## Virtual, gaming systems enhance training

The Army is looking at incorporating more virtual and gaming systems into training programs, but those systems won't replace live training and act more as an enhancement so soldiers can better replicate tasks when they reach a live training environment or a real-life battlefield.

"Virtual training doesn't replace live training," said Col. Henry M. St-Pierre, director of the Army Training and Doctrine Command capability manager and virtual training environment. "But it provides a tremendous capability where soldiers can practice tasks and enter the live environment."

St-Pierre was a member of a Feb. 27 panel at the Association of the United States Army's Winter Meeting and Exposition discussing the Army's progress in live, virtual and constructive simulation. The newest version of Army Field Manual 7-0 has a section outlining how commanders can use a mix of live, virtual, and constructive training on tasks under their mission essential task lists.

Battalion commanders down to squad leaders may not have equipment or enough soldiers available to perform some training missions, but they wouldn't have those limitations in a virtual environment, St-Pierre said. Virtual missions also allow leaders to save money on fuel and ammunition, not to mention saving wear and tear on equipment. Safety is also enhanced as soldiers can replicate dangerous missions in a safe environment.

Speaking at the Fort Lauderdale, Fla., event, "The more you complete a dangerous task, the better you are at it," St-Pierre said.

In Korea, a combination of virtual and constructive training is helping the 2nd Infantry Division in live training missions. Brig. Gen. Walter M. Golden, the 2nd ID's assistant division commander (maneuver), said the encroachment on training areas allows the use of virtual and constructive environments to expand training areas, and units rotate between live, virtual and constructive combined arms training.

Panel moderator Col. Gary B. Brown, director of the combat training center directorate at the U.S. Army Combined Arms Center (CAC), outlined the four terms that define training environments:

- Live: Simulations involving real people operating real systems
- Virtual: Simulations involving real people operating simulated systems
- Constructive: Models and simulations involving simulated people operating simulated systems
- Gaming: Military uses of computer gaming technology

The latter is a technology that really hasn't found a firm hold in Army training, but by 2016, 10 different locations are projected to have live, virtual, constructive and gaming training capability, according to Don D. Toliver, director of operations of CAC's National Simulation Center.

Acquiring an enterprising license for a common gaming technology across the Army would further expand the possibilities of training missions, Toliver said. If linked throughout the continental United States, the common technology would allow non-associated brigades to be networked together for a training mission.

While programming those "grinding force-on force scenarios is easy," Toliver said the challenge is using gaming technology in non-kinetic scenarios so soldiers use logic to handle scenarios. For example, a commander dealing with a virtual civilian in day-to-day interaction could face an issue from not doing the "right" thing.

Gaming technology would allow individual soldiers to tailor scenarios themselves and not rely on technical experts to make changes, Toliver said. Soldiers could also run through mission rehearsals right before going on those missions.

“These are serious games,” Toliver said.

One gaming model already helped soldiers with traffic control points in Iraq, Toliver said. Soldiers initially didn’t know how to set up the control points and “people were getting hurt.” Using gaming technology, soldiers were shown how it was done.

Right now, gaming technology is limited by the ability of software and computers, St-Pierre said. Progress needs to be made in programming the artificial intelligence so the virtual people can react better to the input from real-life people.