DIGITAL SANDTABLE

Advanced Terrain Visualisation

Digital Sandtable

The Digital Sandtable is a touch-based interactive device with an accessible tabletop user interface, that provides full visualisation of terrain using 2D map navigation and a correlated fly-around 3D view display.

Enabling users to freely place units, draw on virtual overlays and view activities as they happen over a sequence of milestones, the Digital Sandtable supports scenario planning and training applications such as wargaming exercises. It is also applicable for live exercise monitoring and control, including integration with external systems to receive streaming data on units.

3D View Display

CORRELATED VIEW

2D Map Navigation

Switchable base map

Shapefile display overlay

3D model renders

Next-generation
Scenario Planning and
Monitoring

Touchtable UI

100% touch-based user interface designed especially for a table format. Intuitive pan, zoom and rotate controls for map navigation. Familiar touch gestures of tapping, holding and dragging of panels and units.

Tools and Visualisation

Distance measurement, location labelling, freeform drawing, placement of units, marking of obstacles, visualising the terrain with 3D and optional VR view, including 3D model renders of building structures.

Wargaming Functionality

Placement of modifiable symbols for units, marking of obstacles, setting routes for unit movement, associating positions and movements with specific milestones, then viewing of activities over the sequence of milestones.

Content Flexibility

Range of options for terrain and surface content source e.g. user-furnished data of bitmap images, shapefiles and 3D models with georeferencing, for import into the Digital Sandtable dataset.

Tabletop
User Interface
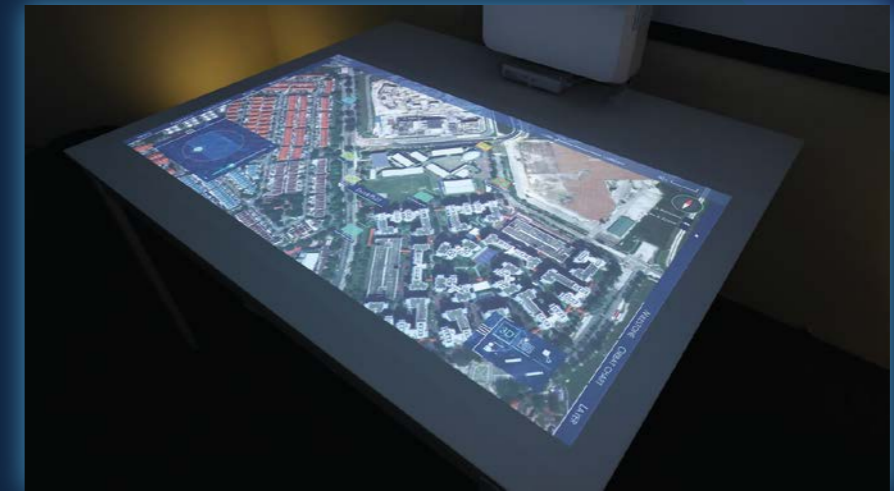
2D Map Navigation
with touch interactivity on an accessible table top

Top Panel
Consists of zoom level, map scale, compass for determination of scale and direction, and options to lock rotation, pan & zoom for enhanced user experience.

Left Panel
For addition of non-intrusive virtual overlays — units and their routes, obstacles, annotations and buildings — on the 2D map and 3D display to facilitate planning and training.

Right Panel
For viewing of activities over milestones of deployment or movement plans saved at various points in time with different placement of units, events and obstacles.

3D Fly-Around Controls
- 360° perspective of terrain
- 360° perspective of 3D model renders

Customisable Moving Toolbar
For easy access to frequently used one-tap tools e.g. 3D fly-around controls, satellite or street map view, group selection of units, instructor's pointer, address search, distance measurement and freeform drawing.

Immersive
Visualisations

Virtual Drop-in View (Optional)
with virtual teleportation in VR

3D View Display
with controllable
fly-around perspective

First-Person View

Visualise the terrain in first-person view virtually "on the ground". Selection of position on 2D Map for drop-in of position on default surface i.e. ground level, or at plot height i.e. top of building.

To-Scale Replication in Virtual World

Immersive walkthrough of terrain or 3D model of designated building to identify potential obstructions and challenges in planning and monitoring exercises.

Polyhedral Buildings

For surveillance of virtual terrain to identify potential obstructions in planning and training exercises.

Visualisation of Entity Positions

Markers in 3D show the position of entities on terrain, around or even within the buildings.

