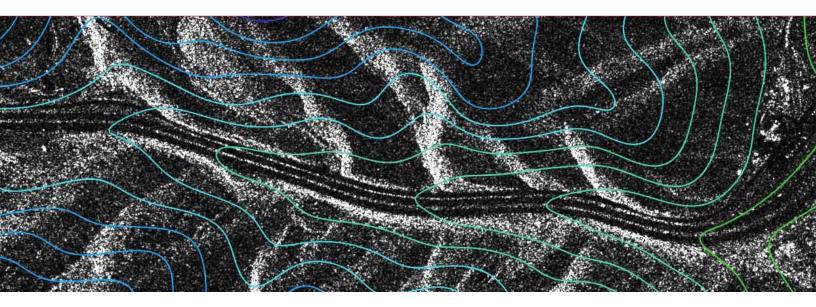
# SOCET SET<sup>®</sup> v5.5 Release enhancements



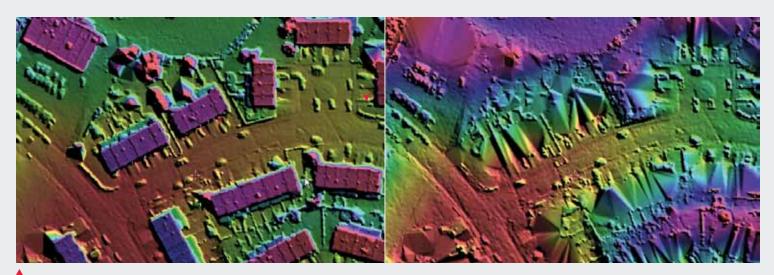
Digital mapping software used for precision photogrammetry and geospatial analysis. Finished products include high-resolution digital terrain and surface models, image maps, 3-D visualizations, and GIS databases. SOCET SET<sup>®</sup> v5.5 offers new functionality to increase data sharing, enhancements for the frame sensor model, additional satellite sensors, and new terrain tools.

Enhancements to the frame sensor model allow exterior orientation data from third-party triangulation packages to be imported into non-local space rectangular (LSR) coordinate systems. The new frame sensor model includes 43 parameters for self-calibration and expanded exterior orientation. Frame import supports the new Applanix® DSS 439 medium format, 30-megapixel, 6.8 µm pixels digital frame camera. New satellite sensor models include ALOS AVNIR, ALOS PALSAR, COSMO-SkyMed, EROS-B, FORMOSAT-2, RADARSAT-2, and TerraSAR-X.

BAE Systems continues to advance its Next-Generation Automatic Terrain Extraction (NGATE) functionality to provide simultaneous bare-earth and reflected surface model generation. In addition, Interactive Terrain Edit (ITE) tools have been enhanced for bareearth product generation from reflected surface models. The new release supports SOCET GXP® v3.1, Microsoft® Visual Studio 9 (2008), and the Microsoft Vista operating system.

A detailed list of improvements and significant bug fixes is provided in this brochure.

## **BAE SYSTEMS**



NGATE can be used to generate digital elevation models (DEM) and digital surface models (DSM) simultaneously. In the terrain shaded relief example shown above the DSM is on the left, the DEM is on the right.

### Core

- Supports Microsoft Vista operating system
- Enhanced interior orientation for high-resolution scanned  $\ensuremath{\mathsf{imagery}^{\dagger}}$
- Supports Leica USB TopoMouse<sup>™</sup>, USB Stealth mouse with joystick, and ITAC Systems' evolution Mouse-Trak<sup>™</sup> trackball
- Enhanced Stealth mouse button mapping allows for use of 32 customizable buttons  $^{\dagger}$
- Vertical coordinate system information added to header of GeoTIFF imagery on  $\text{export}^\dagger$
- Import MAPLOB and GEOLOB NITF information
- Allows geoidal modeling for non-earth ellipsoids

## Advanced Sensor Models (ASM)

- ALOS: AVNIR<sup>††</sup> and PALSAR<sup>††</sup>
- ASTER
- COSMO-SkyMed
- EROS-B
- RADARSAT-2
- TerraSAR-X
- Option to correct for atmospheric refraction during import of the following sensors:
  - OrbView-3, QuickBird Basic, WorldView-1 Basic, ASTER, FORMOSAT 2, ALOS PRISM, SPOT, JERS, IRS, and all new ASM optical sensors
- GeoEye® -1 imagery in NCDRD format<sup>†</sup>
- Frame model allows Exterior Orientation (EO) data import from third-party triangulation or GPS packages into non-LSR coordinate systems
- Direct support for Applanix DSS 439 camera and EO data
- Panoramic images work with non-earth ellipsoids<sup>†</sup>

