GXP® Desktop v4.6.0 cumulative release enhancements

Evan Miller
GXP Product Development

BAE SYSTEMS

GXP Desktop v4.6.0.0 release enhancements

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GXP Desktop v4.6.0.0 release enhancements

- This presentation contains the enhancements included in SOCET GXP® and GXP InMotion™ released December 19th, 2024.

  - GXP Desktop software are full installations.

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SOCET GXP v4.6.0.0 release enhancements

**BAE SYSTEMS**

Infrastructure updates

- Added support for Microsoft Windows® 11.

- Removed LEAD video filter dependencies.

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API updates

- Added the ability to set camera parameters in the 3-D Multiport™.

- Removed WGS-84 dependencies.

  - Now the planetary community can use the API to make image to ground calls without having to do a conversion.

- Added the ability to toggle the 3-D North arrow in a 3-D Multiport.

- Updated JavaScript® API to support:

  - Jump to Point.

  - Set zoom and rotation.

  - Create graphics/update graphics.

  - Retrieve CE/LE.

  - Textbox support.

- Redesigned API queries to handle larger datasets to get returns quicker.

  - Example: 1-1000, 1001-2000, etc.

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Trackball name preference

- We added trackball as a dropdown to allow users to quickly select their input type.

Input controls preference
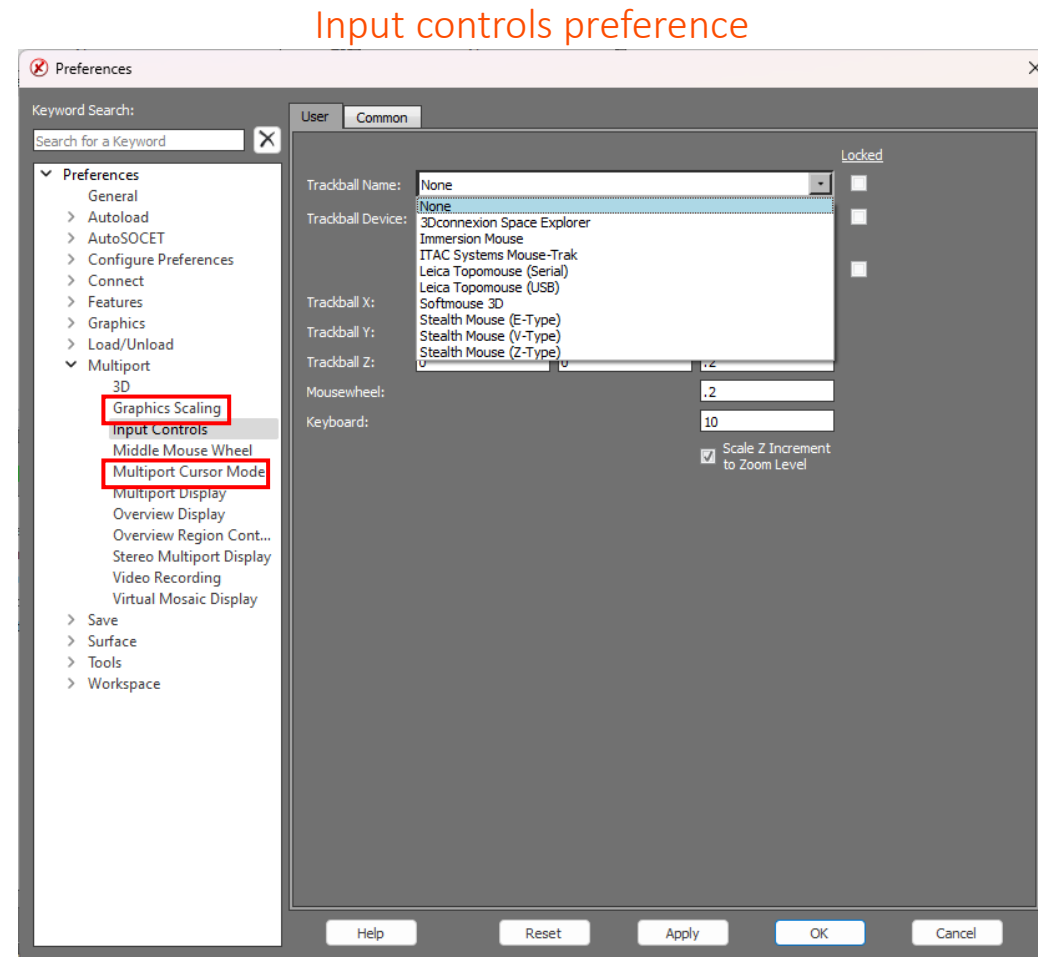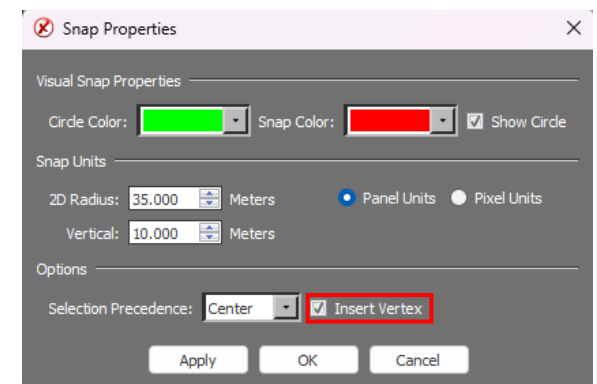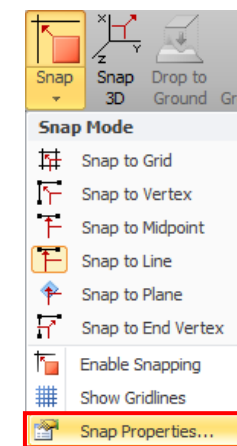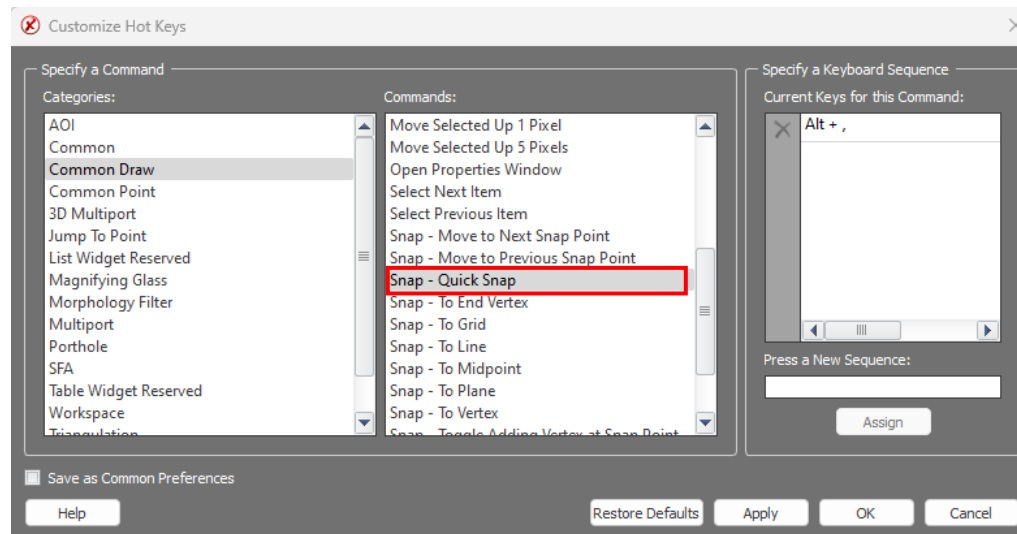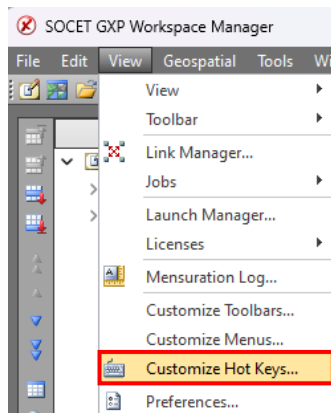
Preferred Streaming Protocol preference

- Allows users to select how they want their imagery streamed into SOCET GXP from their GXP Xplorer® Platform server.

Streaming protocol preference
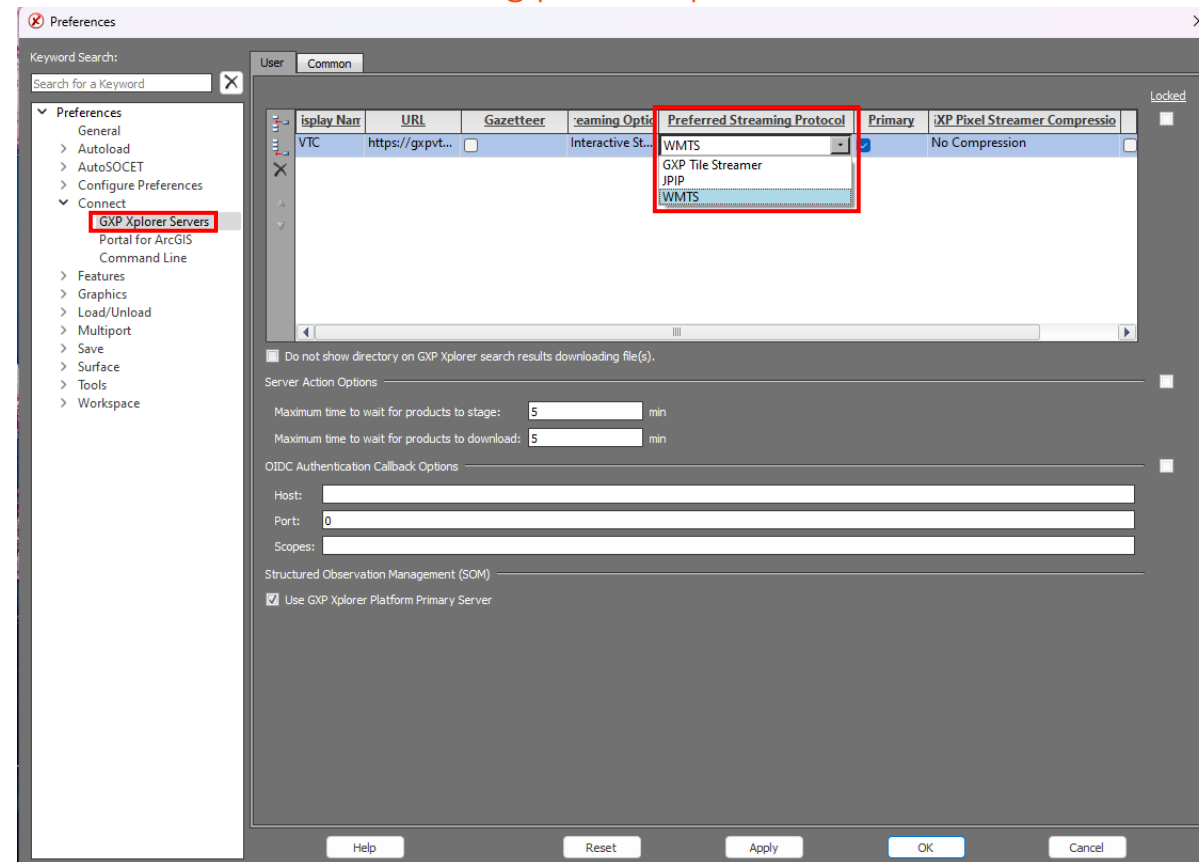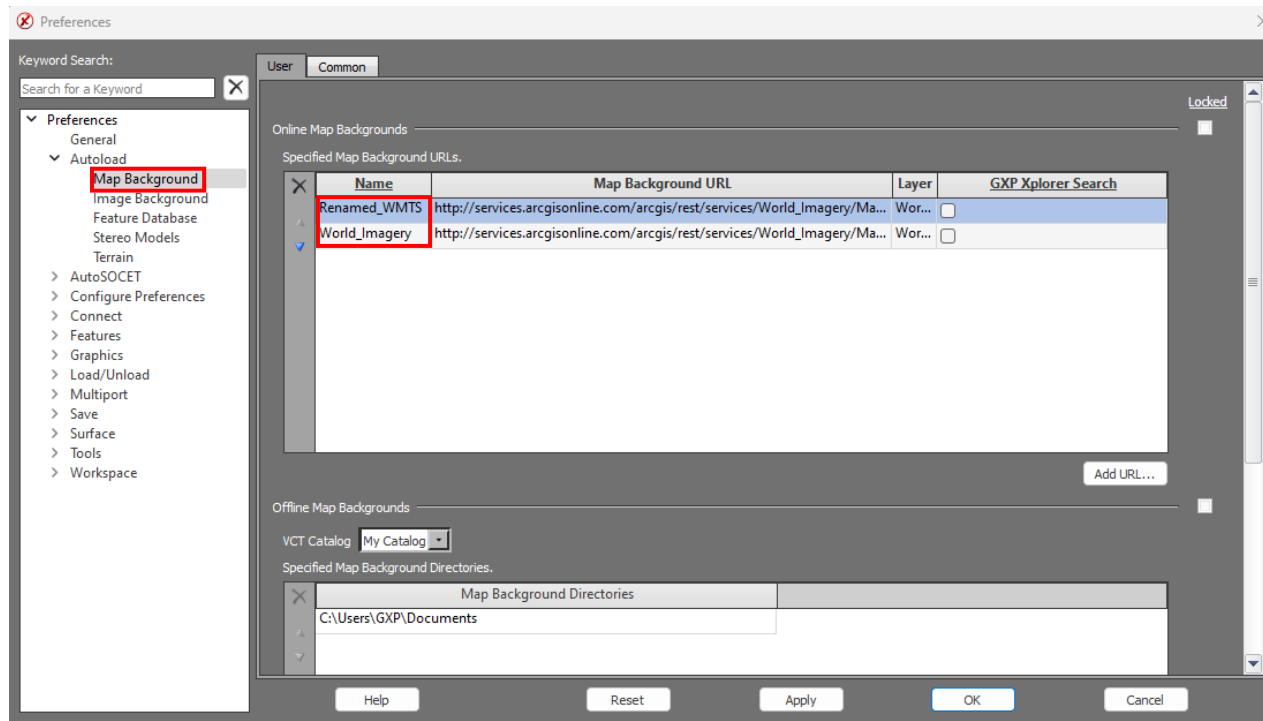
Quick Snap Hotkey

