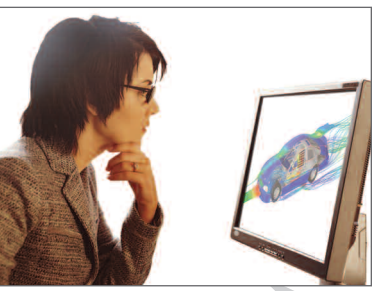
OpenGL Vizserver™ 3.5

High-Performance Large Data Set Visualization and Multi-site Collaboration over Standard Local and Wide Area Networks

Features and Benefits

- Remote data access: eliminates need to replicate data
- Application transparent: runs existing OpenGL® API-based applications without modification or shares the entire system screen via desktop sharing mode
- Shared application control: turns existing stand-alone applications into collaborative applications
- Client independent: gives existing PCs, workstations, and even wireless handheld devices the power of Silicon Graphics scalable visualization systems
- Network independent: uses any standard TCP/IP network including wireless 802.11
- High performance: delivers up to 60Hz remote visualization with full hardware graphics acceleration
- Dynamic resource allocation: turns Silicon Graphics scalable visualization systems into multi-user systems that support entire organizations
- Advanced features: Supports unlimited remote collaboration sites per session, stereo visualization, and SGI Reality Center environments



Universal Access to Large Data Sets and Advanced Visualization

With OpenGL Vizserver 3.5, the performance of the industry's most powerful visualization, computing, and data management systems is available to any user in an organization. Every individual has access to the full capabilities of Silicon Graphics® scalable visualization systems, which offer up to 200 times the compute, memory, and I/O performance of traditional high-end desktop systems. Users can leverage advanced rendering techniques that are impossible with traditional desktops. Whether you do mechanical analysis, petroleum exploration, or medical research, this new level of performance and functionality allows desktop users and geographically dispersed teams to turn batch analysis tasks into interactive ones and to function as a single, interactive group able to solve larger, more complex problems.

Collaborate Anytime, Anywhere

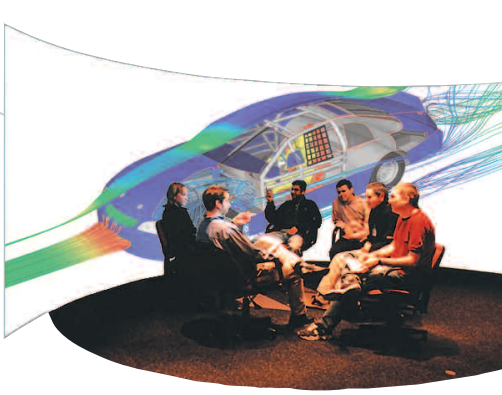
OpenGL Vizserver™ enables remote desktop, PC, or mobile users to collaborate with colleagues using powerful Silicon Graphics® scalable visualization systems and visual workstations. The interactive visual application runs unmodified with its data on visual servers and is visible to any number of independent users. Control of the application is shared among the collaborative team. OpenGL Vizserver makes existing applications remotely accessible and instantly collaborative without requiring remote data replication. Imagine being able to share the latest oil well planning information from headquarters with drilling engineers on a platform in the North Atlantic and allowing them to interactively incorporate their feedback.

Zero Software Modification

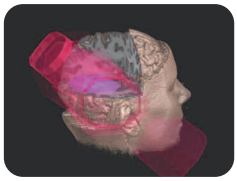
OpenGL Vizserver does not require any system applications, while in desktop sharing mode, or OpenGL® API-based applications, while in application sharing mode, to be modified for remote access or collaborative use. Interactive results generated by applications running on the Silicon Graphics scalable visualization system or visual workstation are delivered to existing clients running just the OpenGL Vizserver client software. Multipipe applications running in SGI® Reality Center® environments can be shared with other Reality Center environments for distributed group decision making, while the support of remote stereo visualization allows both remote individuals and distributed teams to immersively explore their data. This means that all of your visualization applications are now available to all of your users, independent of their locations and platforms.

Leverage Existing Desktops, Reduce Costs, Increase Productivity

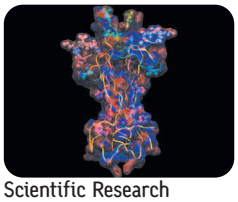
OpenGL Vizserver provides remote access and collaboration with desktops running Linux®, Windows®, and Mac OS® X operating systems. Even wireless handheld devices can access the



OpenGL Vizserver™ 3.5

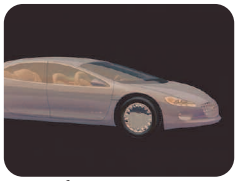


Medicine



Scientific Research

Government and Homeland Security



Manufacturing

integrated visualization, computing and I/O capabilities of SGI® visual servers and participate in networked collaboration sessions. OpenGL Vizserver increases organizational input to critical decisions and enables IT organizations to streamline desktop environments, saving up to 40% on hardware, software, storage, and system management. Centralized visual servers become powerful platforms for graphics, compute, and data-intensive applications that need to be upgraded only when aggregate organizational requirements demand it.

