

## **1. What is the difference between live, virtual, and constructive training?**

Live training is real people operating in a real environment; think of a platoon maneuvering on a range at home station, using the Multiple Integrated Laser System or MILES. Virtual training is real people operating in a simulated environment; think Engagement Skills Trainer or the Close Combat Tactical Trainer. Although the view looks real, it's really computer pixels that look a lot like a gaming scene. Constructive training is simulated people and equipment operating in a simulated environment. Constructive training operators look like they are operating a personal computer and mouse, but the scene on the screen looks like the contours on a map and the units and people are represented by icons. The operator controls their movements using the mouse.

## **2. Why use constructive simulation enablers?**

It's difficult to create the proper conditions for training commanders and their staffs in the collective execution of Mission Command processes at the battalion level and above. There is simply not enough training space, let alone sufficient live opposing force role-players and live non-combatant role-players. More importantly, live training alone cannot replicate the complex nature of the operational environment.

Simulations offer a solution by setting the conditions for effective training and allowing units and leaders to train to standard. Constructive simulations train command and staff teams in the collective execution of Mission Command (MC) using their organic and assigned digital MC systems. These simulations replicate the conditions found in Unified Land Operations (see ADP or ADRP 3-0).

They provide commanders with the forces, organizations and groups to train and educate their staffs how to effectively control Unified Land Operations and coordinate Decisive Action (simultaneous offensive, defensive, and stability operations or defense support to civil authorities). Constructive simulations introduce additional realistic conditions for the Operational Environment not available at units' home stations.

## **3. How do constructive simulations enable collective training?**

Constructive simulations enable unit staffs to "Train As We Fight" (see FM or ADP/ADRP 7-0). The simulations model the elements of the operational

environment such as blue force, opposing forces, police, civil authorities, tribal groups and terrain features. These elements and many others can be created to provide the desired training conditions.

The simulations require sufficient personnel to control the simulations and to role-play the joint, interagency, intergovernmental, and multinational personnel with whom the commander and staff interact. Units interact with the simulated operational environment using their Mission Command systems, simulated visualization media for imagery-based systems (UAVs are one example), live role-players, potentially even simple written or verbal messages delivered by exercise controller personnel.

The flow of information in the simulated operational environment drives the command and staff team's execution of the Military Decision-Making Process.

**4. As a commander what should I expect to provide as part of the planning phase for a constructive simulation driven exercise?**

The commander should provide his draft training objectives as early as possible to the exercise planner. Timely identification of the draft training objectives will provide valuable information to the planners to ensure that they use the right scenario and create the right events meet training objectives. The commander can refine training objectives, but thinking these through early will help to ensure a successful training event.

**5. How will the constructive enablers in the Integrated Training Environment help commanders and their staffs?**

Constructive training creates the opportunity to train with larger units without the expense and risk of putting additional Soldiers and equipment in the field. For example, an armored battalion can be created in the constructive world. In constructive training, the commander cannot tell if the inputs into the Mission Command systems are coming from live Soldiers or if they are being generated in a computer that looks like a personal computer.

**6. How does constructive training in the Integrated Training Environment (ITE) help the Army develop leaders?**

Constructive training creates the robust conditions to train for decisive action in unified land operations against a hybrid threat across the conflict continuum. Working with Live and Virtual training, constructive simulations enable leaders to train with more "units" (in the form of icons on simulated terrain) in a larger area of operations. The constructive simulations, because

of the amount of complexity they can inject into scenarios, and because of their ability to capture AAR information, are a source of superb training, education, and experiential feedback to leaders. Constructive simulations allow leaders to make on-the-fly changes to scenarios, depending on leader reactions to events and conditions. They also allow instantaneous restarts to allow a leader to conduct an AAR and then re-execute an event as many times as necessary, under differing conditions, but without using live troops as training aids. Constructive simulations replicate force structures and situations that cannot be safely, realistically or economically represented in solely live and virtual training. Constructive training produces challenges and stresses that sometimes exceed those in the real world.