

Defense modules in SOCET SET®

SOCET SET is well established as a comprehensive, flexible tool for geospatial analysis tasks in the defense community. Several of its modules have been developed especially for defense users and are fully integrated with the remainder of the suite.

SOCET SET, BAE Systems' industry-leading photogrammetric software package, offers five defense modules. Commercialized as SOCET SET in 1990, the software was first developed in response to Defense Mapping Agency requirements in the early 1980s. The defense modules are updated frequently in response to customer feedback, ensuring compatibility with the latest DoD needs. SOCET SET's defense modules, available on both UNIX® and Windows® platforms, are:

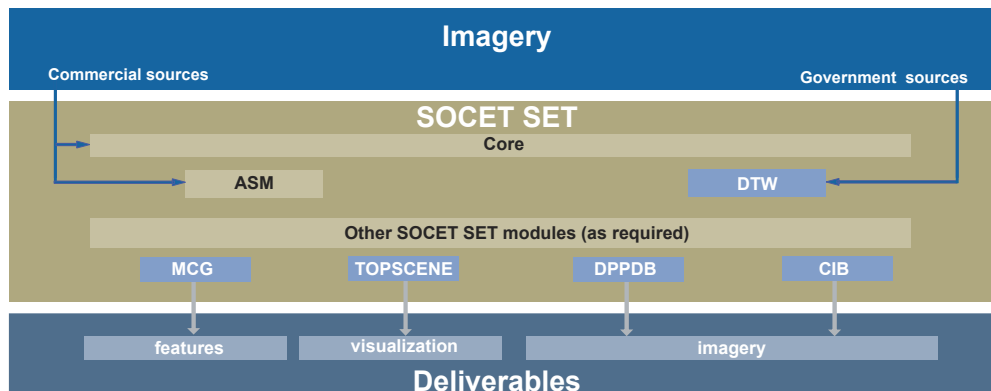
- DataThruWay® (DTW)
- Digital Point Positioning Data Base (DPPDB) Format Production Module

- Controlled Image Base® (CIB) Format Production Module
- Mapping, Charting and Geodesy (MCG)
- Tactical Operational Scene™ (TOPSCENE)

DTW (classified module)

DTW is used for the import and sensor modeling of government image sources, which it converts into a format for use by image processing software packages. It runs seamlessly with SOCET SET or as a stand-alone application. DTW and the Advanced Sensor Models (ASM) modules in SOCET SET share the same approach to image import and sensor modeling for government and commercial imagery, respectively, providing users with a powerful, dependable solution. DTW supports Sensor Model Factory (SMF), Predator and SOCET SET mathematical models. The primary import types for DTW are:

- TFRD 1.3, 2.3, 4.3
- DPPDB (including thumbnails and CE/LE)
- NTM (including NITF, DIDOP and scanned imagery)
- Predator
- USMSD and IDF/AMSD support data



BENEFITS

Based on deep understanding of DoD requirements

Leverages the rich functionality and versatility of SOCET SET

Written specifically for maximum productivity of DoD workflows

Site license for MCG gives maximum economy

DPPDB and CIB Format Production Modules meticulously follow MIL specs — users can depend on integrity of output products

DPPDB and CIB enable users to take full advantage of current trends toward greater use of commercial imagery

All modules unclassified except DTW

MCG reflects comprehensive feedback from services business areas in BAE Systems, which have used it extensively to generate products for DoD customers

DPPDB

The DPPDB Format Production Module complies with MIL-PRF-89034, March 1999 format specifications. It generates controlled imagery in DPPDB format from government and commercial image sources and adjusted support data [AMSD(1) or USMSD(1)]. The production flow, derived from the FPE solution designed for the U.S. DoD, is deployed worldwide.

DPPDB offers softcopy image assessment of source imagery and has the capability to segment the imagery and generate RPC math models. It delineates adverse and void areas (water), and enhances, rectifies, downsamples, and compresses imagery in JPEG format. The results are staged on a local or networked disk, then written to DVD or 8 mm tape. Staging consists of multi-volume directories containing the master product file, CADRG frame files, and all image segments for that given volume. The module can ingest existing DPPDB products for editing of metadata.

CIB

The CIB Format Production Module complies with MIL-PRF-89041, 15 May 1999 format specifications. It generates controlled imagery in CIB format from government and commercial image sources, and supports resolutions of 1 meter or 5 meters. Imagery can be remapped to 8 bits per pixel, orthorectified using DTED to remove terrain distortions, and radiometrically balanced and mosaicked before final formatting. A native CIB viewer is included for seamless viewing of CIB frames. Each CIB product or “cell” covers a pre-defined region of the Earth. CIB outputs can be formatted for CD or DVD, and include:

- Compressed and uncompressed CIB
- Reference graphic
- Overview image
- Frames
- Table of contents file (ATOC)
- CADRG file

MCG

The MCG module, available as a site license, provides specification files to guide feature extraction during the compilation of maps to comply with government standards. It provides tables and attributes for users to create standard and customized vector products; the attributes are defined by the Feature Attribute Coding Catalogue (FACC). MCG supports products such as Topographic Line Map and City Graphics and works with special functionality in SOCET SET Feature Extraction, including FACC+ Specification File Editor as well as tools to generate MCG databases for TLM-50, JOG-A, VMAP-2 and Foundation Feature Data.

TOPSCENE

This visualization module provides integration of SOCET SET Feature Extraction with the DoD’s TOPSCENE mission rehearsal system, which is used by the U.S. Navy, Air Force and Army. TOPSCENE offers the import and export of features, imagery and terrain.

Additional modules useful to the defense community:

Visual Coverage Tool (VCT)

The VCT module, intended mainly for the defense community, provides a rapid, easy-to-use overview of the footprints of geospatial data available on the network, superimposed over reference imagery or maps, enabling users to select and load maps and images into SOCET SET.

SOCET for ArcGIS®

Both government and commercial companies use the SOCET for ArcGIS module, which was introduced in January 2005 to enable users to collect and update feature data directly in the ESRI® environment while viewing it against stereo imagery. SOCET for ArcGIS works with both personal and multi-user geodatabases and with shapefiles.

ClearFlite®

Developed originally for defense users, but embraced by commercial customers as well, ClearFlite is a digital mapping tool designed to help operators identify and record vertical obstructions in and around airfields with a high degree of accuracy.

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SSDM 08/06