- Allows users to quickly snap to a point using a hotkey.
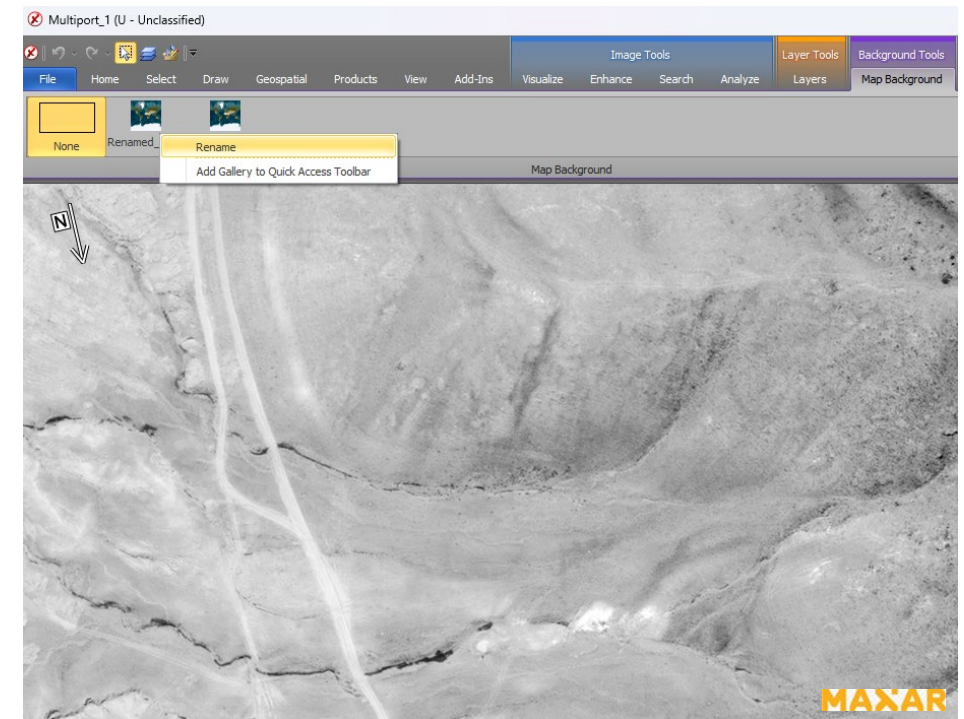
  - Insert Vertex must be enabled.

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Map Background functionality

- Users can rename Map Backgrounds in Preferences and in the Multiport.
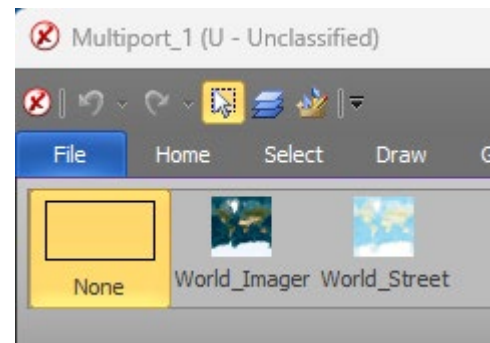
Map Background Preference

Map Background Rename from Multiport

Map Background thumbnails

- Map Backgrounds are now easily identified by their thumbnails in the Multiport.
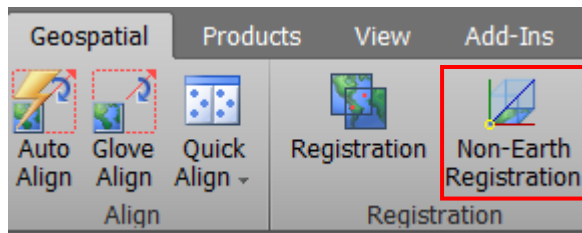
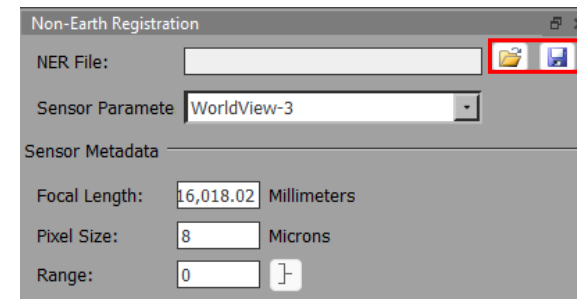Map Background Thumbnails

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Non-Earth Registration (NER) load/save

- Allows users to load previously saved NER work.

- Enables users to save work prior to workflow completion.
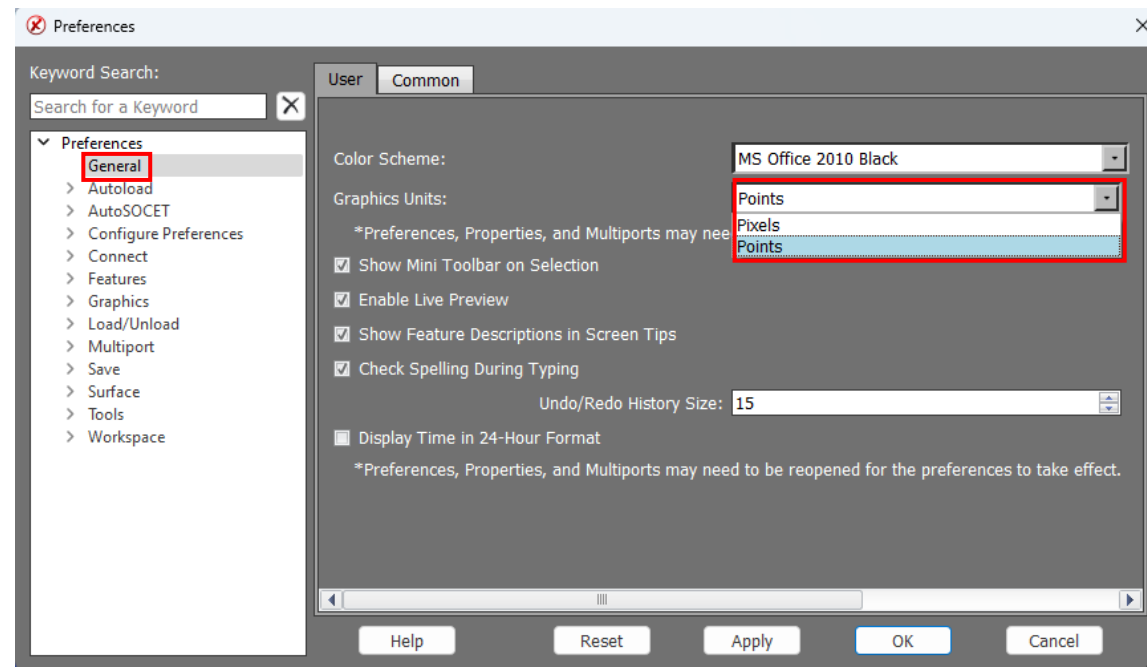
NER button location

NER Open/Save button

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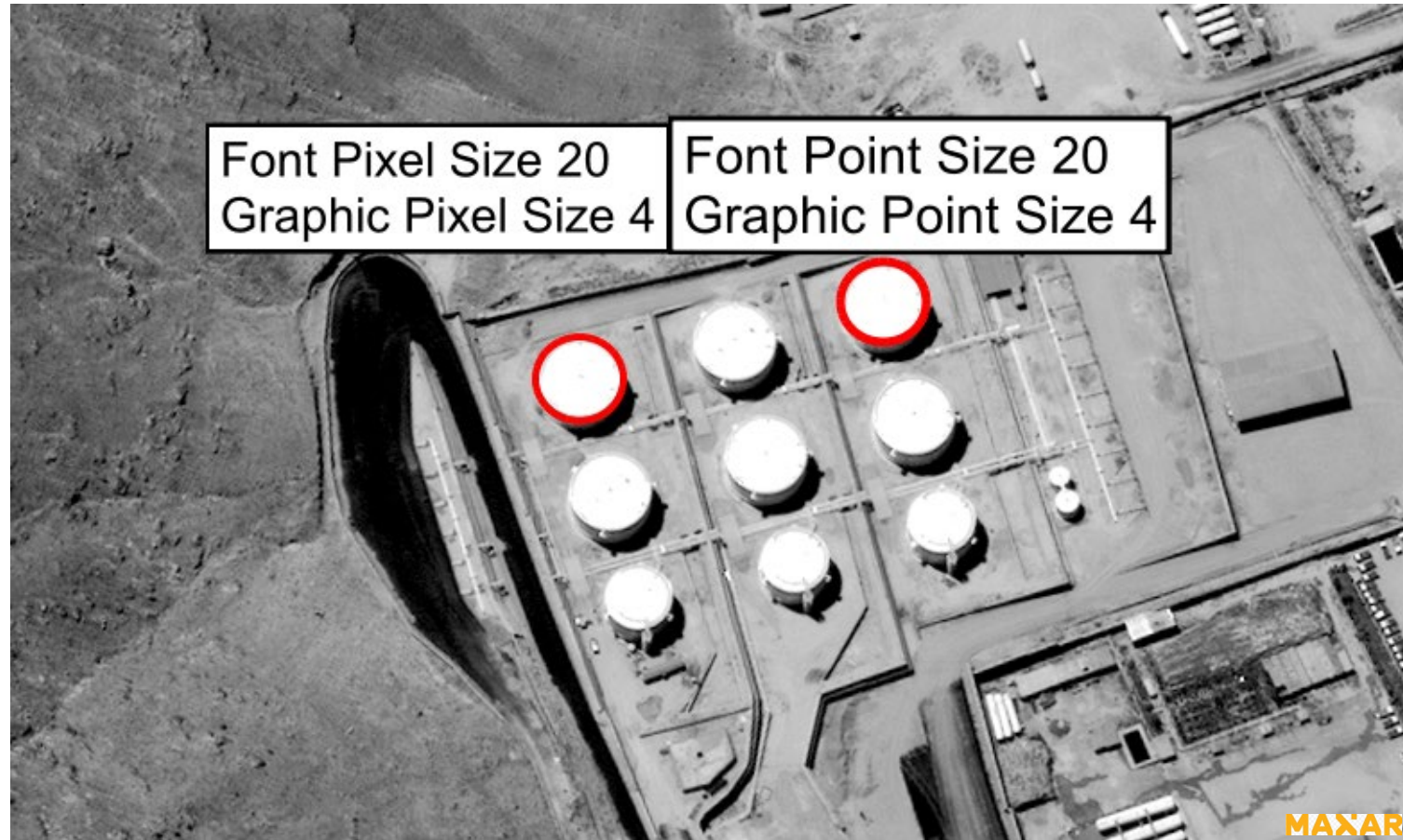# Point graphics units preference

- Users can now use point size instead of pixels.

  - Maintains graphic size across different screen resolutions.

  - Can be updated on the fly.

Graphics Units Preference

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New point graphics units preference

- Example:

Additional new features

- Now clean up all files after an MIE4NITF file is unloaded.

- GXP Automatic Tools for Object Recognition (GATOR):

  - Added the ability to support AOI's from Ortho map and imagery.

  - SOCET GXP now gets its source classification for GATOR detections from GXP Xplorer Platform.

- Users can now populate SNSPSB records with eCIB creation.

- Optimized triangulation and terrain convert jobs to look for errant points and remove them.

- Added the ability to Skip gaps in MTI data playback.

  - If the data has a gap in coverage, it will automatically be skipped when animated.

