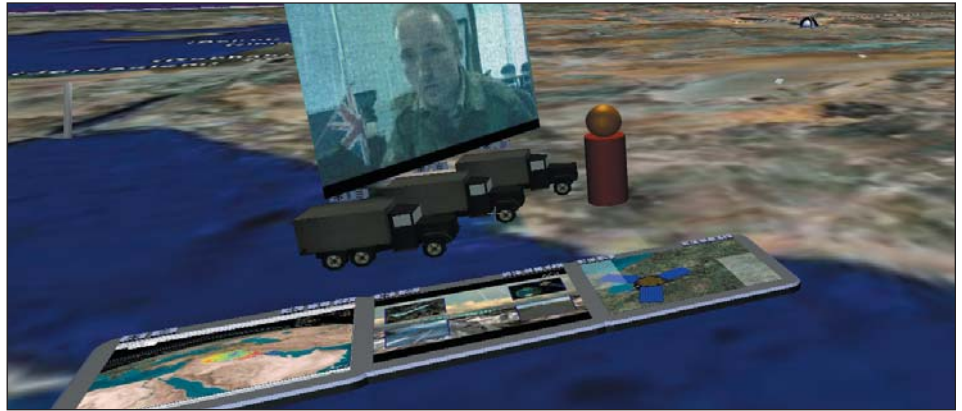# SGI® Decision Support Center Solutions

Mouse and keyboard access to multiple live computer desktops is preserved within the virtual landscape where remote displays are fused at the pixel level with images, video, and 3D models.

SGI® Decision Support Center Solutions in Government and Defense
Rapid Decision Making Tools for Mission Critical Analyses

Tackling Today's Toughest Problems

Numerous government missions require cooperation and collaboration between agencies and governments. The war on terrorism, global trade policies, and environmental impact studies are just a few examples. SGI® Professional Services teams design decision support centers that provide a unique environment to accomplish mission-critical objectives:

- **Command and Control, Communications, Computing, Intelligence, Surveillance & Reconnaissance (C4ISR)** – The SGI pixel fusion server, the foundational technology for SGI decision support center solutions, can be tailored for monitoring, surveillance, event detection, and rapid-response scenarios. With seamless access to distributed complex data, teams gain real-time situational awareness, quicker information flow, and rapid decision-making capabilities

- **Intelligence Analysis** – High-speed computing and interactive visualization capabilities are combined in an SGI decision support center to enable grand-scale problem analysis

The Right Information at the Right Time

SGI has a long history of providing industry-leading technology and solutions for major national and international programs spanning defense, homeland security, and other government arenas. SGI decision support center solutions deliver rapid decision making tools for mission critical analyses. These solutions help get the right information to the right people at the right time.

Flexible middleware within the SGI pixel fusion server lets teams of experts gain control over large, multidimensional fields of data. By exploiting the pixel—the base element for any visualization—the SGI pixel fusion server overcomes the challenge of too much data. Every part of the data flow is automatically managed within an SGI decision support center environment: data input, data fusion within an interactive workspace, and data output streams. Decision makers can focus on the mission objectives instead of the complexities of the data flow.

Real-Time Input of Large, Complex Data Sets from Multiple Sources
The SGI decision support center simplifies the task of bringing in large amounts of heterogeneous data from different applications, devices, and computer systems. Team members have access to diverse data streams from:
- PCs or Linux systems (over DVI), with multiple-channels of input from each computer
- Video/image files from local or shared storage (MPEG1, MPEG2, AVI, DVD, JPEG, JPEG2000, TIFF, etc.) with resolutions of up to 1920 x 1080 per stream
- Multiple computer displays on the network

