



Geospatial eXploitation Products (GXP®)

Training Course Catalog

All scheduled training courses held in our regional training centers are free for current GXP® customers and prospective* customers.

Classroom seating is limited, so please register in advance to secure your space. We regret that we are unable to accept walk-in registrations.

Training course dates and online registration are accessible on the GXP customer portal:

www.MyGXP.com

**Subject to approval by GXP management.*

Training Manager

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Training courses: SOCET GXP®

Track 1: SOCET GXP essentials (2 days)

Who should attend?

New customers (or approved potential customers) and image analysts who need to become familiar with the user interface, basic software concepts, and whose workflows do not include advanced annotations.

Description

This course is the fundamental learning block for all other modules. It offers an overview of SOCET GXP functionality and product creation.

Course contents

Topics include:

- » Graphical user interface and basic components
- » Preferences
- » Loading and importing data
- » Web Mapping Service
- » Working with imagery
- » Basic drawing tools
- » Chipping
- » Grid reference graphic
- » Custom templates
- » Comparison tools
- » Registration
- » Finishing Tool
- » Terrain visualization
- » Google Earth products
- » 3-D visualization

Track 2: Mapping and topography (5 days)

Who should attend?

Government geospatial or topographic analysts, and others with similar workflows.

Course contents

This course is comprised of the following modules:

- » SOCET GXP Essentials (2 days)
- » Advanced annotations and feature extraction (1½ days)
- » Ortho products (½ day)
- » Terrain generation and editing (1 day)

Track 3: Photogrammetric workflows, transition from SOCET SET to SOCET GXP (5 days)

Who should attend?

SOCET SET customers who are transitioning workflows to SOCET GXP.

Course contents

This course is comprised of the following modules:

- » SOCET GXP basics (1 day)
- » Triangulation (1 day)
- » Terrain generation and editing (1 day)
- » Ortho products (½ day)
- » Advanced annotations and feature extraction (1½ days)

Track 4: Remote sensing (5 days)

Who should attend?

Full-spectrum geospatial-intelligence analysts and others with similar tasks.

Course contents

This course is comprised of the following:

- » Track I: SOCET GXP essentials (2 days)

Plus the following modules:

- » HSI/MSI/SAR (1 day)
- » Advanced annotations and feature extraction (1½ days)
- » 3-D modeling (½ day)

Track 5: Image exploitation (4 days)

Who should attend?

Image analysts who work with advanced annotations, use Esri software products, or create 3-D visual simulation products.

Course contents

This course is comprised of the following:

- » Track I: SOCET GXP essentials (2 days)

Plus the following modules:

- » Advanced annotations and feature extraction (1½ days)
- » 3-D modeling (½ day)

Track 6: Video analysis (2 days)

Who should attend?

Video analysts.

Course contents

This course is comprised of the following modules:

- » SOCET GXP basics (1 day)
- » Video analysis (½ day)

A detailed description of the individual SOCET GXP training course modules follows on pages 2 – 3.

Training course modules: SOCET GXP®

SOCET GXP basics (1 day)

Description

This course is an abbreviated version of the SOCET GXP essentials class. It offers an overview of SOCET GXP software functionality and user interface.

Module contents

Topics include:

- » Graphical user interface and basic components
- » Preferences
- » Loading and displaying data
- » Coordinate systems
- » Working with imagery
- » Drawing tools
- » Chipping
- » Linking panels
- » Registration
- » Terrain visualization
- » Google Earth products
- » License tips

Ortho products (½ day)

Description

Learn how to get the best results when creating orthorectified products.

Module contents

Topics include:

- » What is an orthophoto?
- » Types of orthorectified products
- » Orthophotos
- » Mosaic
- » Sheet cutter
- » True orthophotos
- » Seamline editing

Triangulation (1 day)

Description

Learn about different sensors and triangulation methods for registering images and improving accuracy. Triangulation is a key component in most SOCET GXP geospatial analysis workflows.