- Added messaging to inform the user if their InSAR data isn't compatible for CCD (Coherent Change Detection) generation.
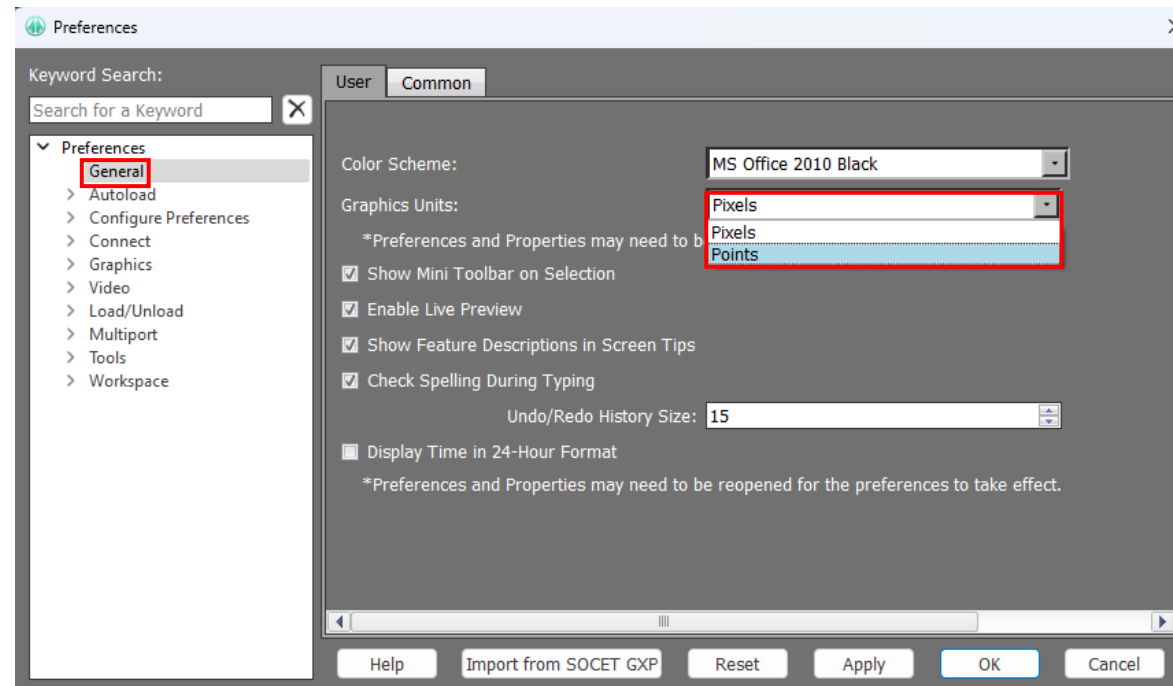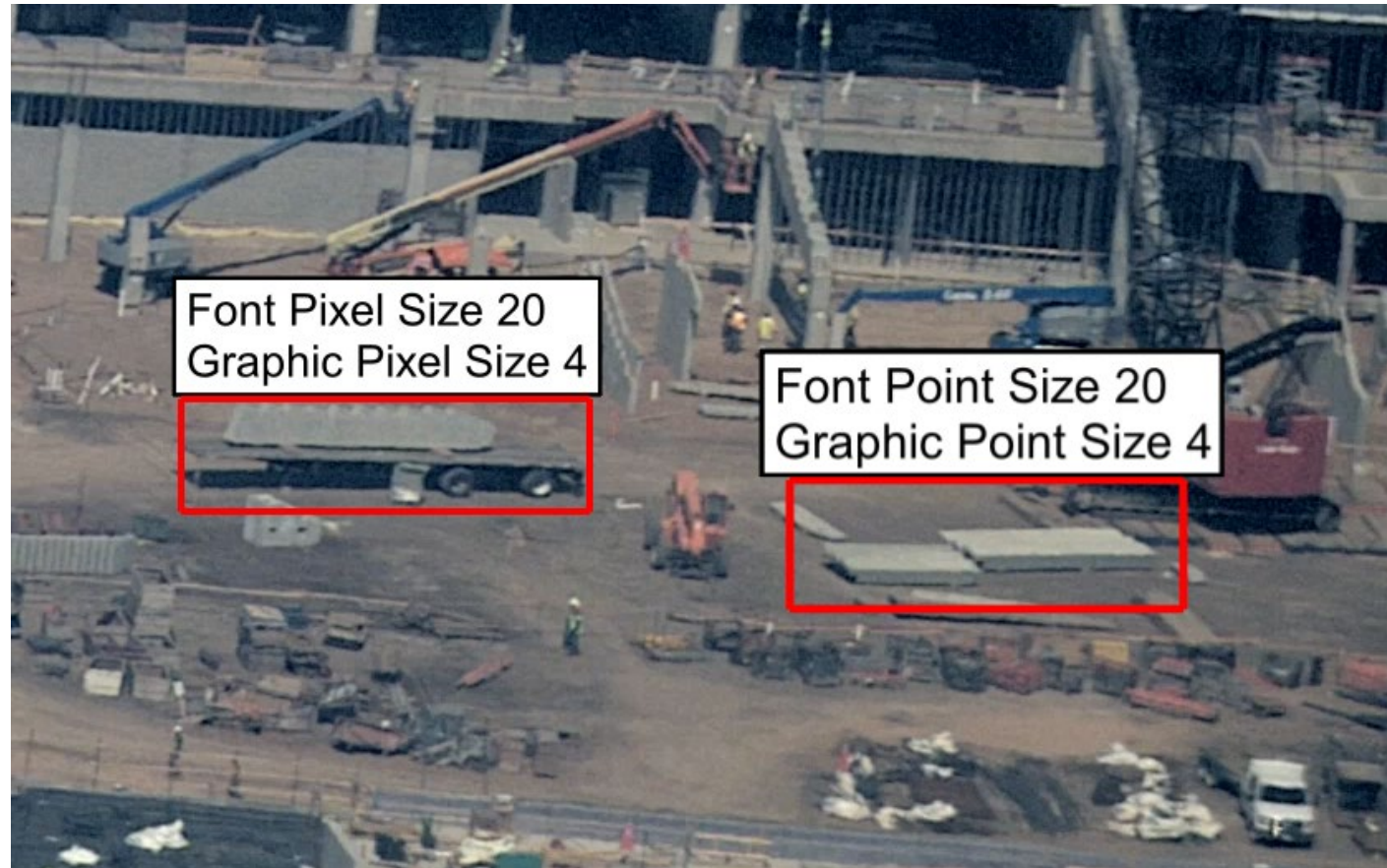
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GXP InMotion v4.6.0.0 release enhancements

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Point graphics units preference

- Users can now use point size instead of pixels.

  - Maintains graphic size across different screen resolutions.

  - Can be updated on the fly.

Graphics Units Preference

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New point graphics units preference

- Example:

Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

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GXP Desktop v4.6.0.1 release enhancements

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GXP Desktop v4.6.0.1 release enhancements

- This presentation contains the enhancements included in SOCET GXP and GXP InMotion released March 27th, 2025.

  - GXP Desktop software releases are full installations.

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SOCET GXP v4.6.0.1 release enhancements

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Infrastructure updates

- Updated to Java 11.

- Updated PostgreSQL.

- Updated OpenSSL.

- Added support for .NET 8.

- Integrated OAuth2.0 authentication.

- Updated UnicodeDateTime.

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Added preference for Default Cursor Tool

- Allows cursor to default to Glove tool.

Default Cursor Tool preference

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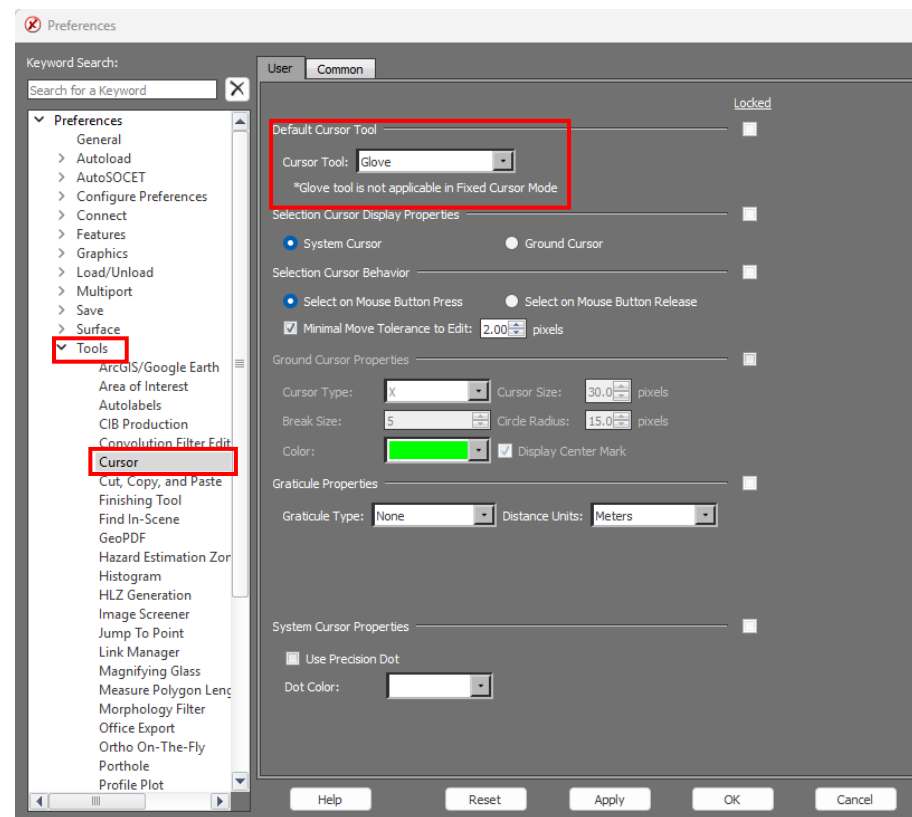
Added Hotkey for Glove tool

- Allows cursor to quickly change to Glove tool.

Glove tool Hot Key location
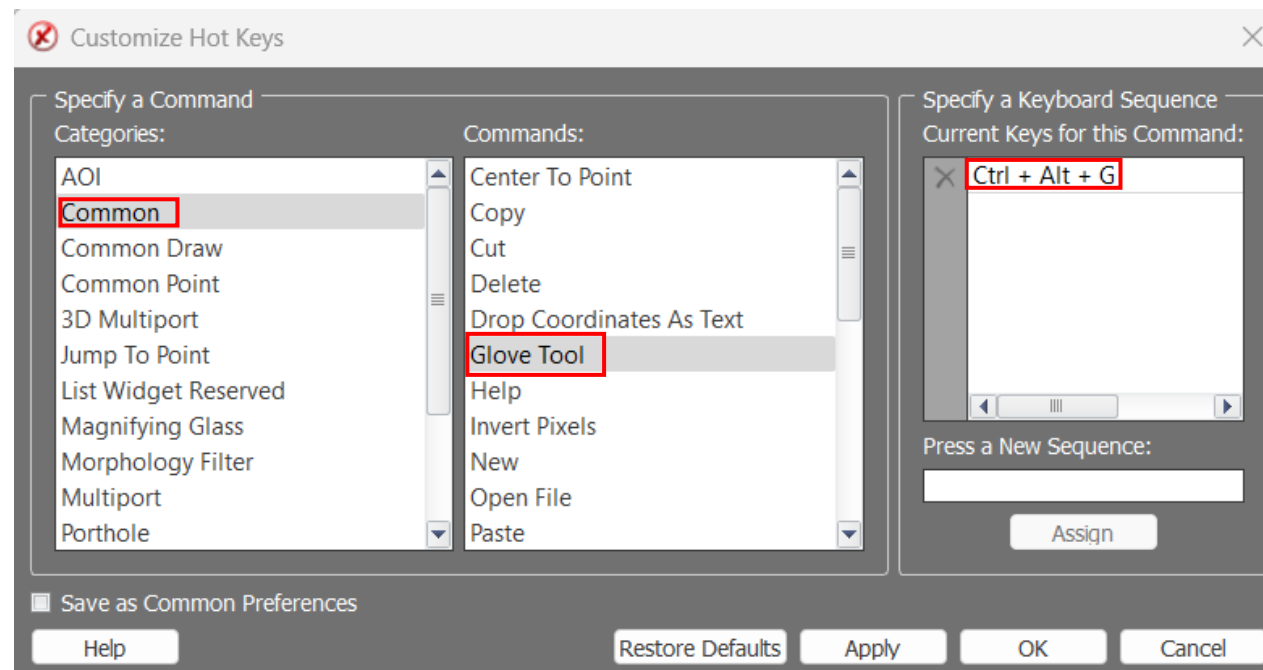
BAE SYSTEMS

Added Measurement Override to Preferences

- Measurement overrides were added to Bracket & Range and Bearing graphics preferences.

