



# MAK ONE

## MAK ONE, Your Digital Twin of Planet Earth

MAK ONE is a complete suite of modeling & simulation applications with infrastructure tools to create multi-domain synthetic environments in realistic geographic and environmental representations with accurate behaviors and correct model fidelity.

MAK ONE is fully customizable with configuration tools and application programming interfaces (APIs) available at all levels of the technology stack.

**SITUATIONAL AWARENESS**

Quickly achieve a “big picture” understanding of the simulation while retaining an immersive sense of perspective: Brief/debrief, After Action Review, Common Operational Picture.

**WARGAMING, COMMAND & CONTROL**

Conduct Mission Rehearsal, Course of Action Analysis and Exercise Planning for Virtual and Live Training Exercises to include Terrain Walkthrough of operational environment and White Cell, Blue Cell, and Red Cell EXCON

**FIRST-PERSON MULTI-ROLE SIMULATORS**

Take over control from the CGF and provide an interactive, and immersive, experience for trainees, role-players, and test subjects.

**IMAGE GENERATORS**

Render correlated out-the-window and sensor views for display in simulators, VR/MR headsets and 3rd-party applications.

**WHOLE EARTH TERRAIN**

Simulate on procedurally generated Whole-Earth terrain or load industry standard terrain formats for compatibility with legacy systems and detail exactly where you need it.

**COMPUTER GENERATED FORCES (CGF)**

Use the multi-domain tactical environment to model and simulate platforms, humans, weapons, communications, EW, and sensors.

**Custom Components**

Configure the GUIs and plug-in custom capabilities to make domain specific simulations.

*MAK ONE is based on open standards, a unified library of content, and includes robust APIs for customization when needed.*

**SENSOR OPERATORS**

Physically accurate electro-optical, night vision, and infrared scenes that correlate with the out-the-window visuals and instructor views. SAR & ISAR scenes for in-cockpit displays.

**INSTRUCTOR / OPERATOR**

Use the behavior engine to control the exercise, add patterns of life, and specify global and local weather conditions.

**NETWORK MANAGEMENT**

Setup, monitor, filter, and record network activity.

*MAK ONE provides a full suite of infrastructure tools to connect, manage, record, and debug simulations in local or wide-area networks using industry standards including DIS & HLA.*

**Use**

Create compelling synthetic environments in realistic geographic and environmental representations with accurate behaviors, correct model fidelity.

**Model**

Configure the dynamics, systems, performance, and visual parameters. Connect simulations into simple or complex networks.

**Develop**

Use the APIs to override, extend, or add new simulation, visualization, and interface functionality to all the engines and interfaces in the MAK ONE technology stack.





**VR-Forces**

- Multi-Domain Computer Generated Forces
- Scenario generation & execution
  - Tactical environments
  - Threat generators
  - Wargaming
  - Command & Staff training
  - Tactics & behaviors testbeds

**VR-Engage**

- Multi-role Virtual Simulators
- Networked desktop training
  - Role player stations
  - Mid-fidelity simulators
  - Precise control of VR-Forces entities
  - Soldier, armored vehicle crew, pilot, sensor/drone operator

**VR-Vantage**

- Image Generation & Battlefield Visualization
- Out-the-window displays
  - Effects-based sensor modes
  - Multi-channel displays
  - VR/XR headsets
  - Situational awareness
  - Battlefield information

**SensorFX**

- Physics-based sensor visualization
- EO, IR, and NVG imaging sensors
  - FLIRs / Thermal imagers: 3-5 & 8-12um.
  - Image intensifiers / NVGs: 2nd & 3rd Gen
  - EO Cameras: Color CCD, LLTV, BW, SWIR

**RadarFX SAR**

- Synthetic Aperture Radar simulation
- SAR & ISAR image server
  - Generated from the same terrain as visual scenes and other sensors



**MAK ONE's Flexibility Extends Beyond Software**

*MAK products can be licensed à la carte, so you can have just the capabilities you want. But with MAK ONE, you can have the whole suite configured to suit your organization's size, shape, and preferred licensing model.*

SCAN TO EMAIL: [INFO@MAK.COM](mailto:info@mak.com) →  
CHECK US OUT: [MAK.COM](http://mak.com)



**VR-Link**

- HLA & DIS Simulation Networking
- Easy way to network simulators
  - Protocol independent API
  - Future proof
  - Code generator

**MAK RTI**

- HLA Run Time Infrastructure
- Industry leading performance
  - SISO Verified
  - Unlimited forwarders
  - Simple and complex networks

**VR-Exchange**

- Protocol Translation & Bridging
- Translate between HLA, DIS, TENA, and DDS
  - FOM to FOM and RTI to RTI bridging
  - C4I to sim interoperability
  - Filter and isolate networks
  - Customizable to support new protocols

**MAK Data Logger**

- Simulation Recording & Replay
- HLA, DIS, Audio, Video
  - DVR-like controls
  - Time-based annotations
  - Export to ODBC databases
  - Controllable by external applications

**WebLVC**

- Browser-based thin clients
- Built with VR-Exchange
  - Connect web apps to DIS, HLA, TENA, ...
  - Client-side Javascript libraries

**MAK Legion**

- Scaling & Interoperability Framework
- Proven to support distributed simulation of millions of entities
  - Thread-safe data store
  - Data oriented design
  - Relevance filtering
  - Spatial organization

**DI-Guy SDK**

- Realistic Human Characters
- Super-realistic, fully-rigged, easy to control human and animal characters
  - Used in MAK ONE and 3rd party image generators
  - Motion Editor

**VR-TheWorld Server**

- Streaming Terrain
- Terabytes of Elevation, imagery, features, & land use
  - Global base-map
  - Web interface to add data
  - Local server and cloud implementations
  - Supports multiple source formats