DIGNITAS TECHNOLOGIES

ARES BATTLESPACE VISUALIZATION AND INTERACTION(ARES BVI) TOOL

ARES
DISTRIBUTED INTERACTIVE
VISUALIZATION ARCHITECTURE

The Ares BVI tool provides a 2D, 3D and Virtual Reality (VR) capability in five unique modalities that project graphical representations of the operational environment. The user defined common operational picture (COP) supports multiple layered overlays unitizing military graphics and symbology to represent an accurate depiction of multi-domain operations (MDO's). The five modalities are all comprised of commercial-off-shelf (COS) hardware components creating modularity and scalability to the point of need (PoN). The Ares BVI software incorporates geospatial imagery data (natural/man-made), military operational graphics and terms, equipment, unit position, mission command sensors and operational assets. Additionally, Ares BVI supports war game scenario development and the After-Action Review (AAR) process, two fundamental components of the Military Decision-Making Process (MDMP).

The five modalities consist of the following:

Terrain Model (Floor Projection)
Ideal for Combined Arms Rehearsals and Sustainment Rehearsals in support of MDMP. (Battalion-above)

Terrain Model (Sand Table)
Ideal for the Operations Order process requiring terrain analysis, Instructional training, requiring contour line depiction. (Battalion-below)

Operational Planning Room Virtual Reality (VR):
Ideal for distributed mission command planning and collaborative planning. (Platoon -above)

Operational Planning Room Augmented Reality (AR)
Provides the functionality of VR but increases versatility by incorporating in person 2D and 3D modalities.
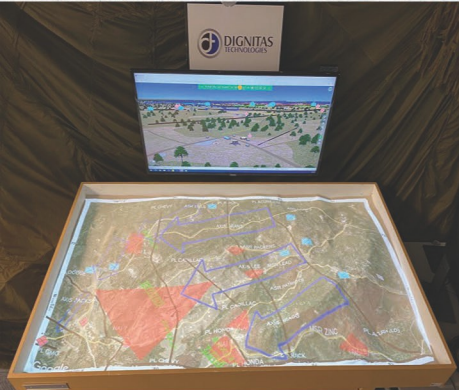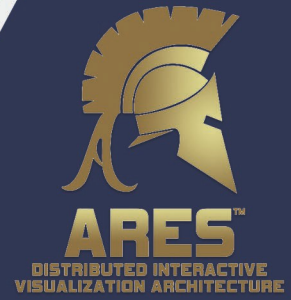
Tactical Planner (Mobile / Web)
Provides flexibility of distributed mission command and planning to the PoN. Can be used as a stand-alone system or a sub-component of the other modalities. Web tactical planner provides 3D visualization.

Terrain Model (Floor Projection)

This enables visualization and manipulation of the operational environment on a provided floor. It displays maps, operational graphics, and commanders critical Information requirements onto the floor surface to create a 2D virtual terrain model. The size of this modality is only constrained by the size of the floor. The floor projector can adjust in real-time from topographical to line-of-sight imagery for macro and micro terrain analysis.

The HTC handheld wand and flat panel display can be used to simultaneously project a 3D perspective of the 2D floor terrain model, providing a multi-domain overlay of ground, air, and cyberspace domains. The Line of Sight (LoS) capability enables an enhanced perspective of the ground tactical movement plan.

The floor projection is ideal for commanders and staff planners to visualize, describe, and direct operations for Combined Arms, Sustainment, Command and Signal Rehearsals or planning live-fire training scenarios.

This visualization tool provides unparallel utility in synchronization of efforts across warfighting functions, incorporating a user-friendly interface that is transportable to the PoN.

Point of Contact:

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Terrain Model (Sand Table)

> The sand table configuration is an evolution in analog terrain model design and digital geospatial mapping technology. A sand table with the incorporation of peripherals and other visualization equipment, allows for a unique user experience in topographical terrain projection.

> The sand in the table can be manipulated by the user to reflect all 8 recognized military terrain features and other mission essential geographical relief. This is accurately overlayed by topographical contour lines creating a 3D depiction of the operational environment's topography.

> Additional overlays of military operational graphics and symbols can be projected simultaneously to visualize the entire scope of the plan for the operation orders process and course of action brief.

Operational Planning Room Virtual Reality (VR)Augmented Reality (AR)

> The VR operational planning room provides a collaborative virtual environment to visualize and manipulate the operational environment providing an entire suite of tools to visualize, describe direct and plan in a virtual Tactical Operations Center (TOC).

> The VR room is perfect for executing distributed mission command to the PoN in a multi-domain environment for deliberate or dynamic planning efforts.

> Ideal for platoon and above operational planning, Special Forces (SF), Security Force Assistance Battalions/Brigades (SFAB's) in support of bilateral and multi-lateral operations with sister services and/or international partners.

> The common operational VR picture provides the same user-friendly interface used in both the (floor/sand table) terrain models, allowing commanders and staff planners the same level of interoperability, flexibility, and situational awareness regardless of geographical separation.

Tactical Planner (Mobile / Web)

> Displays battlespace graphics in a 2D environment directly to an Android device.

> Tactical Planner Application can be operated independently or used for remote collaboration in decentralized mission planning.

> Web tactical planner provides 3D visualization.

■ **Installation**   ■ **Technical Support/Training**   ■ **Hardware Purchasing/Configuration**   ■ **Operator Training**

> Engineering services and equipment to modify or create additional capabilities and features to meet the desired end state of any organization.

> Web tactical planner provides 3D visualization.

> Dignitas' staff are the only Ares BVI developers; their knowledge and experience will ensure high quality delivery, install, training, and support.

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