The Joint Conflict and Tactical Simulation (JCATS) program is an interactive simulation tool sponsored by US Joint Forces Command (USJFCOM) and managed from the command's Joint Warfighting Center (JWFC) in Suffolk, VA. The Lawrence Livermore National Laboratory originally developed JCATS and continues to act as its developer for JWFC. The military uses JCATS for training, analysis, and mission planning and rehearsal. JCATS simulates operations in urban terrain, supports both non-lethal and conventional weapons, and allows users to quickly assemble and disband entities and units. JCATS provides a wide range of operations in a variety of dynamic simulated environments. The simulation models the dynamics of individual soldiers, vehicles, and weapons, all of which increase the realism and participation.

The JCATS export option in TerraTools supports the construction of both large gaming areas as well as detailed urban areas. By leveraging all of its source data preparation and GIS functionality, users can produce JCATS terrain files in UTM and GCS coordinate systems compatible with Version 7.1.5 and higher.

TerraTools provides JCATS users with a simple set of attribution scripts written in the Tcl scripting language that map source data attribution to JCATS required and optional feature labels and defaults. JCATS users can make use of TerraTools' source data integration capability to produce detailed terrain representations using Terrasim's integrated triangular irregular network (ITIN) to produce a JCATS terrain surface that preserves source data accuracy. The exporter automatically creates JCATS tile units from processed source data and derives attribution such as height, mobility, and line of sight properties. Trafficability of terrain features and defilade information is also created with appropriate actual or default values.
Since TerraTools processes geospatial source data into an internal intermediate representation, the export of different runtime formats simply involves using the appropriate TerraTools export plug-in to generate highly correlated databases. These can include OneSAF OTF, OneSAF Testbed CTDB, JSAF CTDB, and MÄK VR-Forces. Visualizations of the JCATS terrain can be exported to TerraTools Tiled Scene Graph (TSG) format and freely redistributed using TerraTools realtime viewer, TSGFly™.

Using TerraTools scripting, users can take common vector, model, and terrain data and construct attribution tables that are valid for each of the derived simulations. By exporting directly from the same TerraTools runtime format which preserves source data attribution throughout the database generation process, there are no unnecessary format conversions which often introduce both geometric and attribution errors. Since TerraTools is a multi-threaded application, users with multiple processor or multi-core workstations can have up to 8 parallel processing threads running on a single TerraTools license.