

# Joint Conflict and Tactical Simulation (JCATS) at Sandia National Laboratories

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## Description

Joint Conflict and Tactical Simulation (JCATS) is a combat simulator that aids in analysis and training for site security. JCATS is used by various military and government security agencies. This computer-based constructive simulation has "humans in the loop" to allow decision-making by the facility participants. Validation and/or sensitivity simulations of weapons facilities and tactics can be conducted. SNL analysts work with on-site facility personnel

- to derive security information, particularly the probability of neutralization ( $P_N$ ),
- to perform parts of a facility Vulnerability Analysis,
- to analyze security for proposed design of sites, and
- to provide training for any site, including theoretical sites.

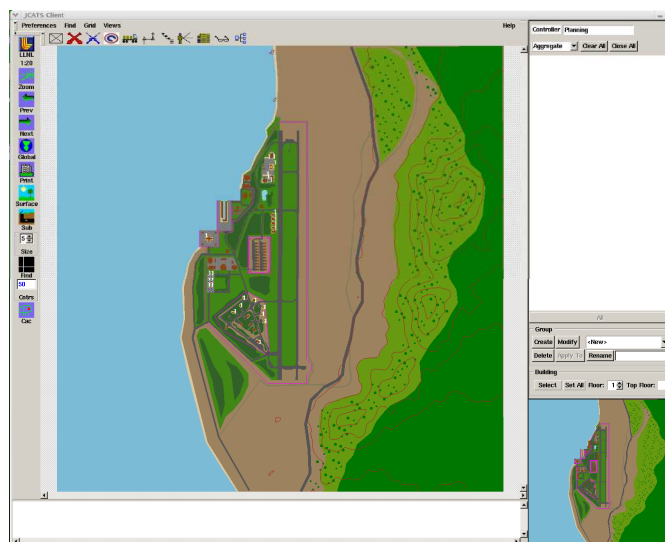
## Capabilities

JCATS capabilities include the following:

- Human operators emulate tactical force responses
- Computer-based methodology provides objective results
- Realistic terrain models use satellite imagery and elevations with depictions of an actual facility
- High-resolution, entity-level facility and response characteristics, including response personnel, vehicles, aircraft, and watercraft
- Realistic modeling of troop capabilities
- All standard weapons and munitions modeled using actual military and Department of Energy test data
- Data collection to gather and retain information electronically for post-simulation analysis



Training classroom with interactive display



Example of JCATS User Interface showing a sample facility with elevations

