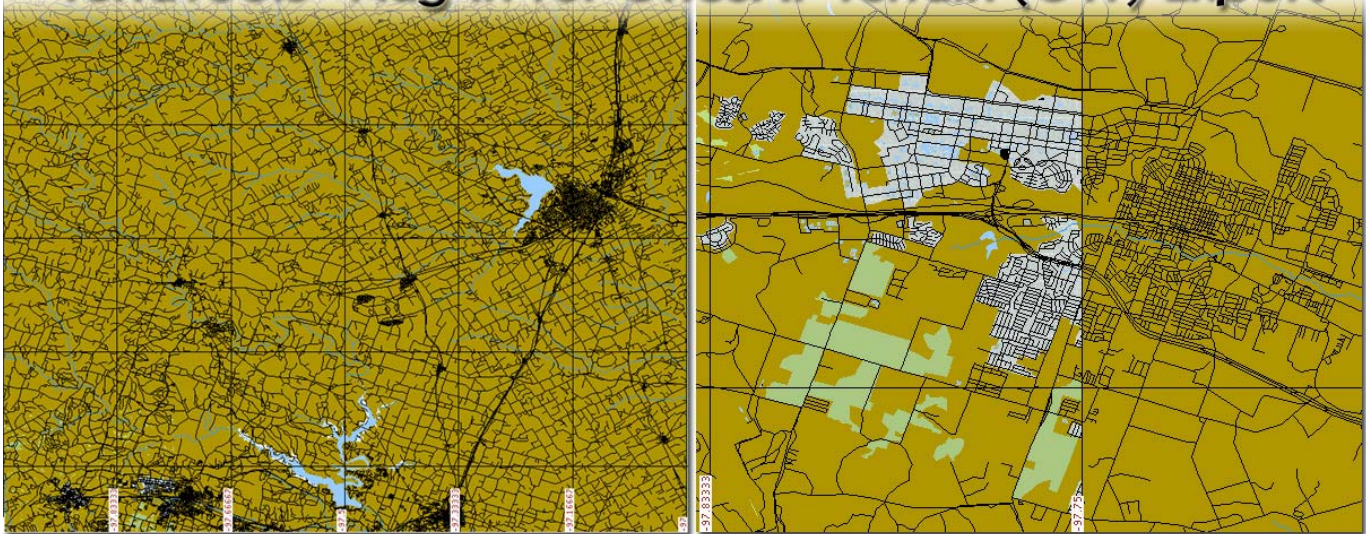


TerraTools® Plug-in for OneSAF Terrain (OTF) Export



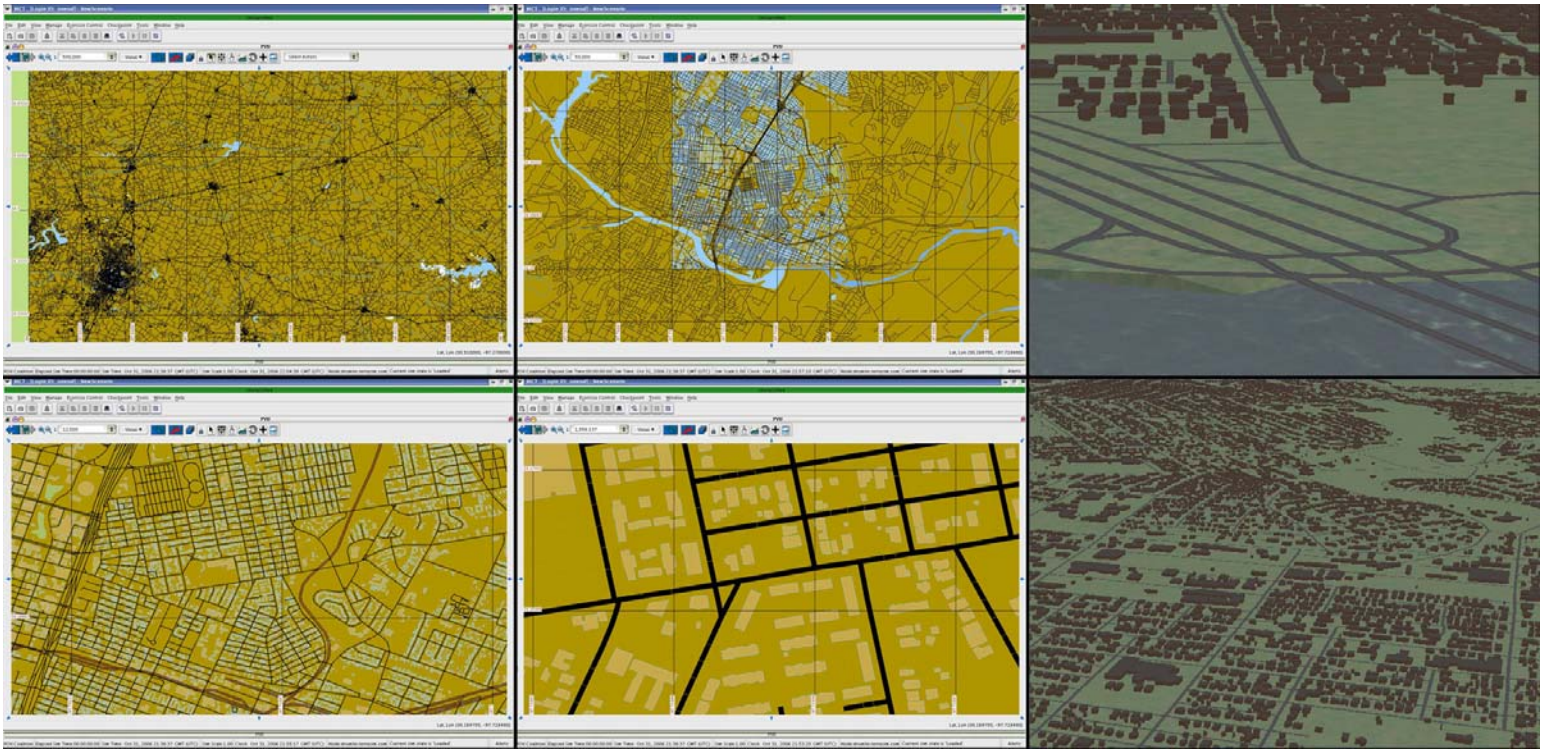
TerraTools® supports the creation and export of terrain databases for the OneSAF runtime environment. TerraTools users can create OneSAF Terrain Format (OTF) compliant databases using a wide variety of geospatial source data. The generation of single geotile cells, and multi-cell databases is fully supported. Ultra High Resolution Buildings (UHRB) data can be individually placed, or automatically scattered using TerraTools unique urban alignment and spacing technology.

TerraTools has been updated to support automatic mapping of common source data attribution to the OneSAF environmental data model (EDM). These