

The Delta3D Simulation Core repository (SimCore) is a library of essential features required by modern 3D simulations. SimCore is a C++ development baseline that is designed to help new M&S development projects get up and running quickly. Alion develops and contributes SimCore to the M&S community as a part of the Delta3D Open Source Game Engine - Extras repository. SimCore is an open source project with no runtime costs or licensing fees; it builds upon Delta3D and is freely available at www.delta3d.org.

SimCore is a set of actors, components and utilities designed to work in a networked simulation environment. It provides a strong infrastructure for Entities that understands damage states, 3D models, publish rates and the difference between local and remote vehicles. It has built in weather visualization and environmental effects for snow, rain, time of day, sunsets and sunrise. It supports multiple physics engines for vehicle and munition simulation. SimCore has real-time Ocean rendering, a system for dynamic lights such as flares and fires, large terrain integration and support for heads-up-displays.

SimCore supports TCPIP Client/Server style networking and has integrated HLA networking that has been used with RTI-S, RTI-NG Pro and CERTI. SimCore has an advanced munition system that can model individual bullets, apply impact forces, show smoke trails, play sound effects, show tracers and differentiate between direct & indirect weapons fire. SimCore is designed to manage and display large numbers of entities and includes the ability to dead reckon and ground clamp using variable level-of-detail.

The SimCore repository includes three ready-to-go applications: 1) Stealth Viewer, 2) Net Demo and 3) Driver Demo. These applications are great examples of how to use SimCore to build your own customized training solution.



Alion Science and Technology is an employee-owned technology solutions company delivering technical expertise and operational support to the Department of Defense, civilian government agencies and commercial customers.

The Delta3D Simulation Core & Stealth Viewer

- **Stealth Viewer** is a completely functional 3D instructor-operator-station that allows you to observe your networked simulation in 3D from anywhere at any angle. It allows you to search for and attach to entities, record and playback your simulations for detailed After Action Reviews and use tools such as the binoculars, compass and night vision goggles**. Stealth Viewer works with any SimCore application including Net Demo and Driver Demo.
- **Net Demo** is a networked multi-player game that has two drivable vehicle types: a Dune Buggy and the Hover Vehicle. It demonstrates how to use Client/Server networking for 3D simulation or training games. It demonstrates sophisticated AI behaviors, weapon systems and UI elements.
- **Driver Demo** is a ready-to-go example of a 3D vehicle simulator. It is a simpler version of Net Demo and demonstrates how to use SimCore to build a fully-networked physics-based hover vehicle that can shoot weapons, take damage and interact with other entities across an HLA network.

More information on how to acquire and use Simulation Core is available here: <http://www.delta3d.org/article.php?story=20090818163549896&topic=news>.

Alion is a leading proponent of Open Technology Development and a major contributor to Delta3D, applying decades of experience in modeling and simulation technology to develop advanced 3D military training solutions. We use Delta3D SimCore to support organizations such as USN Recruit Training Command (RTC); Doron Precision; Northrop Grumman - Ship Building; Office of Naval Research (ONR); BBN Technologies; USMC Program Manager for Training Systems (PM TRASYS); MTS Technologies Inc; US Army Simulation, Training, & Instrumentation (PEOSTRI); Joint Forces Command (JFCOM); Joint National Training Capability (JNTC); and Naval Air Systems Command (NAVAIR).

** Some SimCore features are only available if you have access to US GOTS material.



Contact:
Curtiss Murphy
757.857.5670 x308
cmmurphy@alionscience.com

www.alionscience.com


ALION
SCIENCE AND TECHNOLOGY

Aligned with your needs.