Measurement preference location
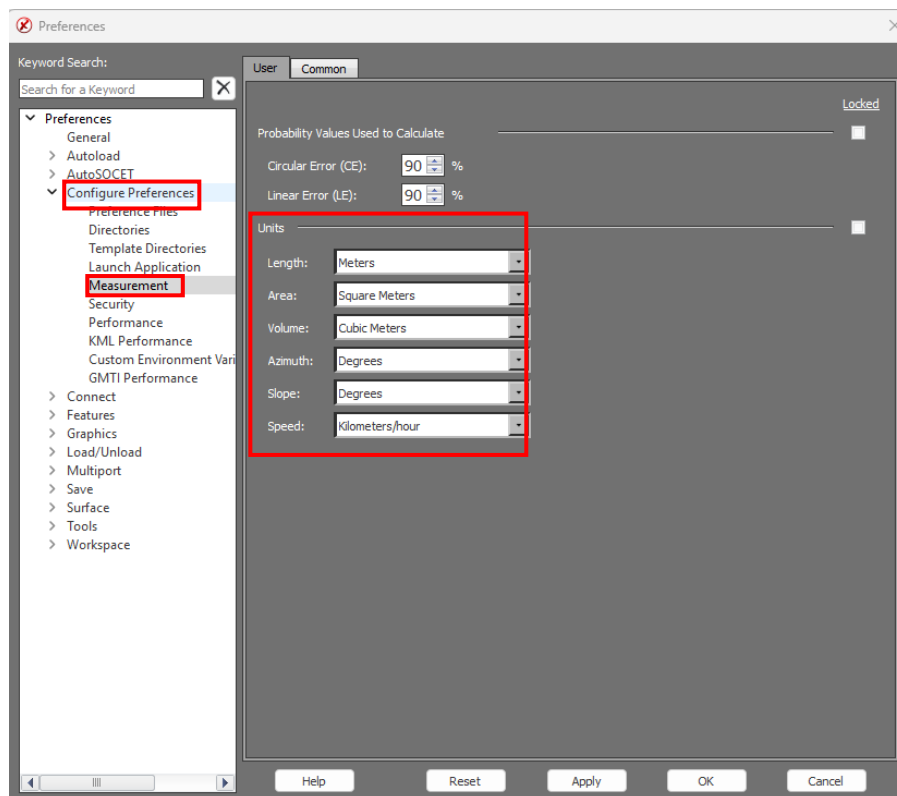
Override Measurement preference location
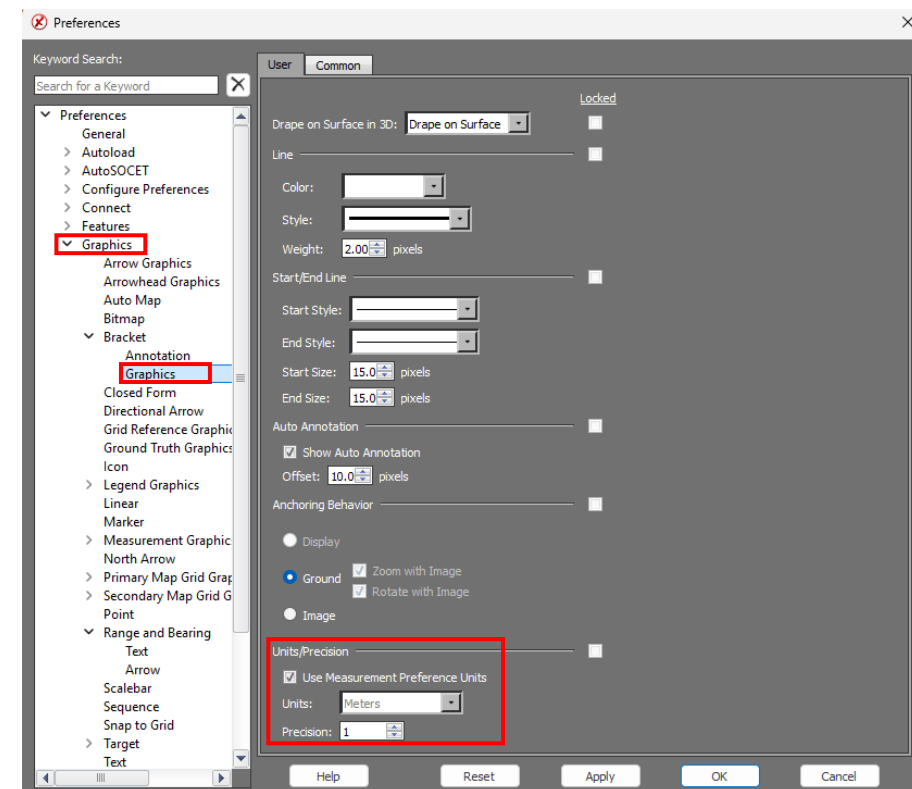
Sync Cursor

- Allows users to sync cursors between SOCET GXP and ArcGIS® Pro.

  - Improves QC time.

  - Viewing extents automatically update.

  - Cursors sync in the following modes:

    - Fixed Image.

    - Fixed Cursor.

    - Stereo.

    - Split Screen Stereo.

  - Hotkey is "Alt + Shift + S".

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Sync Cursor ...2

Sync Cursor Preference location

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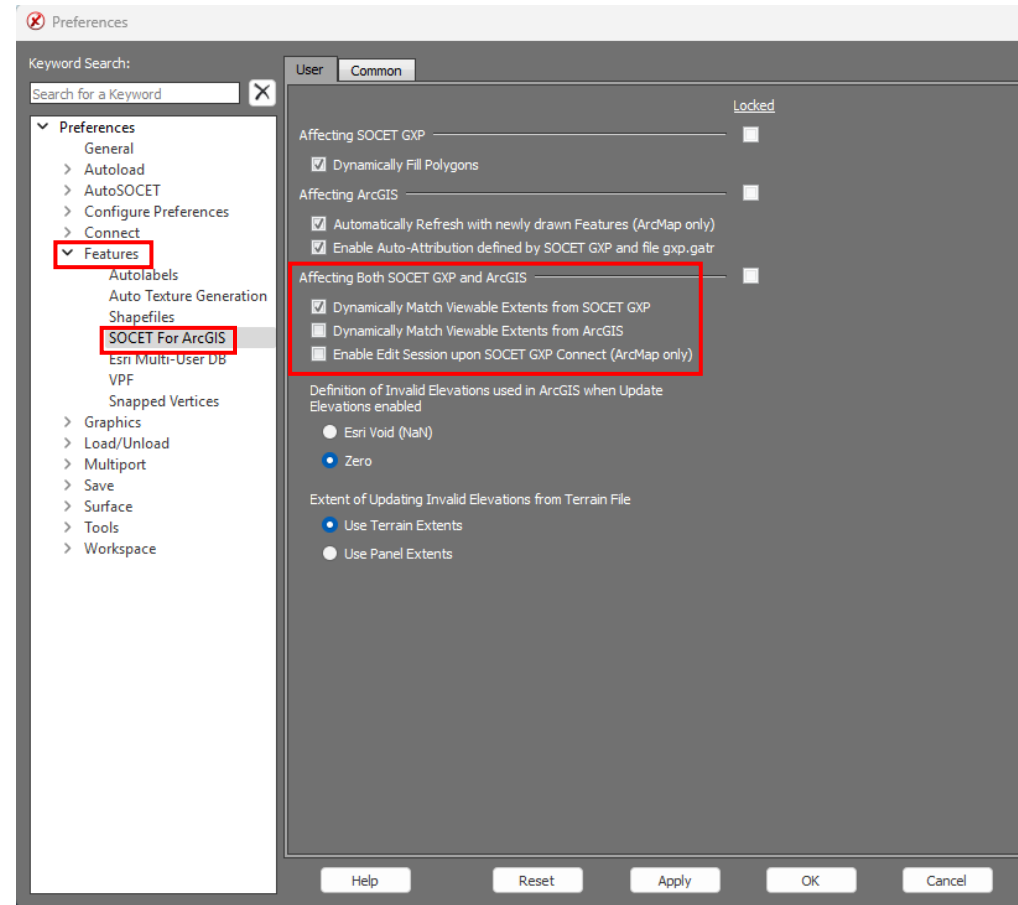
Sync Cursor …3

Sync Cursor UI

BAE SYSTEMS
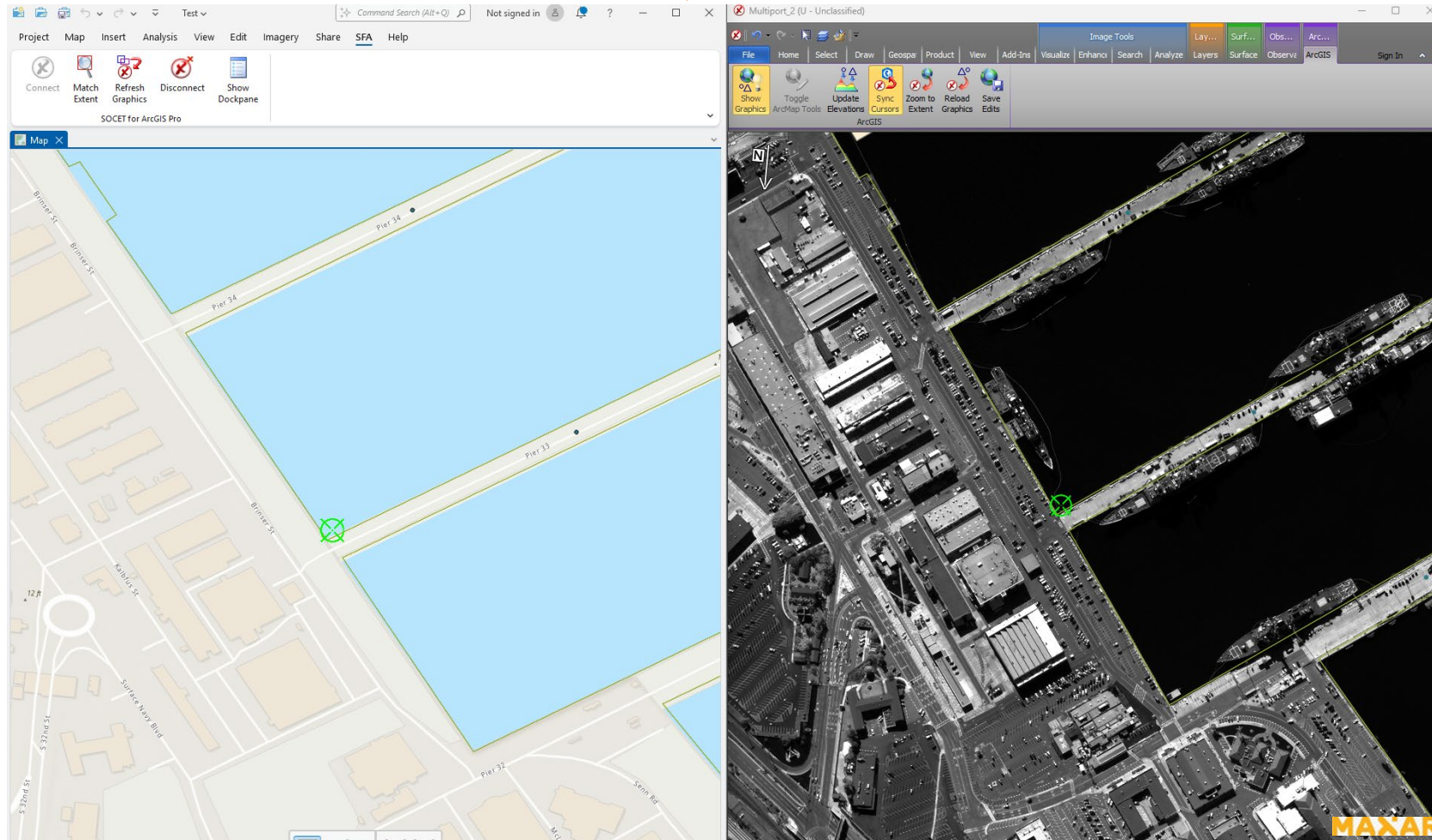
Web Service Layer

- Added a preference for Web Service Layers.

  - Allows for easier configuration and management.

  - Added OAuth2.0 authentication support.

