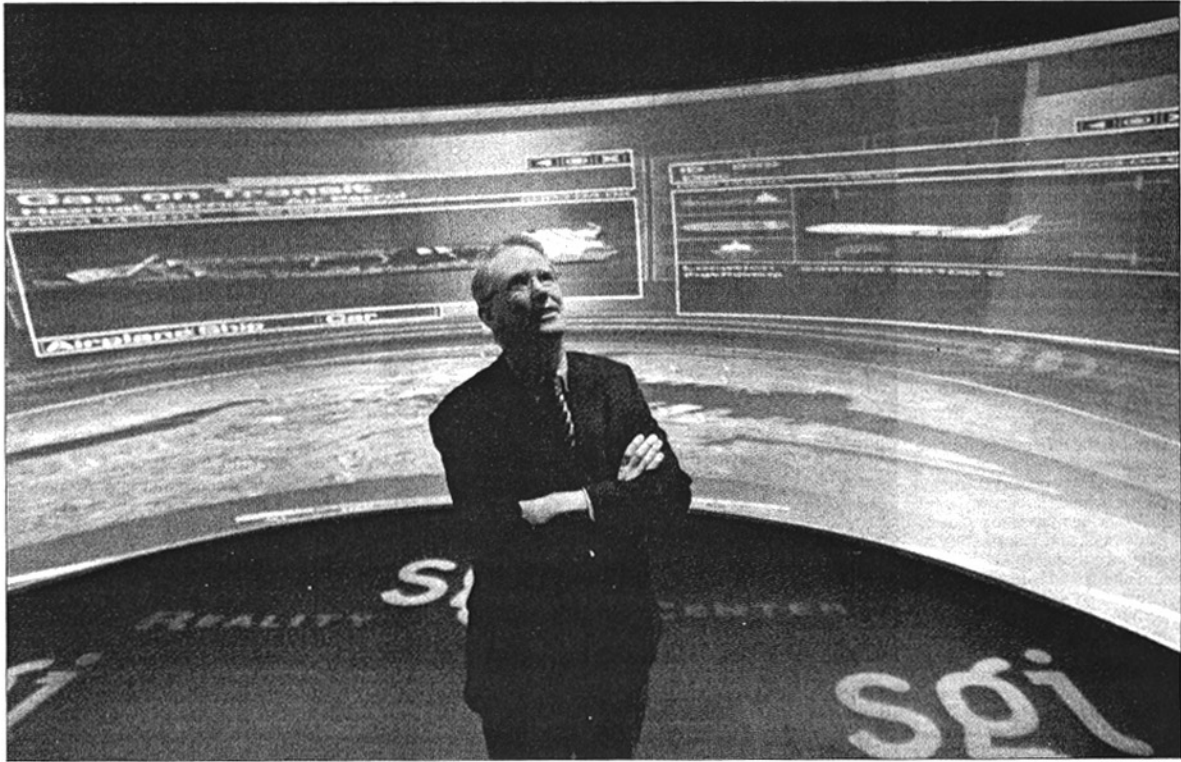


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## Ideas & innovations: military intelligence



KAREN T. BORCHERS — MERCURY NEWS

Paul McNamara, an executive at Silicon Graphics Inc. in Mountain View, stands in front of a sample screen in the company's Decision Support Center. SGI is working with the U.S. military to give battlefield commanders organized, real-time information about what's going on around them.

## Company helping coordinate information from battlefield

### MILITARY USES TECHNOLOGY FROM SGI OF MOUNTAIN VIEW

By Dan Lee  
Mercury News

Modern warfare can bring information overload.

A spy calls in the latest movements of enemy forces. A military plane intercepts a cell phone message about the planned attack. Satellites feed military computer systems with images of the battlefield for advancing troops.

In many cases, such bits of information are analyzed using separate systems in the military and don't reach those on the battlefield in a timely, organized fashion. SGI, a Mountain View company also known as Silicon Graphics that specializes in supercomputers to visualize scientific data, is working with the U.S. military on a new method for giving battle commanders organized, real-time information about what's going on around them.

The goal is to provide troops in the field with vital information, such as helping to determine whether obscured objects are the enemy, civilians or even livestock.

"Technologically we're becoming so much more advanced with all of the capabilities we're deploy-

ing on the battlefield," said Paul Temple, a senior manager for business development with SGI, who spent 20 years in the Army with duties including counter-intelligence and special operations. "With that amount of data, there's no way to keep up."

The Army began testing the SGI technology — including its Altix servers and Prism visualization system — in January at the Army's Fort Huachuca battle command lab in Arizona. A prototype system could be ready for use in actual operations in Iraq by the end of the year, according to Temple.

The research is part of the U.S. military's Brute Force Fusion, or BUFF, program to study ways to improve analysis of battlefield conditions. Using SGI's technology, BUFF can receive 170,000 intelligence reports an hour adding up to 3 terabytes — or 3 trillion bytes — of data a day. The program is using the SGI systems to study how to quickly bring that vast amount of information into one usable source of information.

"The amount of data generated by sensors on the modern battle-

### WHAT'S NEW

■ SGI of Mountain View is working with the U.S. military to test a system to depict real-time battlefield conditions on TV-like monitors that can be quickly accessed by war planners in combat zones.

■ The system uses Altix servers and Prism visualization systems from SGI.

■ The system is being tested at the command battle lab at Fort Huachuca, Ariz., and could be tested in Iraq by the end of the year. It could involve a computer aboard a Humvee to crunch massive amounts of data.

### FOR MORE INFORMATION

■ [www.sgi.com](http://www.sgi.com)

field is rapidly outpacing the ability of the human to understand," Jason Denno, deputy director of the Fort Huachuca battle command lab, said in a statement. "To truly understand what's going on, all of these things must be identified and tracked."

The technology could be used to help soldiers to decide whether to fire on a potential foe but also to

track the enemy and gain insight into opposing strategy.

One possible method is for an Army Humvee to carry the SGI computer server, which would collect information and then feed those reports to a display screen in a nearby location such as a tent in a mobile command center. The devices could communicate over temporary Internet networks, including wireless communications that use gear on a blimp to transmit data.

Military leaders would view a 3-D depiction of the battle zone using colors and symbols on a large screen. For example, a red rectangle with an "X" through it might represent a unit of enemy forces. Friendly forces could be shown in blue.

The system could also use black, white and gray to depict other objects such as civilian population areas or even livestock, Temple said.

He said SGI hopes to eventually sell the Army about 500 servers, portable and fixed, to help analyze and show information to war planners.

"The idea is to cut the time between sensor and shooter," said Temple.

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