



# E-CTC

Exportable Combat Training Center



### Summary

- Plans and executes a realistic full spectrum environment
- Supports Space Technology Integration Laboratory for researching, developing, and validating space capabilities
- Combines existing technologies into advanced capability
- Enables USASMD/ARSTRAT research and development
- Facilitates live-action training exercises at installations across the Department of Defense

**Enables mission planners to build and implement joint, complex, live-action scenarios that combine space assets, human terrain, and physical terrain to create a realistic battle space.**

The Exportable Combat Training Center (E-CTC) program conducts research, development, and demonstration of technologies to deliver a modular and customizable full spectrum combat planning, training analysis, and situational awareness capability by leveraging current research and innovative use of existing technologies. E-CTC supports military decision support concepts for application in supporting the Warfighter to prepare for complex operating environments involving networked, adaptive, and hybrid threats. E-CTC integrates multi-spectrum capabilities of space with Exercise Control (EXCON) to build the geo-spatial setting, human terrain, multidimensional combat situations, synchronization of observations, and synthesizing detailed unit assessment to provide a rigorous, realistic, and relevant pre-deployment unit and leadership training.

### Overview

The Exportable Combat Training Center (E-CTC) program provides an exportable, high-fidelity environment for managing comprehensive, realistic live-action combat training by combining doctrine, relevant tactics, techniques, and procedures, space capabilities, and after-action assessments to deliver holistic full spectrum operations (FSO).

- Automates tasks for building and controlling full-spectrum scenarios at multiple echelons-from platoon lane training to brigade-level, free-play exercises – by organizing and integrating vast amounts of data seamlessly into a realistic, high-fidelity combat scenario
- Integrates space assets into an operational environment enabling troops to learn how to exploit sensor data to obtain Blue Force (BLUFOR) of space assets in combat situations
- Offers an interactive map from 1:250000 scale to high-resolution multi-spectral satellite views that can be populated with military standard symbols
- Currently deployed in support of live-action operations at U.S. Army and U.S. Marine Combat Training Centers, U.S. Marine home station locations

### Technical Concept

**Event Management (EM):** Modeling and visualization technologies to represent real-world combat events and scenarios along with associated geo-spatial and temporal information organized per military doctrines and TTPs (Tactics, Techniques and Procedures) using ontological models for future use

**Human Terrain Management (HTM):** Modeling and visualization technologies of high-fidelity sociological aspects of modern and future combat conditions such as: networks of relationships between people, demographic-level information on attitudes, local customs, patterns of movement, and other information that affects and motivates human behavior, by leveraging existing sociological research, social network analysis, and geo-spatial visualization technologies

**Geospatial Planning (GP):** Near real-time, multi-platform (space, high altitude, mid altitude, and low altitude) and multi-echelon (strategic, operational, and tactical) data access and visualization of a wide range of imagery formats, at a fidelity level appropriate for full-spectrum operations. Integration with USASMDC/ARSTRAT's Advanced Warfare Environment (AWaE) will facilitate coordination, synchronization and visualization of combat events from unit to individual level in a net centric and temporal framework

**Advanced Analysis for After Action Reviews (A4R):** Modeling and visualization technologies to analyze BLUEFOR unit plans and operations orders, assess unit performance in near real-time, and track long-term cognitive skills development of key individuals and command and control (C2) functions

**Advanced Workflow (AWF):** Data fusion, data mapping and multi-level security technologies leveraged to extract unclassified data from classified data and deliver unclassified data in a timely manner in the context needed by staffs involved in planning, command and control and capturing lessons learned in combat missions

**Export Writer (EW):** Rapid dissemination of mission-critical information in a variety of human and machine readable formats including text, image, Microsoft Office, and Extensible Markup Language (XML) while enforcing information security policies appropriately

### Benefits for Today's Warfighter

E-CTC provides a proven, adaptive capability that enables the U.S. Army to prepare units for FSO and as per the 2009 Army Training Strategy, "Provide units and staff with high-intensity, high-fidelity engaging realism, ground truth observations, and effective AARs."

- Plans and executes a realistic operational environment characterized by FSO
- Integrates space assets and multi-spectrum data to enhance combat power across leadership, maneuver and information elements
- Combines existing technologies and resources into advanced capabilities to facilitate live-action exercises at installations across the DoD including CTCs and home stations
- Captures resource requirements from generating force to operating force, and enables effective and efficient capture of warfighting experience/knowledge



For more information, please contact:  
USASMDC/ARSTRAT Public Affairs Office  
P.O. Box 1500  
Huntsville, AL 35807  
Phone: 256-955-3887  
Fax: 256-955-1214  
Email: [webmaster@smdc.army.mil](mailto:webmaster@smdc.army.mil)  
[www.facebook.com/armysmdc](http://www.facebook.com/armysmdc)  
[www.twitter.com/armysmdc](http://www.twitter.com/armysmdc)  
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