Web Service Layer Preference
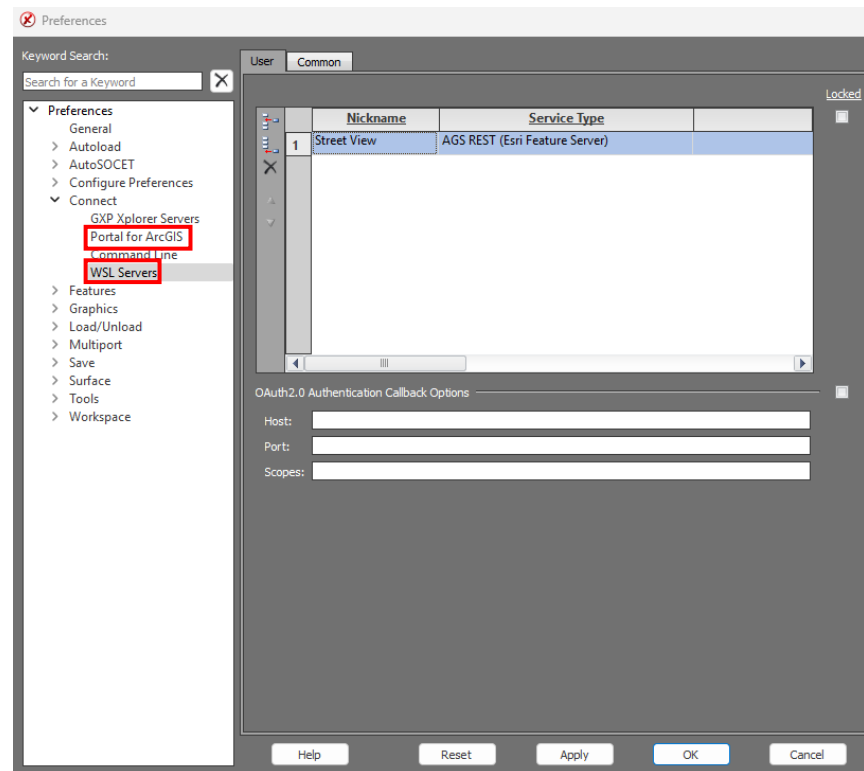
Web Service Layer …2

- Added additional Esri® Authentication using OAuth2.0.

Web Service Layer using OAuth2.0
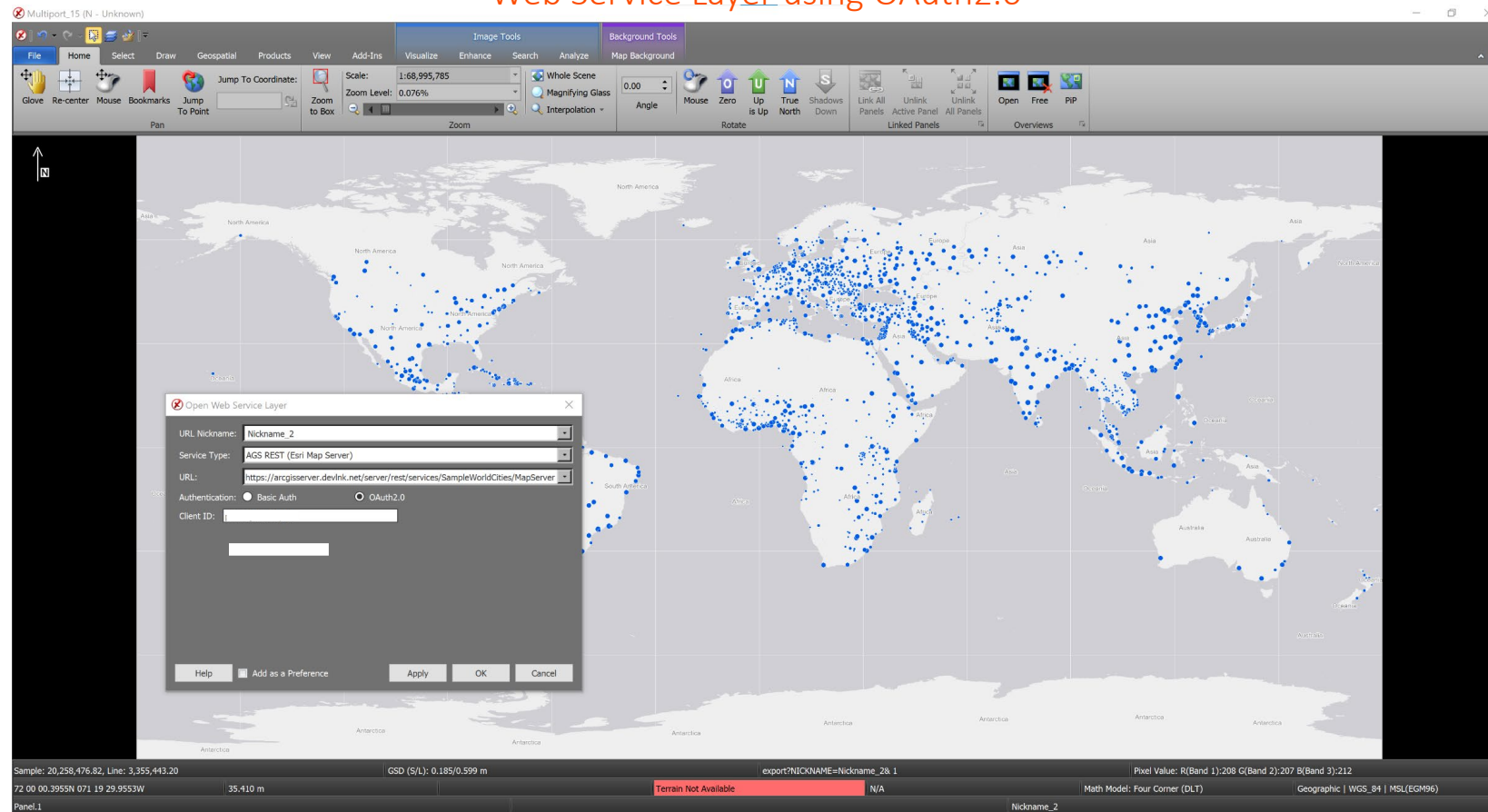
Added Layer Name to Esri results

- When an Esri Feature Service is selected from the GXP Xplorer Connector we return the service URL and Layer Name.

  - Enables users to quickly select and display layers of interest.

Feature Service Layer

Loading Observations Status

- Users can now get feedback when loading Observations into a SOCET GXP Multiport.

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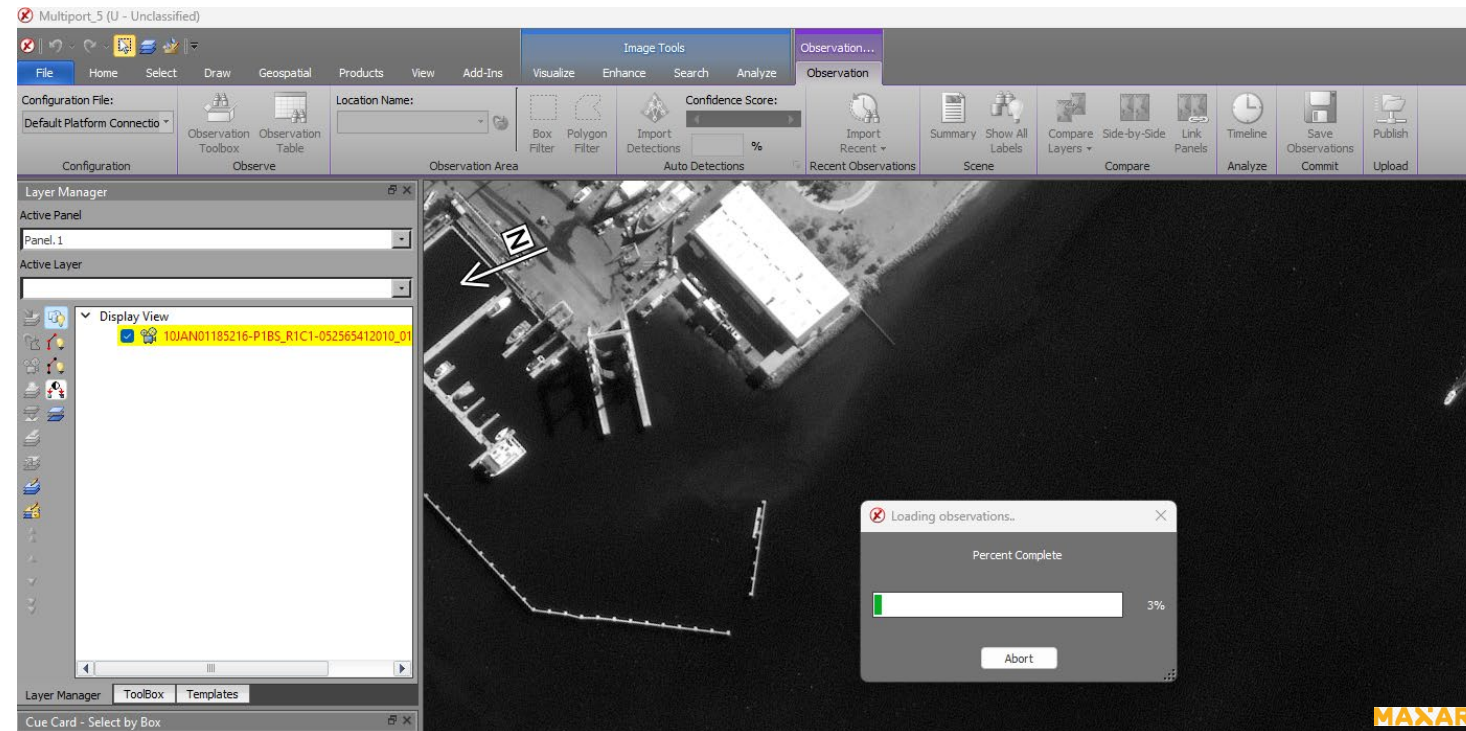
Scalebar Improvements

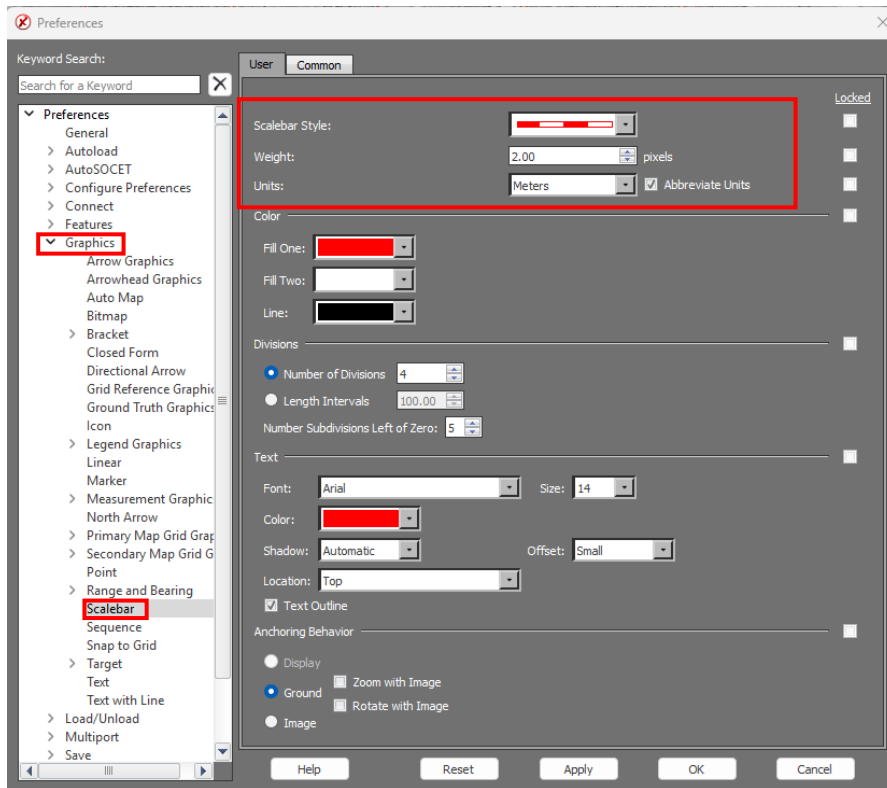- Abbreviated units of measurement.

  - m = Meters.

  - km = Kilometers.

- Dynamically update via preferences.

- Enables users to save work prior to workflow completion.

- Convert orientation of scalebar.

  - Vertical/Horizontal.