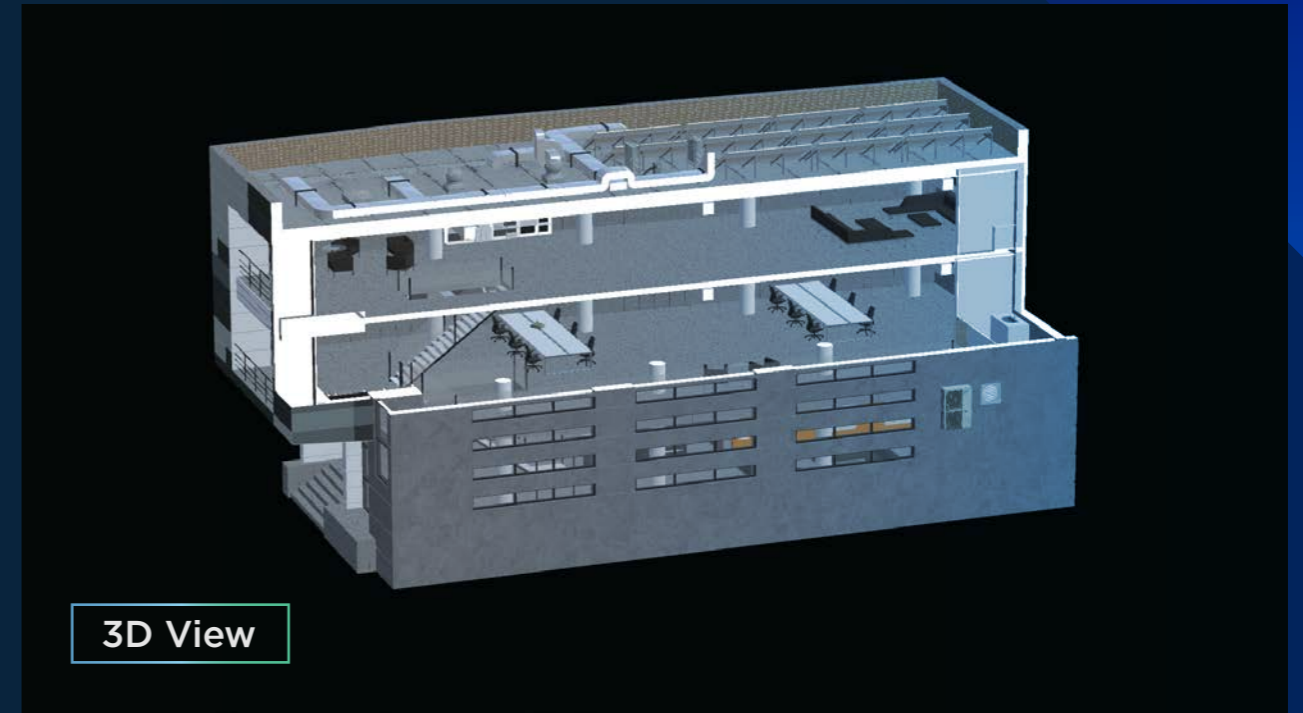# Close-up
Visualisation

Enter Plot Mode

With user-furnished detailed 3D model data, user can enter plot mode for both 2D Map and 3D views of selected plot at higher zoom level.
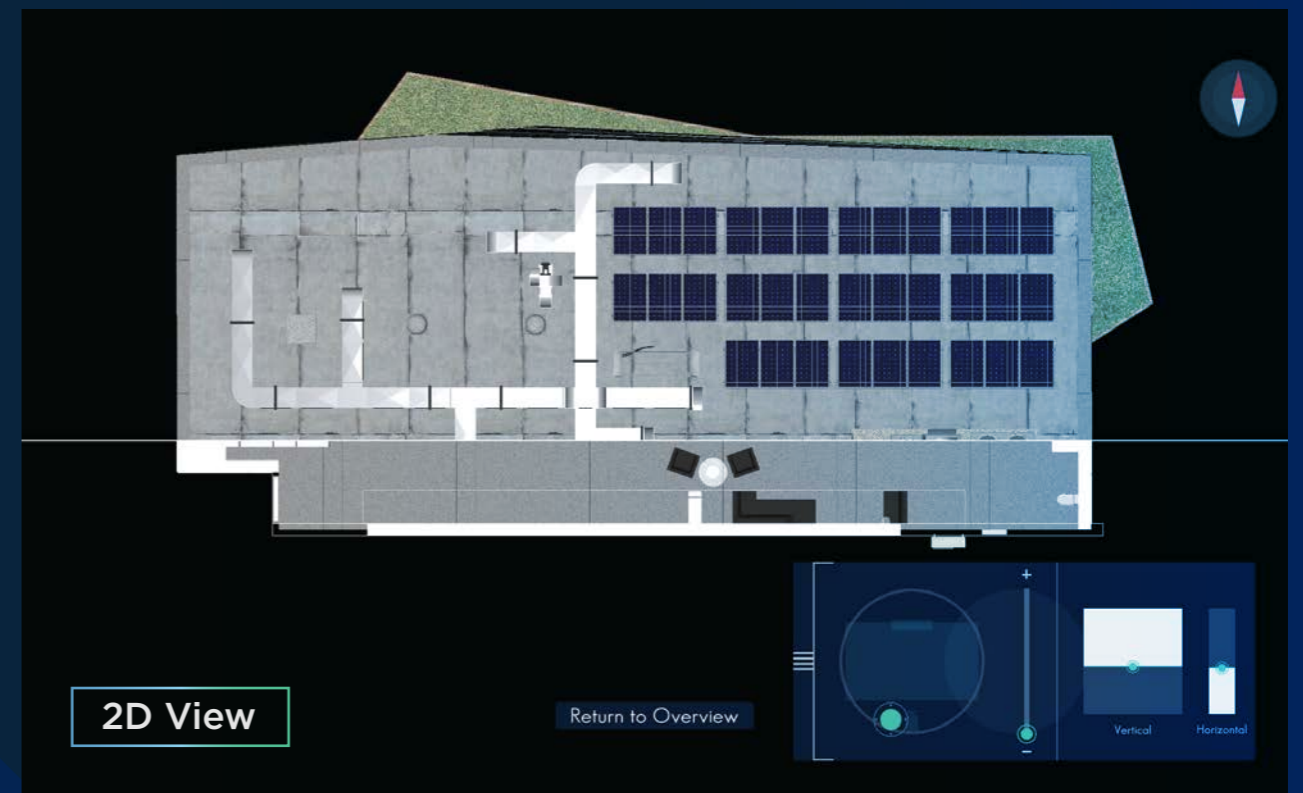
3D Data Import

3D data for plots can be converted from CAD or BIM sources and imported into the dataset of the Digital Sandtable.

3D View

Slicing Controls

Allows horizontal sectioning of building for quick floorplan and vertical sectioning for perspective view on concealed inner structures.

2D View

Return to Overview

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