STK DSIM

Distributed Simulation (DSim) extension is an IEEE-compliant DIS and HLA interface that integrates modeling and simulation (M&S) tools with AGI's high-fidelity modeling capabilities.

Powered by RT3 within STK and leveraging VT MÄK's VR-Link toolkit, DSim provides the ability to port M&S data feeds into STK for analysis including:

- Line-of-sight access between objects

- Communications links

- Sensor coverage with terrain, weather, lighting, and body obscuration constraints

- Navigation accuracy and jammer modeling

- Enhanced situational awareness of thousands of object tracks

DIS and HLA-compliant

DSim is a complete off-the-shelf solution that can import and export both DIS and HLA data from any modeling and simulation (M&S) environment into and out of STK. By leveraging MÄK Technologies' VR-Link through DSim, you can evaluate thousands of entities using STK's multi-track objects (MTOs), as well as develop custom plugins for added flexibility and customization.
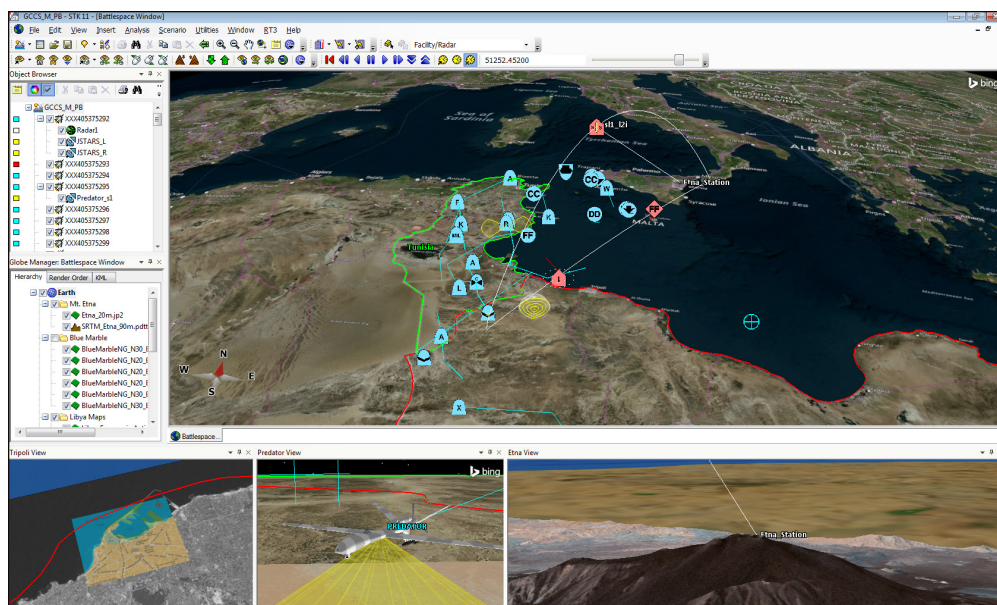
Space-based models

Generate DIS and HLA compliant space-based platforms, such as:

- GPS satellites for navigation and targeting

- Communications satellites for long-range UAV command and control

- High-altitude sensor platforms that provide persistent surveillance during a mission

Analysis of M&S models

Increase the fidelity of your M&S environment by calculating sensor coverage and incorporating a wide range of line-of-sight constraints, such as terrain, relative grazing angles, altitude, solar angles, and exclusion zones to determine when vehicles, sensors, ground sites, and other assets are in view of each other.

Display filters

By using dynamically reconfigurable filters (based on position and associated data), you can manage the display of objects and alter their representation through color, symbology, and other attributes.

Events and alerts

Monitor large volumes of data effectively with automated event detection.

- Specify event criteria using conditional logic on position and associated data.

- Get notified when events occur.

- Review logs to check for past events.

- Automate standard responses by assigning actions to event definitions.

- Actions can include but are not limited to playing an audio clip, sending an email, running a report, or executing STK functionality.

2D and 3D visualization

DSim generates immediate 2D and 3D visualization of objects generated by DIS and HLA-compliant tools. These visualizations enhance situational awareness for M&S entities by displaying simulated data and analytical components in one interactive common operating environment.

Open architecture for customization

Further tailor your M&S environment to:

- Process incoming data (e.g., track correlation).

- Implement custom data feed interfaces cores/compute clusters using the Scalability Extension.