



## DEPARTMENT OF DEFENSE

U.S. JOINT FORCES COMMAND  
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13 Aug 2008

**MEMORANDUM FOR:** Chairman, Joint Close Air Support (JCAS) Executive Steering Committee (ESC)

**SUBJECT:** Joint Terminal Attack Control Simulator Evaluation Report, 21-25 Jul 2008.

1. **PURPOSE.** A Joint Terminal Attack Control simulator accreditation assessment was conducted IAW the JCAS Action Plan (AP) Issue 7 and at the direction of the JCAS ESC. The evaluation team assessed the capabilities of Service/USSOCOM nominated simulators to replace live controls for qualification (currency) training of certified Joint Terminal Attack Controllers (JTAC) as specified in section 5.2.3 of the JTAC MOA (1 Oct 2007). The results of this evaluation and recommendations for certification are contained in this report.
2. **EVALUATION TEAM MEMBERS.**
  - Mr. John Twiddy, Team Lead, USJFCOM/J85
  - Mr. Wesley Bryant, USA, TPIO Virtual
  - Maj Richard Sims, USMC, EWTGPAC
  - Mr. John Mcgaughey, USMC, TECOM
  - LCDR Lee Brewster, USN, NSAWC
  - TSgt Seth Griffith, USAF, 19<sup>th</sup> ASOS
  - MSgt Eric Neilsen, USSOCOM, AFSOC
  - Mr. Steve Scott, USSOCOM, AFSOC
  - Mr. Brad Kephart, USJFCOM/J85
3. **ITINERARY.** Inclusive dates for all simulator visits were 21-25 Jul 2008. Individual dates, locations, and simulator ownership are listed below:
  - A. Call for Fire Trainer (CFFT)  
US Army, Ft Sill, OK, 22 Jul 08 May
  - B. Enhanced Indirect Fire-Forward Air Control Trainer (EI-FACT)  
AFSOC, Hurlburt Field, FL, 24 Jul 2008
4. **CRITERIA.** Scoring criteria were developed by a team of subject matter experts from all Services and USSOCOM and then distributed for review to the JCAS ESC Action Officer (AO) Working Group (WG). This criterion was reviewed and revised in Jan-Feb 2008, by the JCAS ESC AO WG, to allow a "Day Only" classification, for systems that cannot perform specific night tasks. Each criterion is consistent with and mapped to the JCAS execution Joint Mission Tasks (JMT) contained in section 5.3. of the JTAC MOA (1 Oct 2007). A detailed description of criterion development and scoring methodology can be found in Enclosure 1. Scoring criteria can be found in Enclosure 2.
5. **DISCUSSION.** The following simulators were reviewed and comments are provided:

- A. Call for Fire Trainer (CFFT) – This immersive training system is designed to support multi-level training in call for fire procedures and mission planning/execution of artillery, mortars, naval gunfire, and close air support. The CFFT is a portable, flat dual-screen display, forward projected system with a trainee work station that selects targeting equipment through a computer key board or mouse. When added to the system, a head mounted display (HMD) gives the user unrestricted field of view. A fully functional (form fit) lightweight laser designator rangefinder (LLDR) is integrated into the system and a fully functional (form fit) and a tethered, infrared zoom laser illuminator designator (IZLID) complements the system for night training. Modified M-2 binoculars can also be used in the system when the screen is positioned 18 feet from the trainee (demonstrated). This system is suitable to replace live controls.
  
- B. Enhanced Indirect Fire Forward Air Control Trainer (EI-FACT) – EI-FACT supports training for JTACs, Joint Fires Observers (JFO), Naval Gunfire Observers and Fire Support Planning. The EI-FACT is a fielded, forward projected, flat screen, wall mounted, display system with a single JTAC work station that simulates targeting equipment through computer key boards and peripheral devices (joy stick, game controller, etc). When added to the system, a head mounted display (HMD) gives the user unrestricted field of view. A fully functional (form fit) Special Operations Forces Laser Acquisition Marker (SOFLAM) is integrated into the system. Modified M-2 binoculars can also be used in the system when the screen is positioned 18 feet from the trainee (not demonstrated due to room size). This simulator failed to demonstrate the capability to provide realistic JTAC training under nighttime conditions. This system has a limited capability to replace live controls.

## **6. RECOMMENDATIONS.**

- A. Grant interim accreditation to CFFT (Software Version 1.1.2.0 or higher) to replace live controls (Type 1, 2) with the following caveats: The system must include the HMD and integrated Lightweight Laser Designator (LLDR) to replace a live control (see note).
  
- B. Grant interim accreditation to EI-FACT (Software Version 10.6 or higher) to replace live controls (Type 1, 2, "Day Only") with the following caveat: The system must include the HMD and integrated Special Operations Forces Laser Acquisition Marker (SOFLAM) to replace a live control (see note).
  
- C. Accreditation of the CFFT and the EI-FACT should be valid for a limited period of time (period to be determined by the JCAS ESC), until replaced by the Joint Terminal Control Training and Rehearsal System (JTC-TRS), or the simulator complies with the requirements of the JTC-TRS Operational Requirements Document.

Note: In order to replace a live control, trainees are expected to use the HMD in the terminal phase of the control to observe the aircraft and/or the target. Although a form fit laser is a requirement for simulator accreditation, it is not mandatory that this equipment be used to replace a live control.

## 7. OBSERVATIONS.

- A. The experience and proficiency of the simulator operator/instructor and the presence of a well developed planning scenario and associated curriculum are paramount to the overall value of simulator training. Services/USSOCOM must ensure proper simulator operator/instructor training is accomplished prior to allowing simulated controls to replace live controls.
- B. The use of tactile equipment in simulation systems, especially laser designators and IR pointers, enhanced the realism of the training experience.
- C. The best use of simulation is to provide complex training scenarios that can not be replicated on the range with live controls due to asset availability, safety restrictions, and airspace constraints. Live controls should focus on visual acquisition, nose position, and attack geometry of aircraft which are difficult to replicate in simulators. The proper mix of simulation and live controls, with the appropriate focus, will optimize JTAC training.

## 8. SUMMARY.

The JCAS ESC Joint Terminal Attack Control Simulator Evaluation Team conducted an evaluation of Service and SOCOM nominated JTAC Simulation Systems. The purpose of the evaluation was to determine if existing service simulators are suitable to replace a portion of the live controls for currency training of certified JTACs IAW the JTAC MOA (1 Apr 2007). Evaluation criteria were based on the JCAS execution JMT in the JTAC MOA and approved by the JCAS ESC Action Officer working Group. Both the CFFT and EI-FACT simulators are recommended for certification for Type 1 and Type 2 control with caveats.

Any comments may be directed to Mr. John Twiddy (JFCOM J85) DSN 836-6312 or Mr. Brad Kephart (JFCOM J85), DSN 836-8496.



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JTAC Simulator Accreditation Team Lead

### Enclosures

- (1) Scoring Criteria Development and Methodology
- (2) Scoring Criteria
- (3) Simulator Profiles
- (4) Evaluation Score Sheets