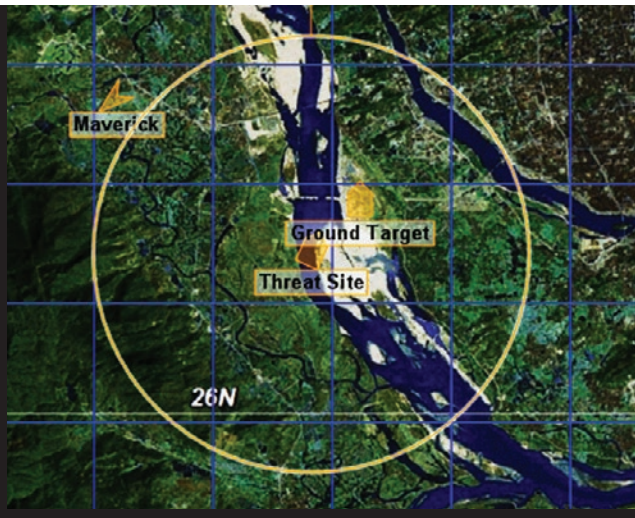
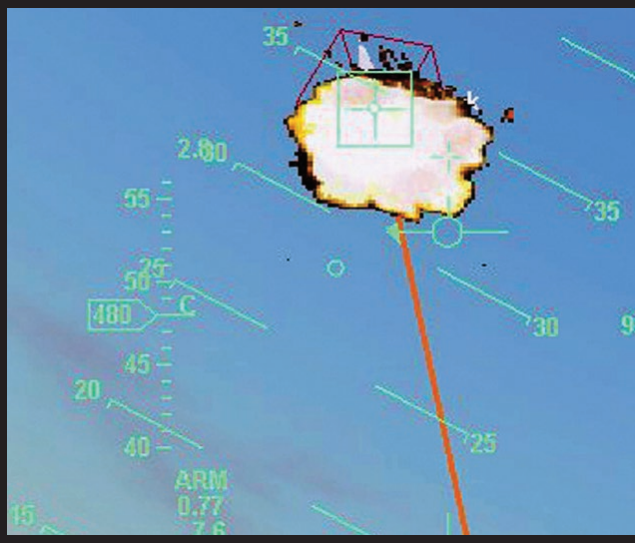
MILITARY
SIMULATION TRAINING

# FACETT®

## FAAC AIR COMBAT ENVIRONMENT FOR TRAINING AND TESTING



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# FACETT® FAAC Air Combat Environment for Training and Testing

FAAC Air Combat Environment for Testing and Training (FACETT) is a Windows desktop application that simulates air combat engagements to support weapon simulation testing, tactics development and post air combat training and debriefing. FACETT® incorporates hi-fidelity missile simulations to generate simulated cockpit displays. A flight simulator mode allows “first person shooter” interaction. An observer mode lets the user fly through the 3D Combat Theater during a scenario or after the scenario has completed.

The FACETT® software initially was developed as a tool to test the development of high-speed weapon simulations in support of FAAC’s effort to evaluate our cockpit algorithms and high-speed missile simulations provided for the F-15, F-16, F-35, F/A-18 E/F and F-22. As FACETT® matured, compatibility with our validated test and training simulations and SimBuilder™ IADS and weapon simulation software product was added.

Applications for FACETT® have grown beyond the evaluation of simulation and Weapon Engagement Zone (WEZ) performance to be a revolutionary tool to evaluate weapon employment tactics in a controlled desktop environment with high fidelity simulation models combined with 3-D graphics, aircraft MFD and HUD WEZ displays, autonomous aircraft and an aircraft flight simulator model. Air combat tactical situations can be created to evaluate weapon performance, recorded for later analysis, replayed from Time Space Position Information (TSPI) data recorded from training or tactical systems, or networked into live system for real-time weapon employment assessments.

## FACETT® Features Overview:

- **Configurable Flight Simulator with 1st Person Joystick Control 3D Combat Environment**
- **Air-to-Air, Air-to-Surface and Surface-to-Air engagements**
- **Scenario Management & Recording**
- **MFD/HUD Cockpit Displays**
- **Plotting & Analysis Tool**
- **Integrates FAAC’s SimBuilder™**
- **Configurable Flight Model**
- **Integrates FAAC Air Combat Training Simulations**
- **Integrates FAAC SimController™**
- **Integrates FAAC ZAP Software**
- **Pilot View**
- **Observer View**
- **Recording and Replay Capabilities**
- **Input Alternate TSPI Sources**
- **Network Capabilities**
- **Scenario Building**

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AIR COMBAT SIMULATIONS

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# FACETT® Features: a closer look