mappings are fully extensible by the user to support other attribution models. In addition to OTF terrain export, TerraTools supports serious gaming and visual formats with export to VBS2 and OpenFlight. Constructive simulation is supported with exporters for JCATS, JointSAF CTDB for OTBSAF and JointSAF, GDB for MÅK VR-Forces, and more.

Capabilities of the TerraTools Plug-in for OTF Export

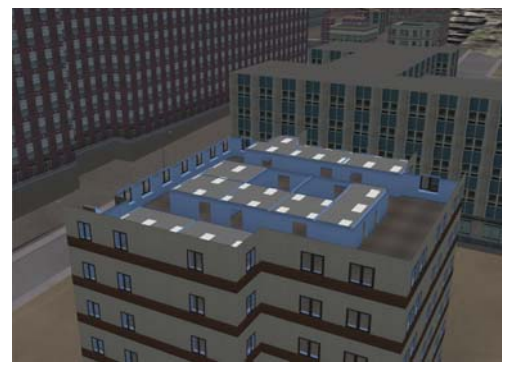
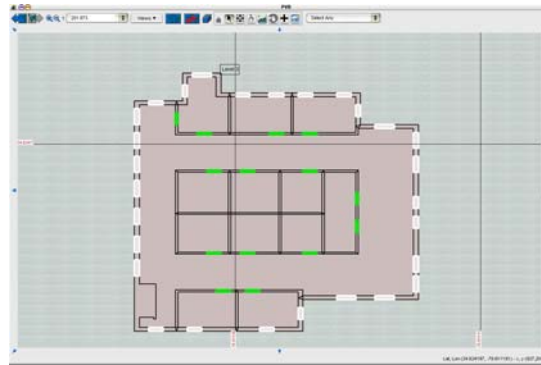
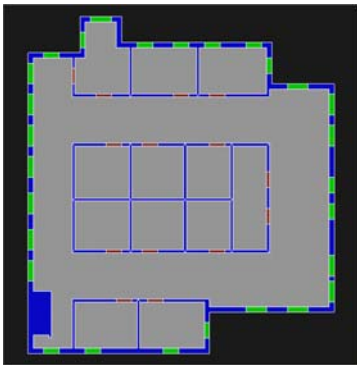
TerraTools OTF Export provides a complete solution for the rapid generation of OneSAF terrain cells with content ranging from large scale broad area cartographic source data to city graphics and specialized urban data collections.