Module contents

Topics include:

- » Introduction to sensor models
- » Relative triangulation
- » Control point editor
- » Absolute triangulation
- » Interactive point measurement
- » Automatic point measurement
- » Analyzing results
- » Frame camera import
- » Frame triangulation

3-D modeling (½ day)

Description

Discover how SOCET GXP can be used for situational awareness. Create 3-D products such as 3-D GeoPDF and OpenFlight models. Extract 3-D buildings in SOCET GXP and display in the 3-D viewer.

Module contents

Topics include:

- » 3-D modeling workflow
- » 3-D modeling fundamentals
- » Basic building tools
- » Complex 3-D modeling tools
- » Automatic texturing
- » 3-D visualization products

Software Version(s)

GXP application training is conducted on the currently-released software version(s).

Training course modules: SOCET GXP®

Terrain generation and editing (1 day)

Description

Learn how to ingest and edit LiDAR data. Generate and edit terrain using stereo imagery and the latest algorithms.

Module contents

Topics include:

- » Digital elevation models and digital surface models
- » Post spacing
- » Stereo Model Manager
- » Stereo viewing
- » Automatic terrain generation
- » NGATE
- » ATE
- » Interactive terrain editing
- » Terrain compare
- » TIN display and editing
- » Terrain operations
- » Terrain quality statistics
- » Ingesting and editing LiDAR data

Advanced annotations and feature extraction (1½ day)

Description

Find out how SOCET GXP interacts with ArcMap and how to automatically extract buildings and trees from high-resolution LiDAR data. Draw graphics and extract features in 2-D and 3-D using the new Drawing Toolbox.

Module contents

Topics include:

- » Stereo Model Manager and stereo viewing
- » Drawing Toolbox (advanced annotations)
- » Creating specification files
- » Creating style sheets
- » Creating a SOCET GXP feature database
- » Default specification file
- » Extracting features
- » Feature query
- » Spatially enabled exploitation
- » SOCET for ArcGIS
- » Automatic feature extraction

HSI/MSI/SAR (1 day)

Description

Work with HSI, MSI, and SAR imagery in SOCET GXP. View and manipulate image bands and apply algorithms to draw out items of interest or areas that need further investigation.

Module contents

Topics include:

- » HSI and MSI imagery
- » MSI composites
- » Band selection
- » Image enhancements
- » Histograms
- » Pan sharpening
- » Scatter plot
- » Spectral profile
- » Band statistics
- » Spectral algorithms
- » Supervised and unsupervised classification
- » Xport
- » SAR
- » Band math
- » Colorization

Video analysis (½ day)

Description

Learn how to view video and collaborate with other analysts to create products.

Module contents

Topics include:

- » Create missions
- » Load/connect to video files
- » Collaborate with other screeners
- » Video enhancements
- » Object tracking
- » Create products

Software Version(s)

GXP application training is conducted on the currently-released software version(s).

Training courses: GXP Xplorer®

GXP Xplorer: The basics (1 day)

Who should attend?

New users of GXP Xplorer.

Description

The one-day GXP Xplorer: The basics class offers a full day of hands-on training to orient users to this new data management software application.

Students learn how to locate, retrieve and share data across a network using powerful search techniques; keep track of all available data by file type; view geo-tagged search results graphically on a map; export data to PowerPoint; and load data into SOCET GXP for exploitation.

After completing the course, students will be familiar with the software interface and menus, and be comfortable navigating the application to search for, catalog and download data.

For system administrators, an optional second day of training is available.

GXP Xplorer for system administrators (1 day)

Who should attend?

GXP Xplorer system administrators.

Description

The one-day GXP Xplorer for system administrators class focuses on how to install and configure the GXP Xplorer server client. Topics include how to set user roles, including activating and deactivating users; creating catalogs and editing catalog settings; monitoring directories and federating catalogs.

Prerequisite

Please note: Students who wish to attend the GXP Xplorer for system administrators class must first complete the GXP Xplorer: The basics training course.

Software Version(s)

GXP application training is conducted on the currently-released software version(s).

Training courses: SOCET SET®

Offered by request only, please contact the training coordinator in your region for more information.