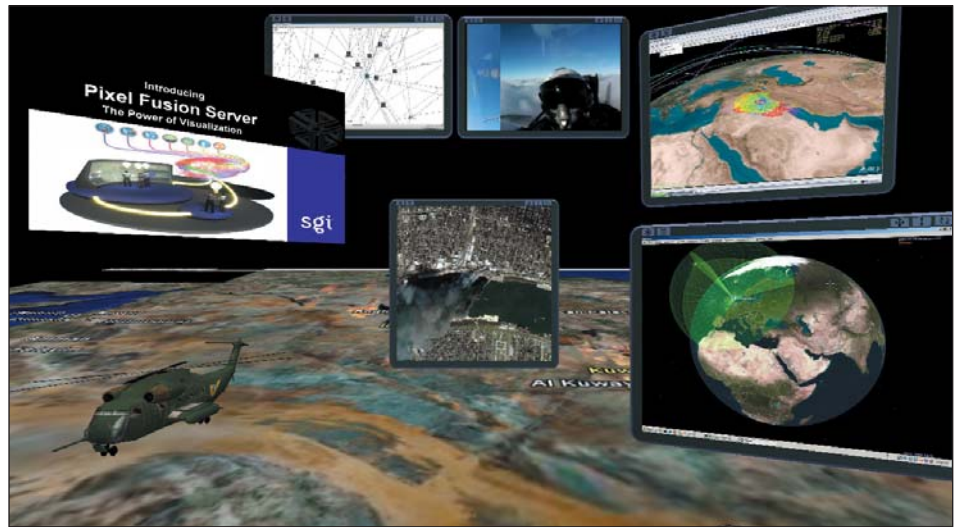# SGI® Decision Support Center Solutions in Government and Defense

Fusing Multiple Streams to Create an Interactive Workspace

SGI's pixel fusion server technology allows decision makers to navigate, instantly reconfigure, and directly interact with multiple live applications within one information landscape. SGI pixel fusion server technology is incorporated into decision support center solutions designed by SGI Professional Services to enable each pixel stream to be displayed within a common three-dimensional landscape of information. Data from multiple and diverse sources can now be easily and intuitively organized, compared, and correlated.

SGI decision support center solutions provide mission control with integrated, real-time situational awareness and the interoperability required for quicker information flow and decision-making capabilities. Clockwise from lower left: helicopter .obj model, Microsoft® PowerPoint® presentation and I2 Chartreader™ showing I2 Analyst's Notebook™ charts via network feeds, F/A-18 cockpit camera movie playback from disk, AGI Satellite Toolkit running on both Windows® XP and Windows 2000 platforms, a high-resolution aerial photo (center), fused against a horizontal map of Iraq captured live via DVI output from a Windows® XP PC running Google Earth™.

Advanced Display Technologies

Teams can choose from a variety of third-party sourced display technologies that address their unique workflow require-ments, including a variety of desktop displays, low-cost video conferencing solutions, or advanced large-screen displays and projection solutions for mission control centers. The exceptional dynamic range, contrast, and image quality offered by today's display products, such as the Sony SXRD™ projectors using Silicon Crystal Reflective Display technology, makes them perfect comple-ments to the large-venue capabilities of the SGI decision support center solutions. The Sony SXRD imaging devices deliver:
• Ultra-high resolution images—4096 x 2160 pixels—for 4 times HDTV resolution

• 4K quality, specified by the Digital Cinema Initiative (DCI)
• High contrast ratio (1800:1), and high brightness (10,000 ANSI lumens)
• Deeper blacks, minimized artifacts, and other advancements for film-like quality
• Ultra-short response time (less than 5 milliseconds) for reduced motion blur

Bringing the Mission into Focus

The collaborative SGI decision support center environment integrates multi-disciplinary inputs into a single cohesive framework. Project teams can interact using a common "visual language," quickly iron out points of contention, and rapidly plan an optimal course of action. Teams operating within a decision support center equipped with SGI pixel fusion server technology can focus on the tasks at hand instead of the complexities of data flow. The information-rich environ-ment fosters rapid decision making for real-time mission-critical tasks.