- **Data ingest:** TerraTools source data, including NGA VPF vector products, ESRI shapefiles, DTED and digital elevation models (DEMs) can be used to create OTF geotile cells with high resolution insets.
- **Validated:** OTF export using TerraTools has been validated for versions 1.1, 1.5, 2.0, 3.0, 4.0, 5.0, and 5.1 of the OneSAF runtime. These include a 4-cell Fort Hood, JRTC, JNTC, and a 12-cell White Sands WSMR operational database. Current customers include PM-OneSAF, PM-WARSIM-ConSIM, Army FCS-LSI, TRADOC-Trisa, and other key defense contractors.
- **Urban Content:** By leveraging TerraTools's industry leading capabilities in large scale urban database construction, OneSAF users can populate their databases with efficiently organized, highly detailed, and geospecific urban content while keeping the resulting terrain and database complexity within the OneSAF runtime requirements.
- **Affordable:** Current users of TerraTools can purchase the OTF export plug-in option without requiring any additional software components.
- **Training:** To better support users of the OneSAF Database Export plug-in, TerraSim has developed a one day, hands-on training course that covers source data pre-processing, OTF EDM mappings, and the export of OTF geotiles. Students can bring sample source data to the course and leave with a completed TerraTools project graph.
- **Complete Solution:** Because the TerraTools export plug-in uses the TerraTools flowgraph project, you have full access to all of the modeling capabilities in TerraTools, ensuring high-fidelity integrated TIN generation, robust feature modeling, and detailed diagnostic tools available at every step of processing. It is completely compatible with all TerraTools exporters including VBS2, CTDB, OpenSceneGraph, OpenFlight, JCATS, and more.
- **Efficient:** TerraTools multi-threaded architecture automatically detects workstations with multi-core or multiple processors and utilizes flowgraph parallelism to decrease processing time. In addition, TerraTools highly optimized geometric processing algorithms produce complex OTF databases within hours without the requirement of expensive multiple machine hardware and additional software licenses.



The OneSAF Objective System (OOS) Version 1.0 was released in September 2006. Since that time, TerraSim has supported all released versions of OneSAF, tracking changes to the OTF format and the OneSAF environmental data model. TerraSim's OTF export includes support for the generation of OneSAF terrain databases, organized as collections of one degree cells or geotiles. These geotiles are built and directly exported in OneSAF Terrain Format (OTF) in the WGS84 geodetic coordinate system using the WGS84 ellipsoid as the vertical datum. TerraTools's unique capabilities in the automatic manipulation of complex feature data, supports user requirements for urban operations. All of the OTF unique ID, feature attribution, and integration requirements are supported, with minimal user interaction. The OneSAF plan view display (PVD) (above) is part of a 4 cell Fort Hood OTF containing Austin, Killeen, and Waco, Texas. Successive displays show the urban content and level of detail preserved in the TerraTools OTF export. Approximately 30,000 automatically generated individual buildings creates a dense urban playbox within the Austin cell.

The TerraTools OTF exporter also supports the generation and placement Ultra High Resolution Buildings (UHRB) models created by the ARA U2MG modeler or TerraTools. The figures below show the UHRB floorplan, OneSAF building PVD, and a TSGFly visual representation of a complex UHRB the building interior created using the TerraTools feature editor.



One Gateway Center, Suite 2050
420 Fort Duquesne Blvd.
Pittsburgh, PA 15222

(412) 232-3646
(412) 232-3649 FAX
www.terrasim.com

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