicon Graphics Prism family of visualization systems. It is designed to solve a spectrum of visualization problems facing researchers, scientists, and engineers.

Silicon Graphics Prism delivers unbeatable visualization and a new level of Linux performance and innovation by combining the best of both worlds—the power of the SGI® scalable, shared-memory visualization architecture and the world-leading Linux scalability found in SGI® Altix® high-performance server products. Based on best-of-breed industry-standard components, with Intel® Itanium® 2 processors and ATI® graphics processors, the system is both powerful and economical.

The Silicon Graphics Prism family stands apart in the visualization world, designed for breaking through barriers imposed by other computer system architectures and fundamentally reshaping the boundaries of what is possible. Whether you're discovering the next new drug, designing and building the next new car, or maximizing the recovery of oil in an existing field, Silicon Graphics Prism provides the infrastructure to solve the toughest problems with systems starting at less than US$30,000.

Silicon Graphics Prism System is:

World's Leading Interactive Linux Visualization System

Designed for Breaking Through Barriers

For leaders, innovators, and visionaries to push limits and solve previously unsolved problems

- Unlock the secrets of the planet by intuitively grasping the complex interplay of oceans, sunlight, and atmospheric effects
- Diagnose life-threatening medical conditions in unprecedented detail
- Achieve six-sigma quality by enabling domain experts to work collaboratively, not sequentially
- Extract currently unrecoverable petroleum assets through better understanding and management of existing fields

Interactivity for Rapid Insight and Discovery

- Gain increased insight by easily working with all your data, all the time, even with terabytes of data
- Discover hidden details by driving 100Mpixel displays
- Eliminate time-consuming data simplification by interactively visualizing billion polygon models

Room to Grow for the Future

- Access to high performance features and capabilities, starting at less than US$30,000
- Seamlessly and independently scale compute, memory, graphics and I/O
- Easily upgrade and integrate the ever-evolving best of breed components
- Start small and expand to meet the needs of your entire team

In addition to this world-leading visualization family, SGI delivers a complete visualization ecosystem, including Visual Area Networking and Reality Center® facilities, as well as a host of OpenGL® software development tools. The comprehensive development environment contains open source tools, OpenGL Multipipe™, and cross-platform application programming interfaces (APIs) like OpenGL Performer ™ and OpenGL Volumizer™. These tools make exploiting the power of true scalable visualization straightforward and painless.

Customer Needs

Interactive visualization is vital for achieving breakthrough results. Yet it has become increasingly difficult as systems are not keeping up with the exponential growth in the size and complexity of datasets. Today, data sizes of a terabyte or more are commonplace, and the choice of architecture is critical to avoid system bottlenecks and reduce tradeoffs in performance or image quality that users often make in order to obtain interactivity.

The System

With Silicon Graphics Prism, limits are meant to be broken. Leveraging the power of true scalability, Silicon Graphic Prism provides the ability to easily scale resources within a system to meet your interactive visualization needs. Scaling up to 16 graphics pipelines and 512 processors, the Silicon Graphics Prism family offers many times the visualization capability of any other computing system available. Its global shared memory architecture provides direct access to all the data, and its world-leading I/O capabilities enable entire workflows to be accelerated by eliminating time wasted on waiting for data to be loaded, saved, or distributed.

Silicon Graphics Prism also provides a new platform for advanced visualization with the unique Visual Area Networking (VAN) technology. Fostering new levels of collaborative research and development, VAN allows visualization to be transparently accessed and shared. The combination of Silicon Graphics Prism and VAN makes increased productivity, accelerated insight, and greater data security a globally available competitive advantage.

System Features and Benefits

Silicon Graphics Prism delivers superior leadership, insight, decisions, and results.

Feature	Benefit
World-leading Architecture with NUMAflex™	
• Modular and scalable	Seamlessly and independently scale system resources (CPU, I/O, memory, storage, graphics) to meet your specific visualization needs
• Global shared memory	Eliminate time-consuming data preparation by interactively visualizing terabyte datasets using a single, system-wide, shared memory
• High bandwidth, low latency	Increase application performance by accessing all your data over multiple 6.4GB/second interconnects
• Intel Itanium 2 processors, ATI® FireGL™ graphics, Linux and other open source tools	Leverage innovation with industry and open standard components
• Scalable Graphics Compositor with dynamic load balancing	Increase performance and image quality by combining the power of multiple GPUs
Complete SGI® Visualization Ecosystem	
• Visual Area Networking	Transparently access and share data and resources from cross-platform clients for effective collaboration
• Reality Center facilities	Accelerate team insight with the ultimate in immersive environments
• QuickTransit™ dynamic translator	Run existing IRIX® applications
• Comprehensive development environment	Exploit the power of true scalable visualization with a host of OpenGL based visualization tools and APIs, including OpenGL Performer, OpenGL Multipipe and OpenGL Volumizer

Key Specifications

Targeted at all visualization users, Silicon Graphics Prism offers a family of systems to empower individuals, transform team productivity, and scale to tackle the most extreme visualization needs.

Power	Team	Extreme
$30K - $150K US	$75K - $250K US	$200K + US
2-4 ATI FireGL GPUs 2-8 Intel Itanium 2 CPUs 4U - 8U	4-8 ATI FireGL GPUs 8-16 Intel Itanium 2 CPUs 8U - 20U	4-16 ATI FireGL GPUs 16-512 Intel Itanium 2 CPUs 23U+
Delivers Productivity	Delivers Breakthroughs	Delivers Ultimate Advantage