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Scalebar Improvements ...2

Scalebar Preference

Scalebar Properties

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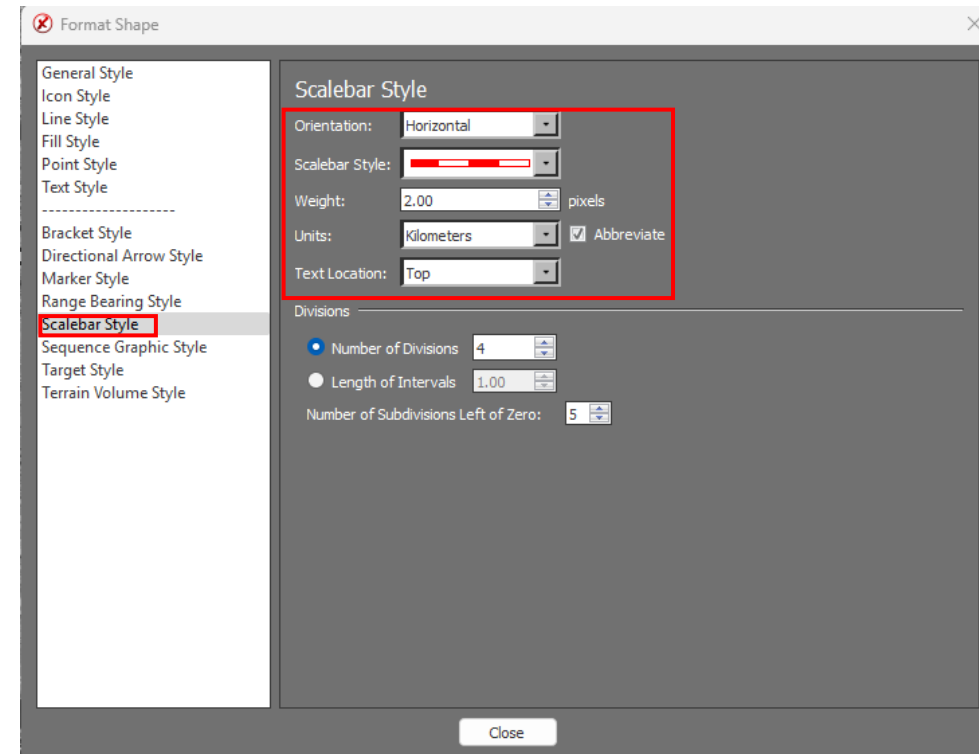
Scalebar Improvements ...3

Scalebar Visualization

Multi-line style improvements

- Line style weights are now the entirety of the line style.

Linear Graphics Preference

Linear Graphics Properties

BAE SYSTEMS
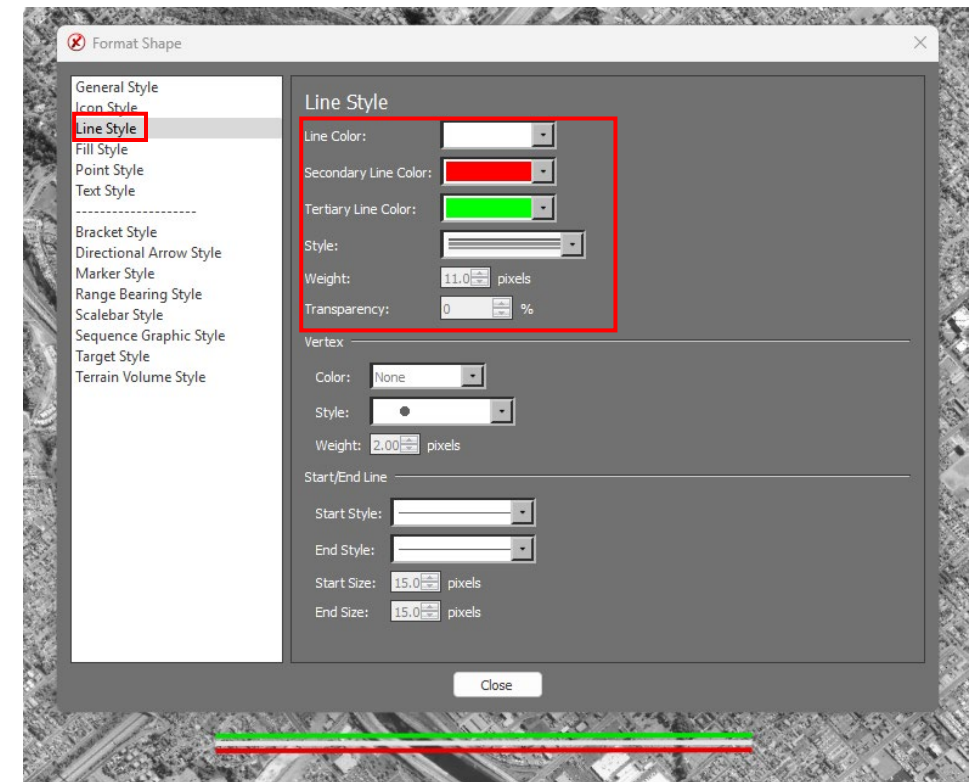
Additional new features

- Cleaned up Debug log.
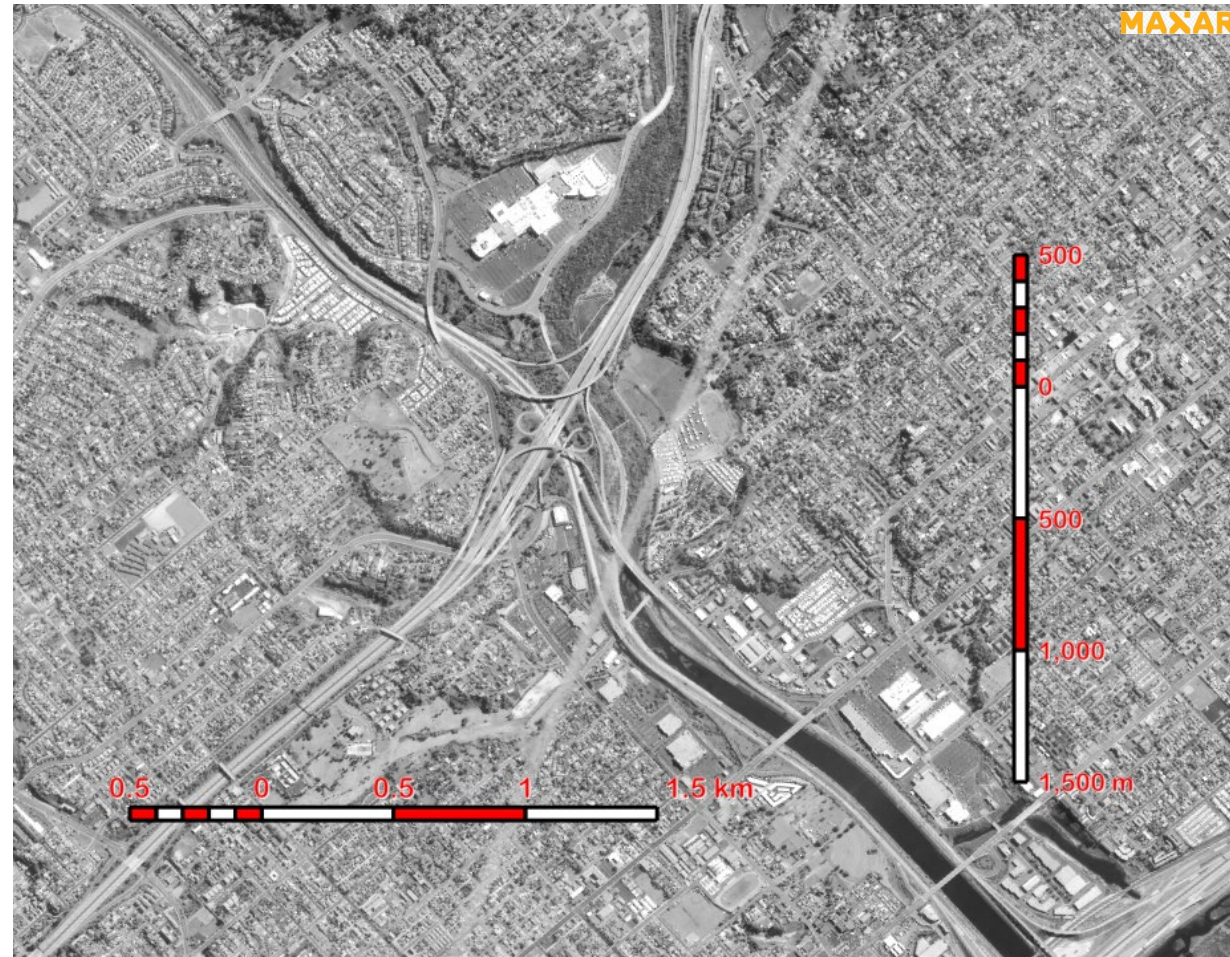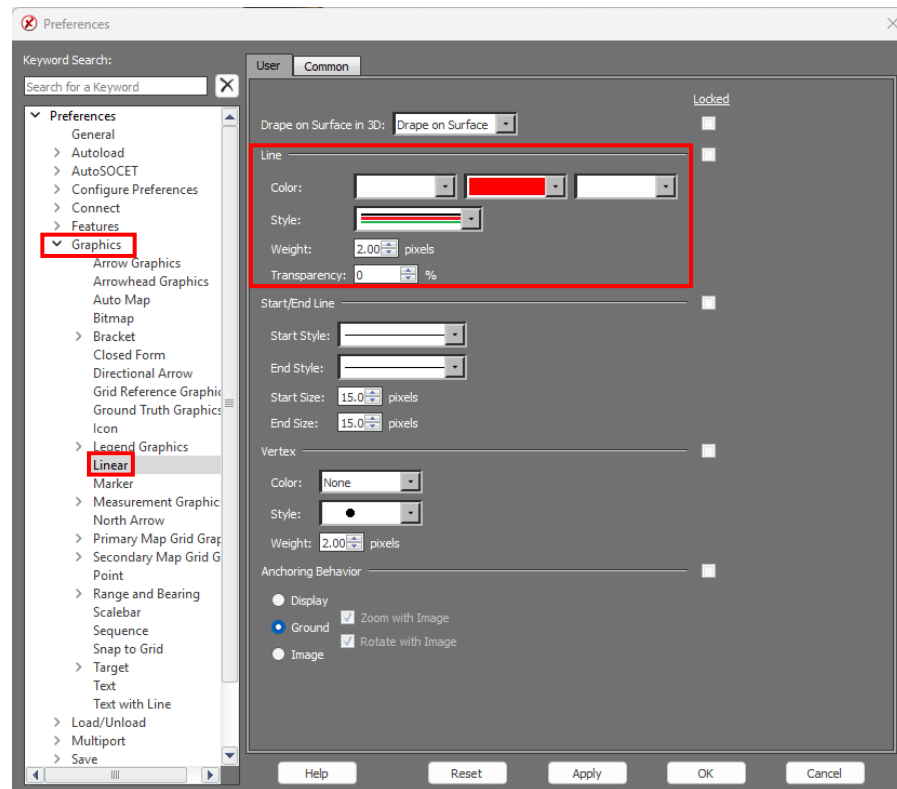
- Added GATOR GPU support.

  - UI change in GXP Xplorer Platform.

  - Environment variable change in SOCET GXP.

    - GPU is enabled when environment variable is set to: GXP_GATOR_USE_CUDA=TRUE.

  - Default is set for GPU optimization.

- Improved Epipolar rectification for oblique viewing.

  - A new sensor model was created for viewing extremely distorted imagery in stereo.

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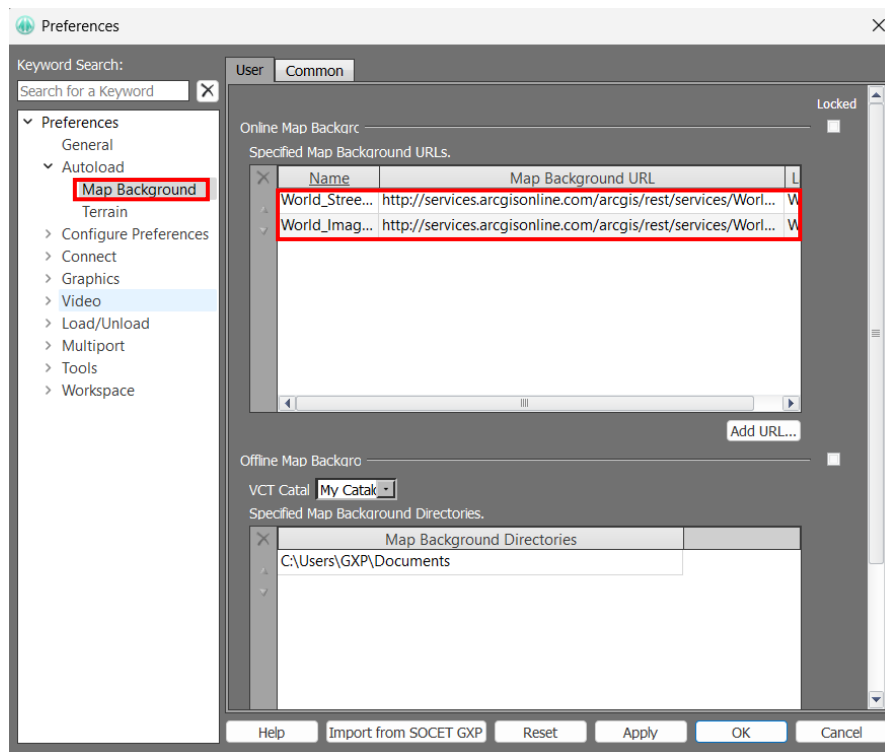# GXP InMotion v4.6.0.1 release enhancements