Maximum Performance on Existing Networks

OpenGL Vizserver delivers fully interactive application performance over existing LANs and WANs. It is layered on top of standard TCP/IP protocols and supports packet-filtering firewalls that make powerful applications securely available across corporate intranets or the Internet. OpenGL Vizserver supports powerful interframe compressors that can significantly increase performance, resolution, and image quality for remote users, particularly over slower networks. Remote collaborators now experience the full power of application-transparent collaboration from their desktops or mobile computing environments.

Efficient Resource Scaling

As the needs of an organization change, its computer systems must keep up. Silicon Graphics scalable visualization systems are based on the SGI® NUMAflex™ modular computing architecture and offer efficient scaling of system resources. If you need to load data faster, hold larger problems in memory, solve problems more quickly, or support more simultaneous users, simply add the required resources to a single shared visual server and they are available to everyone. These systems are more than just graphics workstations; they are high performance shared-memory systems that can also be used as scalable compute servers, increasing your organization's return on investment.

Increasing the Impact of SGI Reality Center Environments

SGI Reality Center environments deliver the ultimate group collaboration experience. They use large-scale displays, advanced applications, and the powerful visualization capabilities of Silicon Graphics scalable visualization systems to let organizations make higher-quality decisions in less time and at lower costs. OpenGL Vizserver can be used to link multiple SGI Reality Center environments for distributed decision making and to integrate remote expert input and management review. OpenGL Vizserver significantly increases the value of Reality Center environments by enabling their use by remote individuals and groups.

Powerful, Practical, and Effective Collaborative Solutions

OpenGL Vizserver provides the power to maximize productivity, decision making, and ROI. It fits seamlessly into existing desktop and networking environments and delivers the unrivaled visualization power of Silicon Graphics scalable visualization systems and visual workstations anywhere and everywhere it is needed. OpenGL Vizserver provides a rational, cost-effective way to collaboratively visualize large amounts of data and solve problems that have previously been out of reach.

SGI OpenGL Vizserver 3.5 Technical Specifications

Server

OpenGL Vizserver 3.5 provides hardware-accelerated visualization using the graphics present on the visual server. Silicon Graphics® Prism™ family of visualization systems are supported as multisession and multipipe servers. To accelerate readback performance and overall frame rates to as high as 60Hz, multiple Scalable Graphics Capture (SGC) card can be utilized. Silicon Graphics® Prism Deskside systems can be used as single or dual-user collaboration servers.

Network

OpenGL Vizserver 3.5 runs on general-purpose TCP/IP networks, including 1000/100/10Base-TX, ATM, T1, 802.11a/b/g, and supports packet-filtering firewalls.

Client

OpenGL Vizserver clients are freely downloadable from www.sgi.com. Supported platforms are Silicon Graphics Prism Deskside systems running SGI ProPack 3 Service Pack 6 or higher, workstations based on Intel® Pentium® III processors or higher running Red Hat® Linux® 8.0, systems running Microsoft® Windows® 2000, Windows® XP or Windows® XP Tablet PC Edition operating system, or systems running Apple Mac OS 10.3.5 or higher.

Technical features

OpenGL Vizserver 3.5 offers a compression API with a variety of built-in, frame-by-frame compression algorithms (4:1, 8:1, 16:1, 32:1) that also apply interframe compression techniques, interframe lossless compression and JPEG and ZLIB compression options. It supports frame spoiling, dynamic pipe allocation, a reservation API, firewall/security features including PAM authentication and a customizable authentication API. Multipipe session support includes support for dual-head workstations, multi-pipe SGI Reality Center environments, software composition and output pipe selection. SGI clients support remote stereo display.

Collaboration features

Each visualization pipeline on a server can support one session with any number of collaborators (including one optional local user).Control of the application is shared among the users. All users except the master can join, leave, or rejoin the collaboration session at any time. Configurations with multiple sessions and/or multiple collaborators per session should consult configuration guidelines available at *www.sgi.com/software/vizserver/tech_info.html*.

Services

OpenGL Vizserver solutions can be specifically configured and installed by SGI Technology Services to maximize their use and ROI.

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