

AFSIM

Advanced Framework For Simulation Integration & Modeling



DCS has been a key AFSIM capability provider since 2014 and has over 20 years' experience developing AFSIM capabilities, including being the original developers of Wizard, Warlock, and Mystic. As the AFSIM Master Integrator for AFRL, DCS develops and applies the AFSIM framework in support of various mission objectives for Air Force, Navy, and Joint sponsored initiatives.

DCS produces broadly reaching scenarios derived from intelligence sourced data combined with representations of present day to cutting-edge future concepts. These concepts are portrayed with a wide array of behaviors, responses, and orders of battle to fulfill AFSIM modeling requirements for the evolving battlefield reaching beyond a single scope of effectiveness and into multi-domain coordinated capabilities.

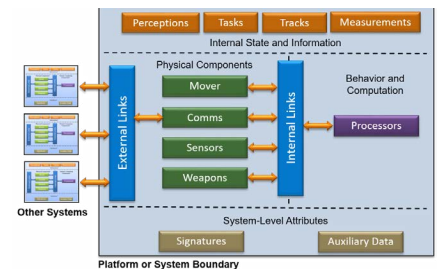
- Government owned, available to all U.S. Government agencies and eligible DOW industry partners, community-informed, military simulation framework
- Part of a shared “digital commons” across DoD EMS&A
- Multi-domain capabilities from sub-surface to space including EW and cyber
- Multi-resolution modeling
 - From detailed physics-based to simple effects representations of platforms, sensors, communication systems, and weapons
- Built upon the needs of the analytic community
- Modern C++ framework of simulation “building blocks” utilizing Object-Oriented (OO) design and offers a flexible plug-in API



- Scripting language (Python like) for constructing scenarios and providing customized control without modifying C++ code
- Script-based definition of behaviors, tactics, and command structures
 - Transitions creation of tactics and behaviors from software developers to the analyst

- Flexible agent modeling architecture permitting realistic representation of tactics and behaviors

- Component based architecture offers modularity for platform components (sensors, movers, weapons)
- Realistic perception-based representations of systems

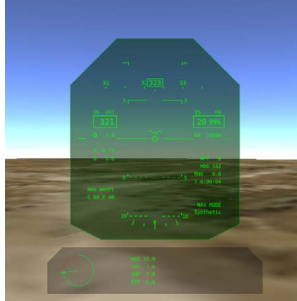


- Includes tracking, correlation, and fusion algorithms
- Allows fog of war representation
- “Box-set” Models and Scenarios
 - Domain-specific examples and laydowns
- Basic ground warfare modeling
- Basic surface and undersea warfare modeling
- Map overlay banner displays scenario’s classification level, caveats, and trigraphs
- Advanced air-to-air combat capability



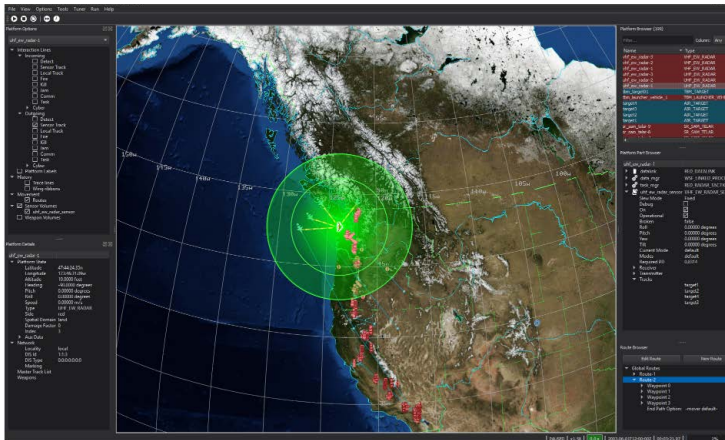
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- Mover creator is a GUI-based tool that simplifies the development of AFSIM mover models
- Robust space operations modeling capability
 - Cislunar modeling
 - GUI-based orbital mission sequence design
 - GUI and script based constellation creation
- Framework for effects-driven cyber modeling
- Electronic warfare effect modeling architecture
- AFSIM includes a suite of supporting tools
 - Wizard (Integrated Development Environment) provides an end-to-end analyst toolchain, used for scenario development and simulation execution
 - Mystic is an extensible framework for recording, playback, visualization, with capability to dive into performance statistics
 - Warlock is an operator-in-the-loop tool supporting experimentation and wargaming
- Ability to run both constructively and real-time while utilizing the same scenarios
 - Links to other simulations via DIS or HLA
- Able to convert open street map files to AFSIM route networks
- Combines timeliness in development and fidelity of operations at a level not previously experienced



GOVERNMENT MANAGEMENT

- AFSIM is available to U.S. Gov't and DoD industry at no cost, includes source code, documentation, and access to training material
- Information Transfer Agreement (ITA) allows for direct distribution to industry, including classified version allowing use of AFSIM for IRAD projects



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