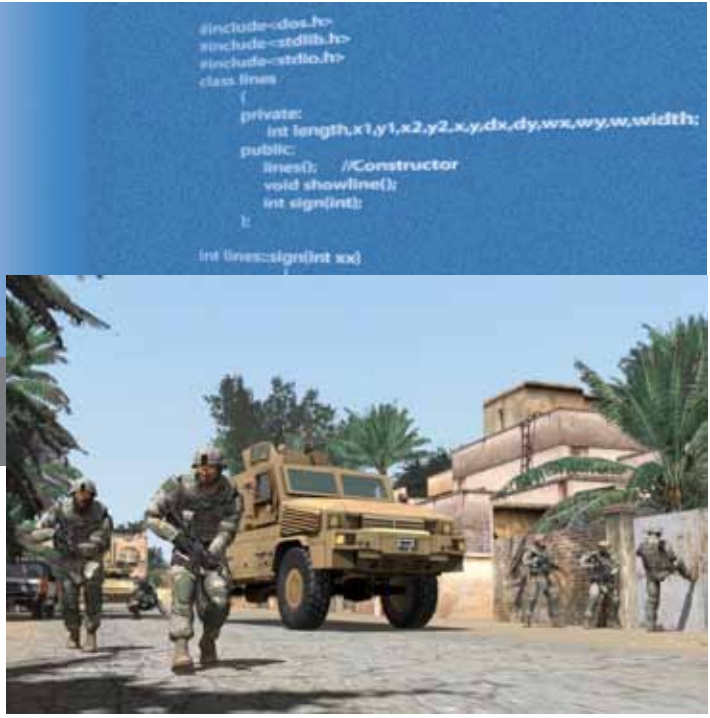
QUANTUM3D®
Technology for Solutions

ExpeditionDI® Software Platform: VBS2

Immersive Training ... Anywhere



When combined with Quantum3D's ExpeditionDI immersive man-wearable simulation platform, VBS2 software from Bohemia Interactive Simulations creates a ready-to-go dismounted infantry training solution.

High Fidelity Simulation - Affordable Game-Based Technology

VBS2 is a fully interactive, three-dimensional, game-based simulation solution designed for tactical training, mission rehearsal, experimentation, visualization, and much more. In addition, the VBS2 Virtual Training Kit (VTK) encompasses a full feature suite of tools that enable rapid content creation, High Level Architecture (HLA) / Distributed Interactive Simulation (DIS) integration, and training assessment.

VBS2 is currently in use by military organizations worldwide including the US Army, US Marine Corps, UK Ministry of Defence, and Australian Defence Force for mission rehearsal, tactical training and simulated combined arms exercises.

Complete, Interoperable Solution

ExpeditionDI and VBS2 provide an out-of-the-box training solution capable of simulating a wide range of infantry situations at the tactical level. ExpeditionDI builds on VBS2's realistic imagery by completely immersing the warrior in a virtual environment, and provides a natural interface driven by the user's physical motion, posture, and weapon handling.

The system can be networked with other HLA compliant simulations to meet specific training outcomes. For example, connecting ExpeditionDI dismounted infantry with a separate armored vehicle simulator, or simulating a Special Forces team conducting a counter-insurgency mission while the overall campaign is controlled by a higher level constructive simulation such as OneSAF.

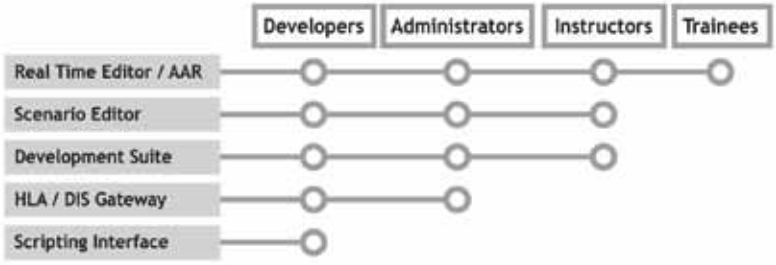
Bohemia Interactive SIMULATIONS

Example Applications

- Mission rehearsal and area familiarization
- Combat Team level training
- Combined Arms or Joint Training
- Analysis of options (decision support)
- Training in urban environments (e.g. MOUT)
- Navigation
- Vehicle checkpoints and area control
- Cultural awareness training
- Fire support / forward air controller training

ExpeditionDI / VBS2 Architecture

ExpeditionDI and VBS2 are designed for rapid scenario and database deployment. Within VBS2, the scenario layer and terrain layer are separated to simplify and accelerate the process of scenario development. The Scenario Editor is used to place characters, objects and vehicles upon the terrain and then the layout is saved as a file that may be executed at runtime for whatever purpose (e.g. training or analysis).



*ExpeditionDI and VBS2 empower the **user** to create scenarios and content to train squads for any situation.*

Features and Benefits

Flexible, Networked Training Environment

An entire squad trains as a team to build necessary communication and leadership skills. Combat teams of warriors and armored vehicles can practice operations with human-operated aircraft and artillery, or by linking with other HLA/DIS compliant environments like JSAF and JCATS. Full bi-directional capability allows tools such as OneSAF to drive ExpeditionDI.

After-Action Review

Allows fully controllable visual and audio replay from multiple perspectives, complete with statistical analysis. Debrief after each training session; see actions from each warriors perspective and review areas of improvement.

Artificial Intelligence (AI)

The Finite State Machine (FSM) editor allows complex AI behaviors such as crowds, ambient activity and enemy activity. The FSM AI has a flowchart interface, making logic trees easy to understand and define.

Wide Variety of 3D Models

Hundreds of units, weapons, and vehicles have been modified for VBS2, including USMC, ADF, US Army, NZDF, Incident Response, Eastern European and Middle Eastern representations. Also included is a wide range of geotypical structures and vegetation which can be used to populate custom locations. These assets have unique behaviors and features that add realism to the simulated environment.

Rapid Terrain Generation

Within a few hours, real-world terrain areas can be created from source data (DTED, shape, imagery). 3D models are easily imported from 3DS or OpenFlight .

Game-Based 3D Engine

Real-time rendering of large, high fidelity terrain areas with an emphasis on realism including rotation of the Earth, accurate star fields, time-lapsed weather, ambient life, etc.

Radio Simulator

Combat Net Radio Simulator (CNR-Sim) is a software-only radio/intercom feature allowing realistic team communicaton communication. Supports multiple teams and switches quickly between communication channels. Replay of recorded voice traffic during After-Action Review augments the training experience.

Bohemia Interactive SIMULATIONS

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