

## X-Gen<sup>®</sup> Generic Unmanned Aircraft System Trainer

### High Fidelity Unmanned Systems Simulation

CATI has designed a High-Fidelity Virtual Training and Testing System focused on the unique requirements of the commercial/civil community. X-Gen<sup>®</sup> incorporates the latest technology for training payload and air vehicle operators from basic through full-operational, location-specific training, and rehearsal procedures. X-Gen<sup>®</sup> is based on CATI's proven image generator software for real-time scene rendering of the sensor views. X-Gen<sup>®</sup> also has an open architecture design which provides a programmable 6-DOF aero-model that supports any air vehicle control, menus, cued symbology, and 2D map display. X-Gen<sup>®</sup> is scalable to run on a laptop, desktop, or full Ground Control Station configuration. Users have the capability to design and train on custom scenarios as well as add future updates.

*Bringing Reality to the Virtual world...*



### Air Vehicle Operation Features

- Automatic Flight Control System (AFCS)
- Flight symbology
- 2D map display with Airspace situational awareness
- Route planning
- AV checklist operations
- High-fidelity fixed-wing and rotary-wing air vehicle modeling

### Payload Operation Features

- IR - TV - EO payload sensor views
- Sensor pan and zoom
- Laser ranging and designation
- Geo-stabilized point and entity tracker
- Multiple electronic/digital zoom and focus
- Sensor fusion IR & TV - IR & EO
- Contrast-based Image Auto-Tracker (IAT)

### Standard Interfaces & Databases

- Distributed Interactive Simulation (DIS)
- High-Level Architecture (HLA)
- CDB and SECORE compliant
- Extensive libraries of world-wide geo-specific, high-resolution databases
- Rapid placement of database features using the Environmental Modeling Editor (EME®) for fast turnaround and reduced cost

### Generic UAV/RPA Parameters

- Multiple air vehicles; fully tunable in size, endurance, weight or payload
- Pilot or sensor models selectable on a single workstation



### Instructor Operating Station (IOS)

- Network control of multiple X-Gen® student stations
- Scenario and lesson plan selection
- Atmospheric effects control
- Multiple cloud, fog, and haze layer models
- Continuous time of day based on geographic location
- Activation/deactivation of emergency procedures either manually or through pre-selected criteria
- Automated monitoring and logging of trainee actions under emergency procedures

### Export Control

- X-Gen® is approved for export
- Civilian and Commercial X-IG® sales are subject to the jurisdiction of the U.S. Department of Commerce in accordance with the Export Administration Regulations as EAR-99