## Multi-Sensor Triangulation (MST)

- Shared parameter adjustments for boresight misalignment and GPS antenna offset during triangulation
- Self-calibrating physical camera parameters
- Adaptive Tie point Matcher point transfer
- Export PatB image measurement (mea) file for all image types
- Enhanced Auto\_Blunder\_Detect solve strategy<sup>†</sup>
- Refined WorldView-1 triangulation default adjustment parameters<sup>†</sup>
- Auto brightness and contrast for interactive point measurement windows

## DPPDB and CIB®-like format production\*

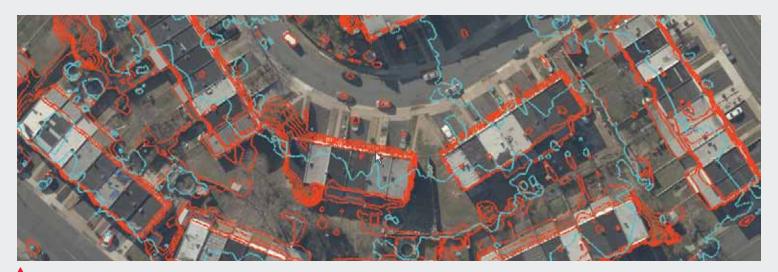
– Direct import for triangulated commercial imagery into workflow wizard  $^{\dagger\dagger}$ 

## DataThruWay® (DTW)

- Multiple image select on import of TFRD images<sup>†</sup>
- Upgraded to JTW 9.2.8 image libraries<sup>†</sup>
- Enhancement for DTW to run in Solaris<sup>™</sup> GNOME environment<sup>†</sup>

## NGATE

- Simultaneous digital terrain model and surface model generation
- Corrected terrain model tiling effects<sup>†</sup>
- Removed artifacts due to processing on multiple processors  $^{\dagger}$
- Enhanced to run NGATE in batch mode<sup>†</sup>



Blue contours model the DEM generated with NGATE's DTM filter functionality. All buildings and trees have been removed during the extraction process without any manual editing. Red contours model the DSM that was generated simultaneously using NGATE.

## ITE

- Figure of merit sets posts to invisible for orthophoto production<sup>†</sup>
- New tool sets posts inside a polygon, such as a building, so they are not displayed as contours

#### **Mosaic and Orthophoto**

- Added outlier reject functionality to DRA enhancement
- Corrected DRA enhancements<sup>†</sup>
- Create GeoTIFF tiled JPEG<sup>†</sup>

#### Feature Extraction and SOCET for ArcGIS®

- Integrated government off-the-shelf Geospatial Analysis Integrity Tool (GAIT) tool for geodatabase and shapefile quality assurance and validation (domestic version only)<sup>†</sup>
- SOCET for ArcGIS<sup>®</sup> performance enhancements to address anomalies while editing vertices in a SDE configuration<sup>†</sup>
- Populate attribute values from PLTS favorites when using SOCET SET sketch tools  $^{\dagger}$
- Added SOCET SET smart zoom tool for improved zoom with ArcMap<sup>®</sup> canvas
- Option to disable AOO Auto-attribute  $^{\dagger}$
- Added vertical datum and height units to shapefile  $\text{export}^\dagger$
- Breakline feature codes retained when exporting as terrain<sup>†</sup>

#### **ClearFlite®**

– Updated NOAA obstruction surface to include FAA AC-18B specification  $^{\dagger\dagger}$ 

## System requirements

- Microsoft Windows<sup>®</sup> XP, Vista\*\*
- Sun Microsystems<sup>®</sup> Solaris<sup>™</sup> 10
- <sup>†</sup> Corrected in SOCET SET v5.5
- <sup>††</sup> Patch is planned for SOCET SET v5.5

<sup>\*</sup> SOCET SET Digital Point Positioning Data Base (DPPDB) format production module [which uses MIL-PRF-89034, March 1999 format specifications] and SOCET SET Controlled Image Base<sup>®</sup> (CIB) format production module [which uses MIL-PRF-89041, 15 May 1999 format specifications].

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