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Map Background functionality
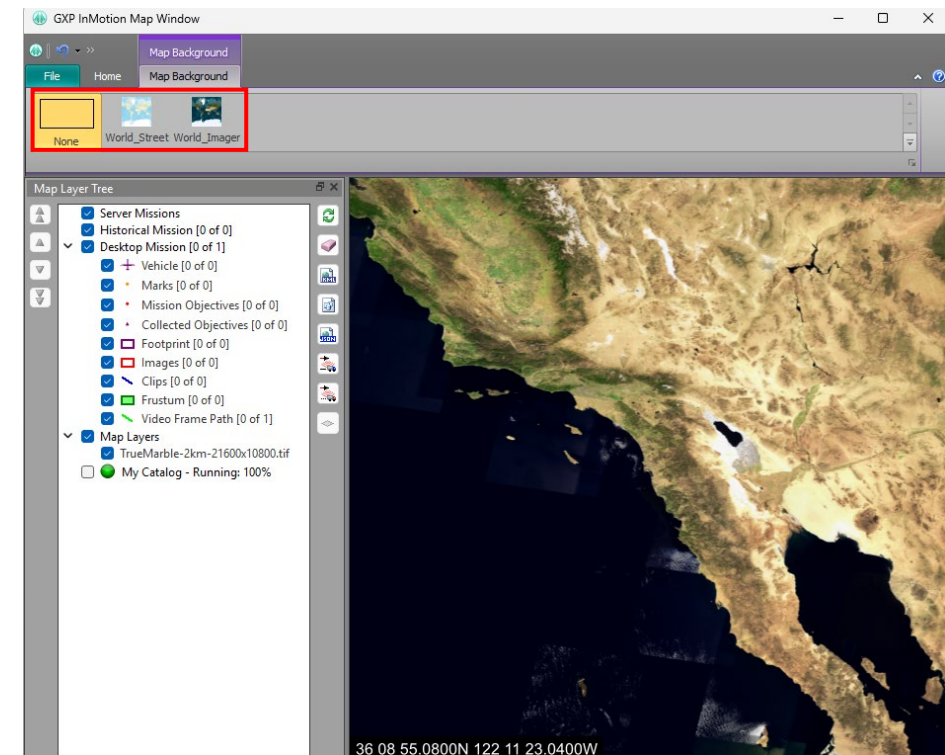
- Users can rename Map Backgrounds in Preferences and in the Multiport.

Map Background Preference

Map Background View and Rename from Map Window
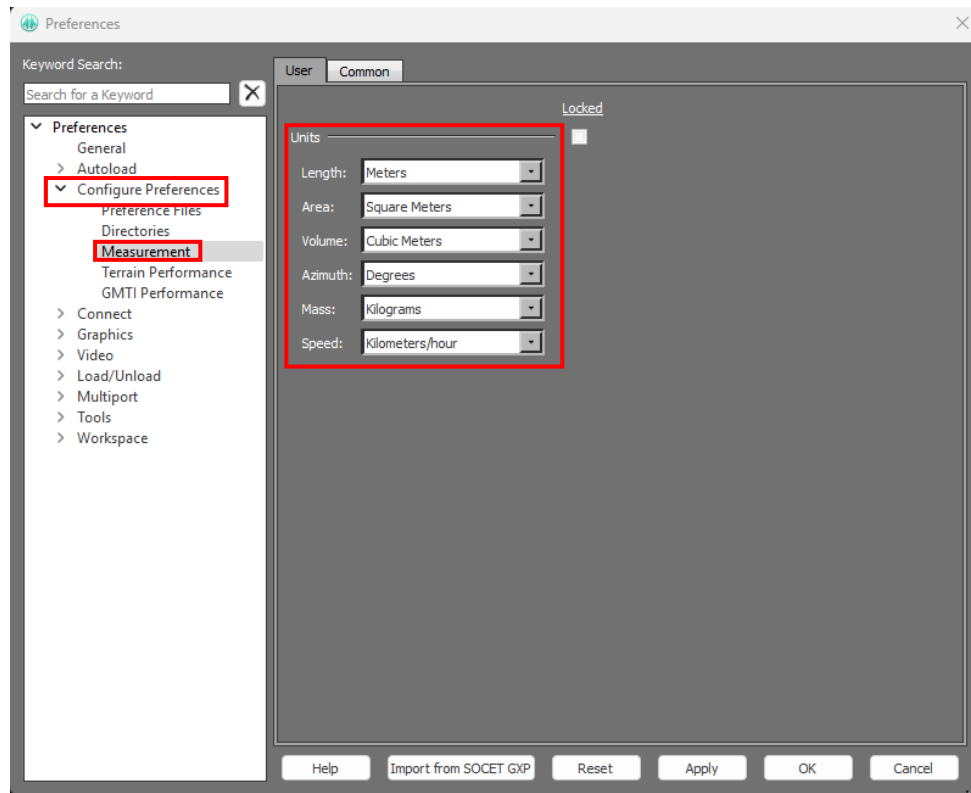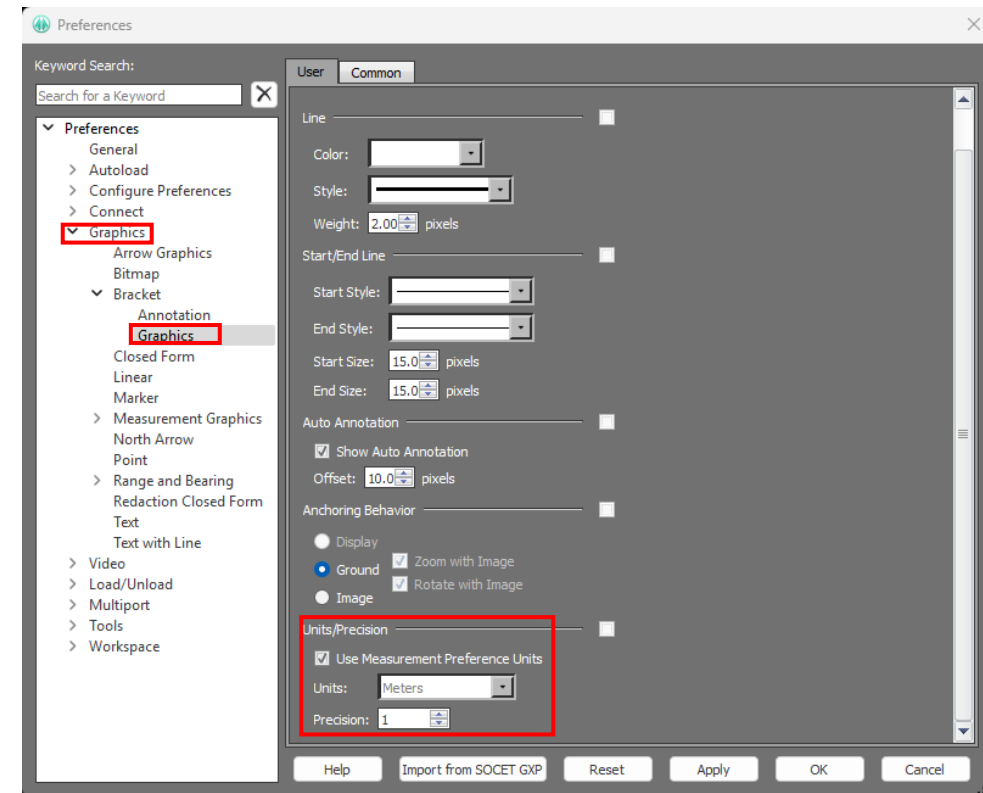
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Added Measurement Override to Preferences

- Measurement overrides were added to Bracket & Range and Bearing graphics preferences.

Measurement preference location

Override Measurement preference location

BAE SYSTEMS
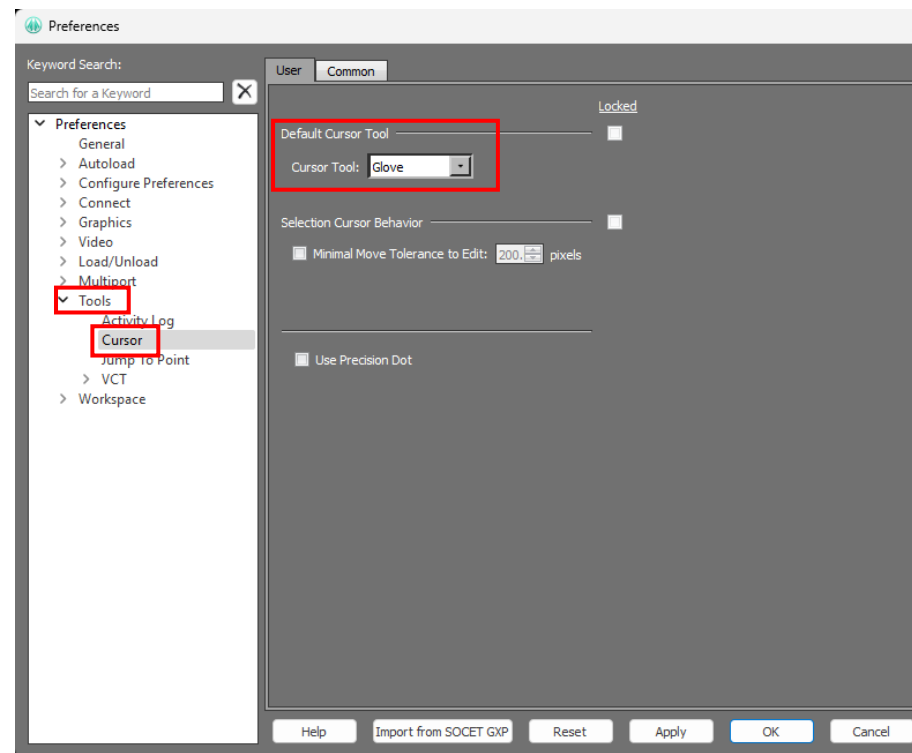
Added preference for Default Cursor Tool

- Allows cursor to default to Glove tool.

Default Cursor Tool preference

BAE SYSTEMS
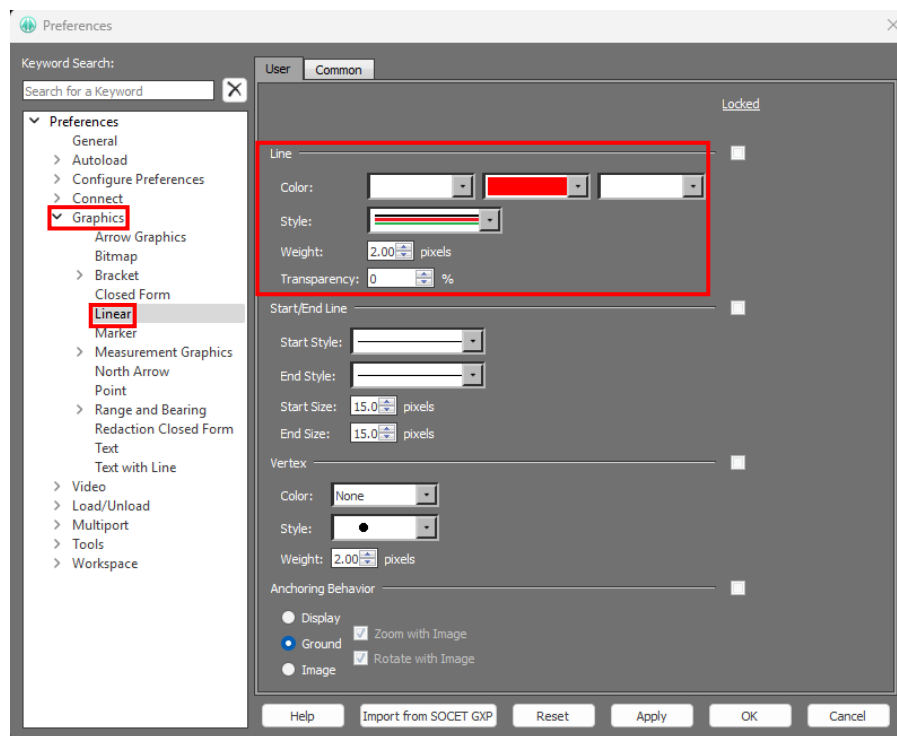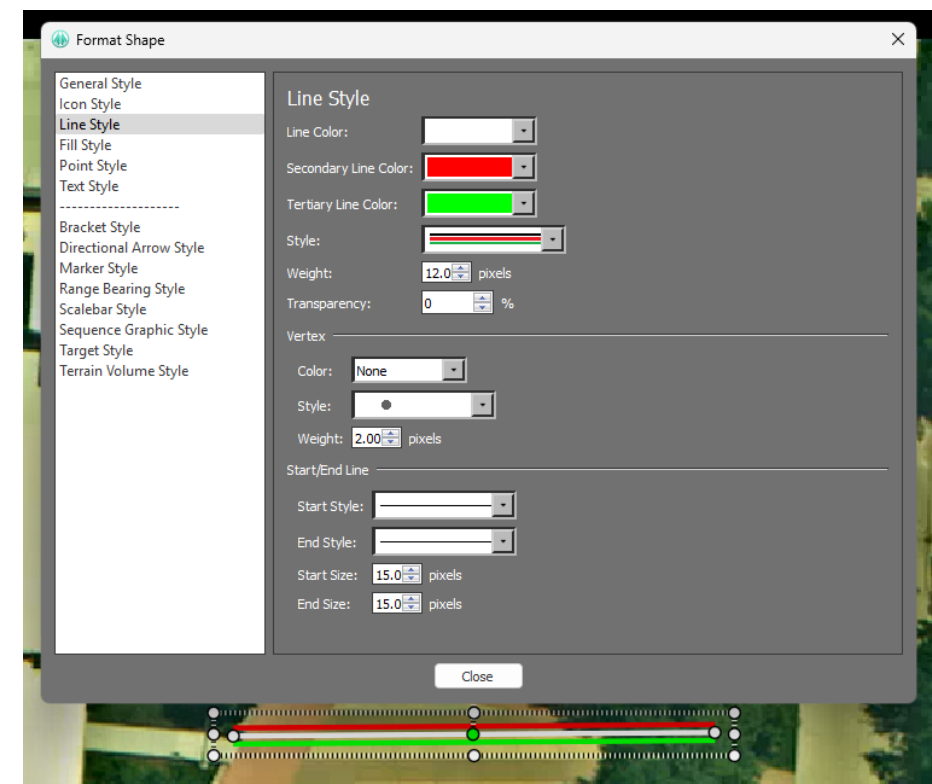
Multi-line style improvements

- Line style weights are now the entirety of the line style.

