

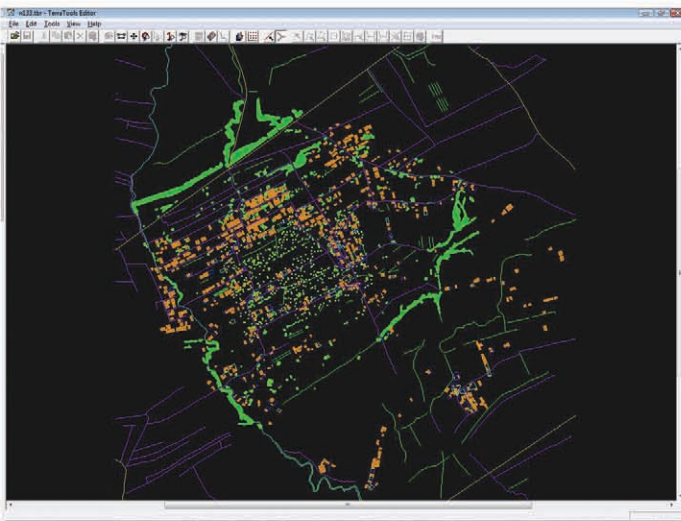
Rapid Generation of VBS2 Maps

Abbottabad Terrain Database

- ✦ Rapid generation of high fidelity Bin Laden compound 3D model from open source photography (BIS).
- ✦ Geospatial source data compilation from multiple orthophotos using TerraTools and RoadMAP (TerraSim).
- ✦ Composition of high fidelity model and surrounding environment in TerraTools VBS2 exporter.
- ✦ Iterative refinement, updated simulation products available daily using single TerraTools workstation.

From Source Data to Complex VBS2 Simulation Environment

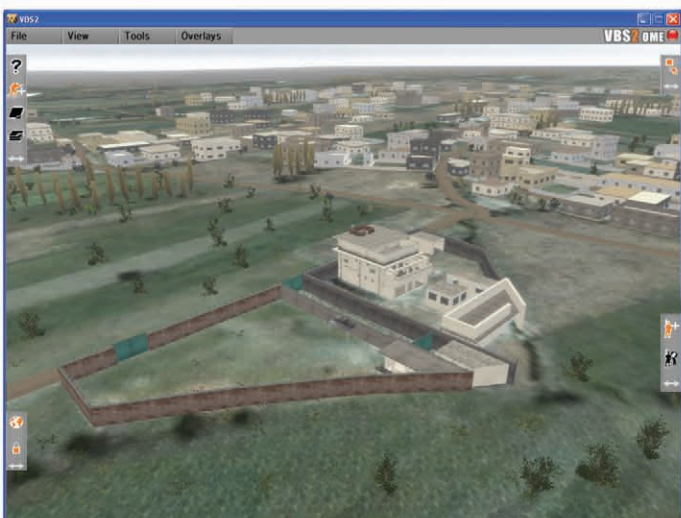
Figures below show the complete source data layers that were extracted from reference imagery. This information, accompanied by a digital elevation model and reference imagery, are the only source data required to support fully automated generation of the VBS2 map file. This approach supports the generation of key landmark structures, lines of communication, and reuse of geo-typical model appearances which greatly reduce overall development time.



GIS Source Data compiled in TerraTools and RoadMAP



Overview of Abbottabad City Database



Overview of high detail Bin Laden compound



Buildings with parametric generation of roof structures

High-resolution Geo-specific VBS2 Model of Bin Laden Compound

The Abbottabad mission map production for VBS2 demonstrates that small highly-focused teams can produce actionable visualizations and mission reconstructions using advance source data preparation tools like TerraTools and RoadMAP from TerraSim®. Coupled with the ease of producing fully functional site-specific models for VBS2, serious game technology can be used for rapid deployment of environments that support mission planning, rehearsal, and after action review.

With the exception of the compound model produced in Oxygene 2 by BIS, source data was interactively compiled from georeferenced imagery. Automatically generated buildings, walls, field boundaries, and tree lines with realistic model scatter greatly reduce the manual timeline. Total recompilation time for each enhanced map is less than one hour using a single workstation.

Once compiled, the full power of scenario generation in VBS2 is applied throughout the operational life cycle. Because scenarios are developed independently of the newly acquired map content, the overall background playbox can be developed in parallel once the key operational areas have been defined.



Compound modeled by Bohemia Interactive Simulations



Detail of Bin Laden compound



Building complex modeled in Oxygene 2



Detail showing interior rooms and stairs