## Scenario Building

- Drag and Drop combatants onto mission map
- Define target aircraft and surface entity behavior
- Set-up Stand-Alone or Network Scenarios
- Load/import mission specific maps
- Select different aircraft flight models for the ownship aircraft
- Assign joystick configuration per aircraft type

## SimBuilder™/Air Combat Training Integration

- Fully integrates FAAC's SimBuilder™ product
- SimBuilder™ supports integration air defense systems (IADS) as well as air and surface launched weapons and countermeasures
- SimBuilder™ can be replaced with FAAC validated air combat training simulations for greater fidelity

## Recording and Replay Capabilities

- All scenarios can be recorded for later replay and analysis
- Can be run with recorded TSPI data from an alternate training device
- Alternate Ending – Whether running from a FACETT® developed scenario or alternate source TSPI the user can jump into an aircraft and take full control of the aircraft and weapons employment

## Network Capabilities

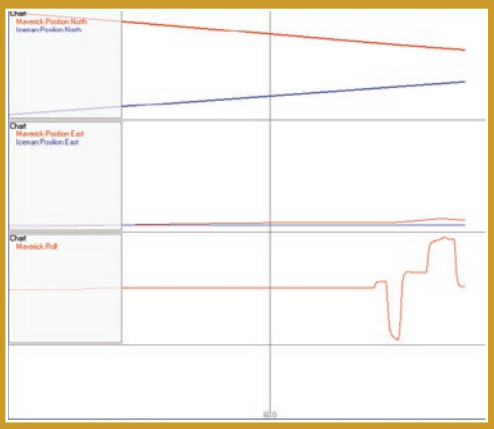
- Multiple FACETT® stations can be networked together to allow multiple separately controlled aircraft to be flown together in real-time against each other or autonomous aircraft
- Network scenarios can be recorded
- Network with other systems to provide WEZ displays and weapons simulations driven from alternate TSPI sources

## ZAP Integration

- Can be integrated with actual ZAP software used on tactical fighter jets to re-create the weapon employment displays seen in the aircraft
- Can be configured with F-16, F-15, and/or F/A-18 E/F and F-22 displays
- Threat WEZ: allows side-by-side comparison of ownship weapon capabilities versus selected target's weapons for accurate assessment of first shot in a real-time dynamic environment

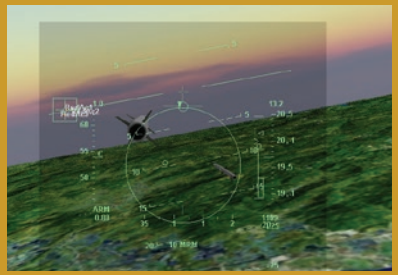
SIMBUILDER

WEZ Display

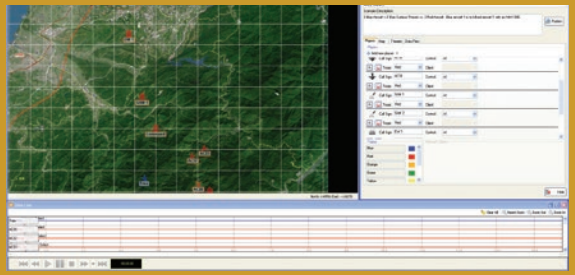


Plotting and Analysis

Hypercopter View



Pilot View



Scenario Building

# The right tools
## for the most realistic training

### FAAC Incorporated Air Warfare Simulations Division

The Air Warfare Simulations Division of FAAC today represents the original core of our company, founded in 1971 to provide high-speed accurate weapon simulations for the original training range USN/USAF Air Combat Maneuvering Instrumentation (ACMI) systems developed to better prepare pilots for combat operations.

Our weapon simulation technology established and maintains the standard for real-time weapons assessment. This capability was eventually brought from the training world to the tactical world through the incorporation of the Zone Acquisition Program (ZAP) into the fighter's Operational Flight Program. ZAP was a revolutionary leap in capability to the US and FMS warfighter, replacing low-fidelity coefficient driven algorithms, with accurate high-speed simulations.

Our 40+ years of weapon simulation and software development experience is used to provide our customers with the best training and tactical software possible.

### Air Warfare Simulations Division Products

**Tactical Weapon Employment Zone (WEZ) Software**
- Zone Acquisition Program

**Air Combat Training Weapon System Simulations**
- Supporting Training Ranges and Flight Simulators around the world

**Electronic Warfare Simulation Software**
- Threat Sensor and Integrated Air Defense Systems Simulation

**Weapon System Analysis Software**
- FAAC Environment for Training and Testing (FACETT)

**KC-135 BOSS**
- Boom Operator Simulation System

### Air Warfare Simulations Division Goals

- Provide high quality software and support our customers with integrity and professionalism, going beyond what is required to do what is right
- Provide the warfighter with the best training and tactical weapon system software in the world

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