



Training objectives for exercise Freedom Resolve I included protecting Iraq's coalition forces and assets. High-fidelity MetaVR graphics and 3D models were used in the simulation.

created aggregate data that could be analyzed to determine trends. Procedures were refined as this capability was imbedded into the exercise architecture.

Initially, it was unclear to the training audience what the CSOC's reporting requirements, information flow and assistance methods were. Coordination improved as the exercises went on. Prior coordination and input into the planning process is necessary to establish guidelines and eliminate confusion.

GROUNDBREAKING

Numerous lessons learned and information gathered will increase effectiveness of CSOC operations. The development of a digital-integration facility at the Grafenwoehr Training Area in Germany will enable continuous development and testing of simulations, interfaces, networks and C4ISR systems, to truly verify the C4ISR accuracy. Improvements are being developed to expand the capabilities of monitoring tools. This increased capability will include joint simulations, interfaces and C4ISR systems.

The CSOC must be incorporated into a larger information-gathering process to show the relevancy of information and data, and determine metrics for C4ISR use and simulations' participation. These metrics will have greater applicability throughout both the USAREUR training community, and also the simulations/communications community.

The ability to digitally monitor the network was a groundbreaking achievement. The partnership between simulation, communication, training audience and C4ISR experts was critical to the success of the training event. The result of creating the CSOC was a continuous real-time evaluation of the integrated simulation-C4ISR exercise design. Centralizing the tools allowed rapid dissemination of simulation information to exercise key leaders. This resolved simulation-C4ISR problems and minimized lost training time.

At the intersection of decision-making and technology, the organization, processes and systems used during Danger Focus II and Freedom Resolve I are being developed to benefit training in USAREUR, the Army and across the joint community. ■

Lt. Col. Mark Alan Eastman is deputy director of simulations, U.S. Army Europe, and director of simulations, forward, at the 7th Army Training Command in Grafenwoehr, Germany.

Capt. Michael A. Busby is assistant operations officer with the directorate of simulations, forward, U.S. Army Europe in Grafenwoehr, Germany.



META VR

as well as sending a "ping" to any IP address to check for port connectivity.

What's Up Gold is a commercial Windows-based software application used for network monitoring. This tool monitors network availability and provides real-time notification of any specific failure.

A command-and-control personal computer monitored the common operational picture. Participating units consolidated information and observation into the common picture.

EXPERT SUPPORT

Tools used to communicate among the various CSOC personnel were essential to meeting Gen. Bell's call for "rapid fault isolation" and "the means to communicate with our simulations-contact teams." The dispersed nature of contact teams demanded secure

mobile communications during the exercise. Motorola XTS-5000 hand-held radios filled this role. They provided the long-range communications capability the CSOC needed to immediately contact and direct requested subject-matter experts to the problem source.

The reporting portion of the CSOC organized and collated the monitoring and communications data into a useful format for distribution and after-action review.

The "robust fix-it capability" and simulations-contact teams were contracted C4ISR subject-matter experts and simulations/network personnel. They provided technical evaluation, analysis and solutions for the exercise architecture.

The ability of the CSOC to recognize malfunctioning systems focused the training audience on maintaining their systems, thus minimizing downtime. This capability also