

# Simulated Warfare Environment Generator

AIR COMBAT ENVIRONMENT TEST & EVALUATION FACILITY

## Overview

Two unique simulation technologies reside at the core of ACETEF. They are SWEG (Simulated Warfare Environment Generator) and its interface system SWES (Simulated Warfare Environment System).

SWEG is derived from a family of unique “language-driven” simulation systems with such names as *Suppressor*, the *Action Cognition Behavior Model* (ACBM) and *CIMUL8/SPECT8™*. The most familiar member of this family, *Suppressor*, is a legacy simulation system used by many DoD and industrial studies and analysis groups to explore combat operations at the mission level. *Suppressor* is highly regarded in its capability to realistically simulate the employment and interactions of opposing forces engaged in a state of war.

SWEG and its latest upgrade incorporates enhanced capabilities. These enhancements allow SWEG to model players, platforms and weapon systems in much greater detail than ever before and with an increased level of dynamic interaction. The Warfare Simulation Team controls, maintains and distributes SWEG to a growing user community. The ACETEF SWEG Team ensures backward compatibility and stability of SWEG.

SWEG permits the explicit modeling of multiple contingency actions within the echelons of a military force based upon an evolving conflict environment. This feature, coupled with an equally robust capability to model explicit communication networks, including message content, context and connectivity, enables ACETEF to test, analyze and evaluate a myriad of complex problems in tactical environments. This creates unparalleled realism and relevance to the current

national security strategy, military doctrine, tactics and procedures.

External assets may be actual systems under test or system simulators in any one of the ACETEF laboratories or man-in-the-loop simulators, remote simulations or have several connections to an entire aircraft.

The ACETEF simulation and networking architecture has been tested and exercised on numerous occasions. Demonstrations and exercises involving SWEG include Joint Theater Missile Defense, Joint Strike Fighter Virtual Strike Warfare Environment, STOW, Kernel Blitz, AN/ALR-67 Operational Test, F/A-18, EP-3 SSIP, EA-6B, High-Level Architecture (HLA) Engineering Protodefederation, Joint Advanced Distributed Simulation and ACETEF-REDCAP Link. ACETEF has also participated in several Distributed Interactive Simulation (DIS) exercises and is an active participant in HLA. At ACETEF, distributed simulations, real systems, real aircraft and man-in-the-loop devices can all interact together in the same conflict simulation and within the demanding confines of a real-time operating environment.

**For more information contact:**

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