

CAST-170 Terrain Obscuration Program

Terrain Obscuration System Option

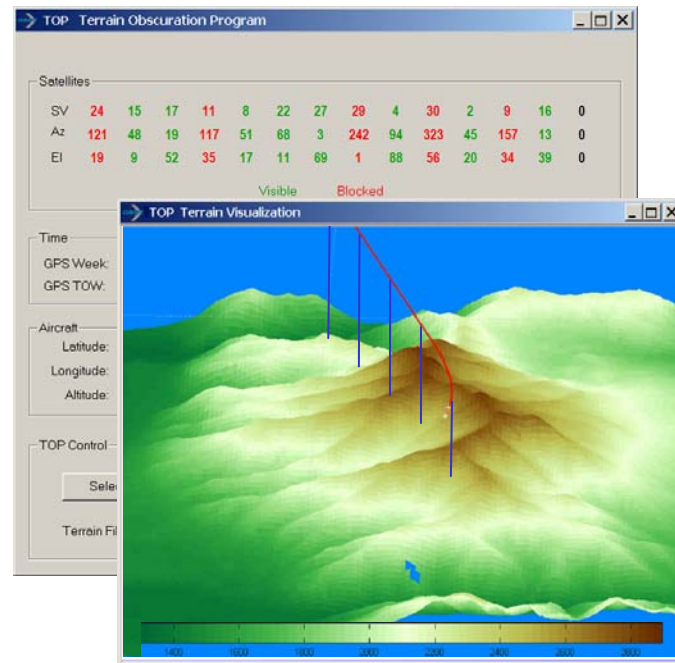
The CAST-170 Terrain Obscuration Program (TOP) software provides a real-time check of satellite visibility due to terrain surrounding the simulated vehicle. When combined with a CAST simulator, TOP enables the user to characterize the effects of area terrain on a GPS receiver.

How It Works?

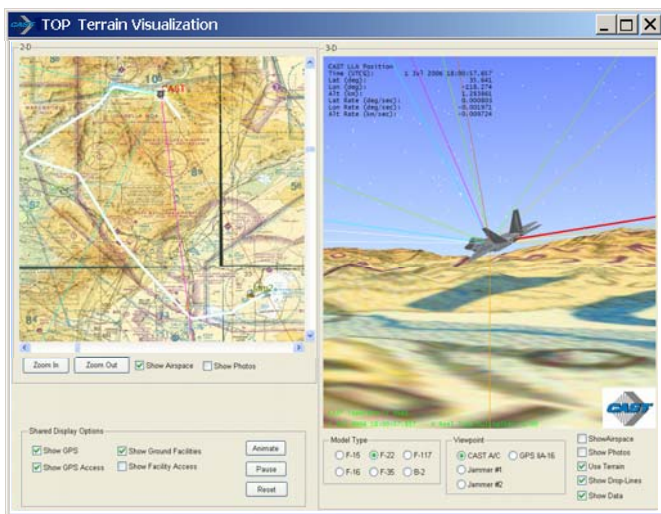
Communication between the simulator and the TOP computer takes place over an Ethernet link. The CAST system supplies a list of satellites that are normally visible to the TOP each second. TOP checks the line of sight for each of the satellites in the constellation with the surrounding terrain database to determine visibility. TOP returns a visibility status for each of the satellites according to the terrain obscuration factor.

Enhanced Visualization Option

When the Enhanced Visualization option is added to TOP software, the user is provided with 3-D visualization of the terrain surrounding the vehicle. The terrain is presented in an animated 3-D view with observation points relative to the simulated vehicle, GPS satellites, or other simulated facilities. Line of sight access lines from visible GPS satellites depict effects of terrain on GPS signal coverage.



The Terrain Obscuration System Interface



Terrain Obscuration 3-D Enhanced Visualization Option

System Features

- Color-coded satellite visibility status for easy viewing
- Displays terrain altitude at location of vehicle and terrain altitudes surrounding the vehicle
- Unique 3-D visualization option for viewing the area terrain in real time
- Equipped with Digital Terrain Elevation Data (DTED) Level 0 terrain data
- Designed to accept higher resolution DTED data (available to authorized users only)

System Configuration

- Operating System Windows
- Hard Disk 10 GB min
- RAM 512 MB min
- Processor 1 GHz min
- Interface TCP/IP Ethernet



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