

Solutions Brief

SGI® Visualization Solutions

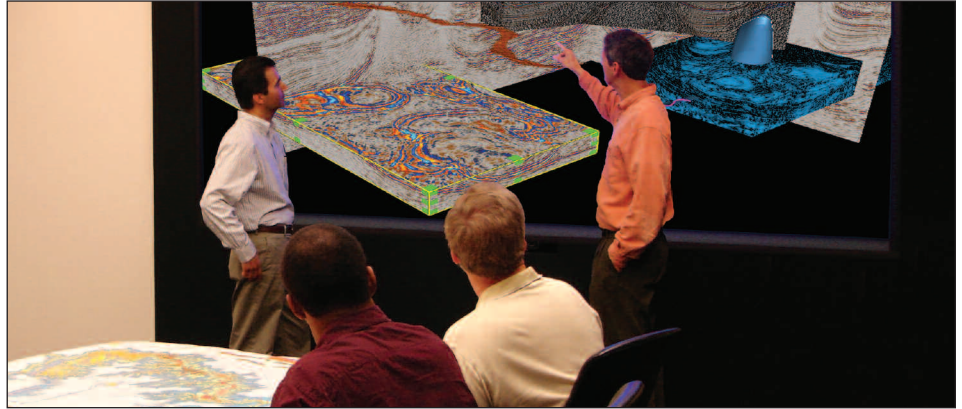


Image courtesy of Landmark Graphics Corporation

Energy Visualization In the Team Room

Make Day-to-Day Decisions Better and Faster with Silicon Graphics Prism™

Better Collaboration, Increased Profitability

Like to boost recovery rates from 30% to 60%? Need to create infield drilling plans for aging fields or come up with acquisition bids—fast or on the fly? Today, the huge volumes of seismic information for doing this and boosting the bottom line are available. The dilemma is that when experts in diverse disciplines need to work together to make purchase and drilling decisions in tight timeframes, they can't easily visualize all that data. That's because the teams are broadly distributed, and corporate visualization facilities are often remote and/or pre-scheduled weeks or months in advance.

When the pressure's on to act faster, your experts need to make decisions with unprecedented efficiency and insight. The energy industry relies increasingly on complex scientific and engineering data for critical investment and management decisions, with seismic surveys and simu-

lation results scaling from 10GB up to terabytes. To gain the full benefit from all your data and all the expertise on your team, you need a powerful and affordable way for earth scientists, reservoir engineers, and operations experts to see and work with data in a convenient, common location. They need to display and interact with the data on a large scale for simultaneous viewing and at a sharp resolution so they can bring together their diverse insights for optimal decision-making.

Redefining What's Possible

The Silicon Graphics Prism™ visualization system enables breakthrough results in exploration and recovery by delivering a single scalable, extensible platform that seamlessly integrates the HPC power of SGI® Altix® servers with best-of-breed visualization capabilities. Equipping the team room with capabilities that were previously only available in a centralized visualization center, Silicon Graphics Prism

enables your team to use applications with the latest in multi-attribute visualization capabilities and at the same time see the results from discipline-specific codes.

Empowering every expert to ask—and quickly answer—more complex questions in a team environment yields breakthrough results as discipline-specific insights are combined and translated into shared understanding for the entire asset team. Face it: today's datasets have outgrown desktops, which typically can't cope with data exceeding 2GB or occasionally 8GB in size. By contrast, Silicon Graphics Prism allows you to interactively analyze hundreds of gigabytes of relevant data, dramatically increasing success rates when sharpshooting an entire field.

Occasionally, an asset team will need to reach out to a remote expert on specific earth sciences or drilling problems. The



combination of Silicon Graphics Prism with SGI developed Visual Area Networking (VAN) technology lets your team reach out for expertise throughout your organization—from staff at remote sites, experts worldwide, and decision makers continents away. Your team room environment becomes a window into a virtualized extended team that can further increase insight, productivity and investment (ROI).

Team's Changing Needs

What would happen today if your asset team needed to work with a regional dataset in order to make the best lease-sale decisions? Would it have to work with subsets of data, throw away existing analysis systems, or wait months to use the corporate facility?

With Silicon Graphics Prism, the team could simply upgrade its existing capability with more memory, CPUs, graphics or storage and keep working. Silicon Graphics Prism is the world's most powerful and flexible visualization system, combining the power of Intel® Itanium® 2 CPUs, ATI® graphics processors, the Linux® operating system and SGI scalable system architecture. You can start small, with an entry price of under US\$30,000, and scale up as your needs increase to 256 CPUs, 16 graphics pipes, and up to 4TB of memory.

In a team room, this means that you can look forward to interactive environments with up to eight times the resolution of today's digital cinemas, twenty to eighty times the memory of today's PCs, and world-leading supercomputing capabilities. This makes the manipulation and visualization of all of your data both practical and affordable at the team level.

Maximizing Flexibility, Maximizing ROI

With PCs, greater demand on the system means poorer performance and poorer performance means slower, less optimal decisions. With the price of oil at \$50/barrel, being able to extract an extra 10 million barrels from a field is worth \$500M. Can you afford to hamstring your decisions and limit your bottom line through the use of low-end visualization approaches that cannot support your larger business goals?

Silicon Graphics Prism is an advanced all-purpose system that delivers consistently stellar performance that is gratifyingly adaptable to your organization's dynamic requirements. Need to analyze larger tracts? Add memory. Need higher resolution? Add graphics pipes. Need more compute performance? Add CPUs. And never, ever, throw away anything.

In addition, a single Silicon Graphics Prism can perform multiple tasks. Through the power of VAN, the full capabilities of the Silicon Graphics Prism in your team room can be split among several concurrent users who are working from their desktops. In this way, a single low-end

system can be used to visualize a single 200GB dataset in a team room or concurrently work with multiple 100GB datasets on commodity desktops in the end-users' offices.

Silicon Graphics Prism increases your ROI in other ways as well. Unlike desktop systems that aren't used after workers go home, the market-leading HPC capabilities and shared memory architecture of the Silicon Graphics Prism enables it to work after hours on a range of problems that are critical to an individual asset team. Your teams can identify areas for seismic reprocessing or reservoir simulation, run them overnight on the world's fastest computing architecture, and have them completed when they return to work. This shortens decision cycles since time-consuming data transfers are not required and your jobs run faster by leveraging the computing power of Silicon Graphics Prism.

Silicon Graphics Prism improves both the scale and accuracy of your team's work flow.

The New Standard for Seismic Interpretation

When it comes to empowering asset teams with a new level of visualization power and insight, Silicon Graphics Prism has no peer in the team room—or anywhere else. Only Silicon Graphics Prism offers you an affordable, scalable, and flexible solution that significantly boosts your team's productivity when managing and visualizing multi-attribute data, understanding high-resolution surveys, and operating digital oilfields—all in real time. With Silicon Graphics Prism, your team will get more oil, faster, from fewer wells for a longer time at lower cost.



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