Linear Graphics Preference

Linear Graphics Properties

Imagery of MX-15 videos over Ft. Collins; Courtesy of L-3 Communications, EO/IR Inc.

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GXP Desktop v4.6.0.2 release enhancements

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GXP Product Development

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GXP Desktop v4.6.0.2 release enhancements

- This presentation contains the enhancements included in SOCET GXP and GXP InMotion released June 27th, 2025.

  - GXP Desktop software releases are full installations.

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SOCET GXP v4.6.0.2 release enhancements

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Infrastructure updates

- Updated to Kakadu v8.4.1.

- Updated to GDAL v3.7.0.

- Updated the OSGI jar file for PowerPoint template import.

- GXP Job Service security improvements.

  - Removed "*" from the SOCET GXP Job Service Access Restrictions.

    - It will now only communicate internally on the computer versus over the network.

  - Disabled the Job Service HTTP Server.

    - Example location: C:\Program Files\BAE SYSTEMS\SOCET GXP 4.6.0\Config\GXPJobService\js-config.xml.

    - Edited line: <TCP_PORT localhost-only="false" port-number="1354"/>.

BAE SYSTEMS

Added 2-D Scene Feature and Icon Scaling
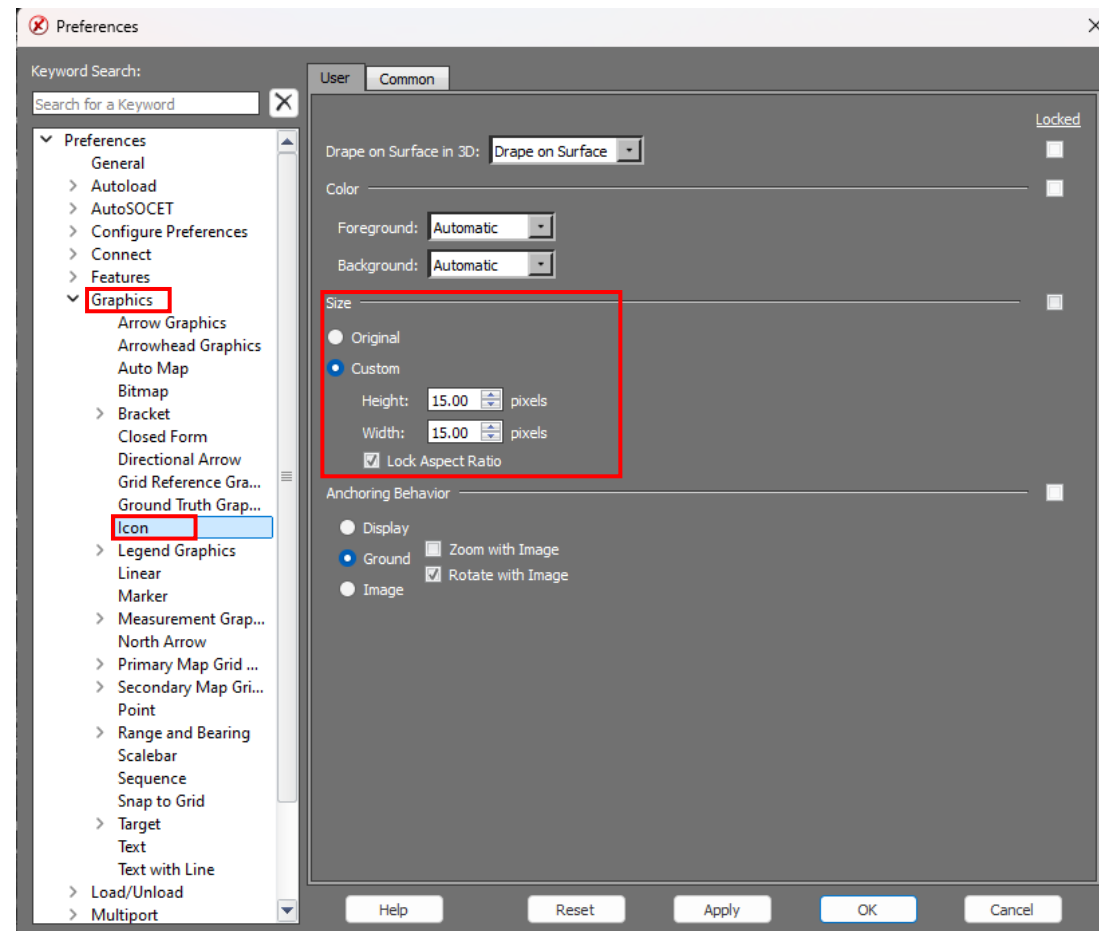
- Allows features and icons to be scaled by the user.

Default Icon Style preference

BAE SYSTEMS
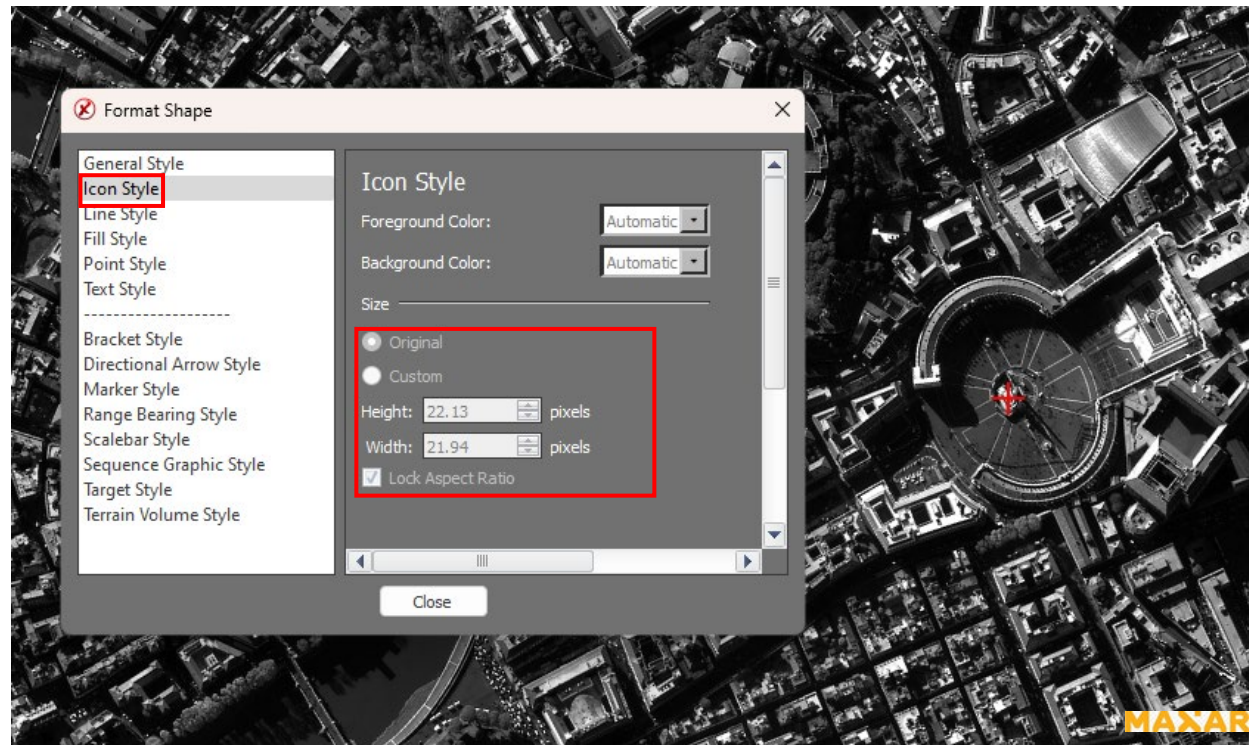
Added 2-D Scene Feature and Icon Scaling …2

- Preference location and settings.

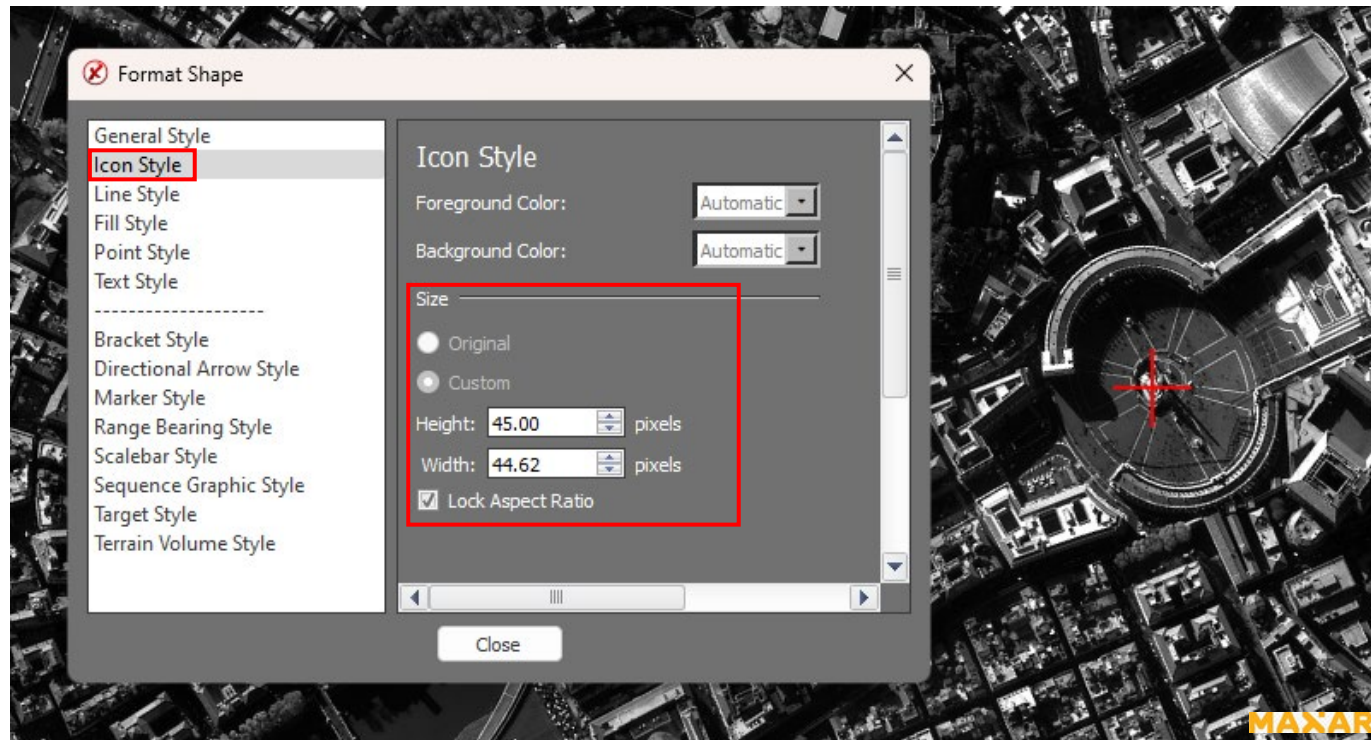 - No need to close and re-open your Multiport for this to be enabled.

Default Icon Style Preference

Added 2-D Scene Feature and Icon Scaling …3

- Allows features and icons to be scaled by the user.

Custom Icon Style preference

BAE SYSTEMS

Removed "Unknown" Entities from the SOM Toolbox

- Improves Data Model load times.

- Added Observation Progress bar.

Entities Update

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Added .3tz (3-D Tiles Zipped) support

- .3tz files can now be opened in SOCET GXP.

  - We will extract and load the data via File Open and/or Drag and Drop into the Workspace Manager.

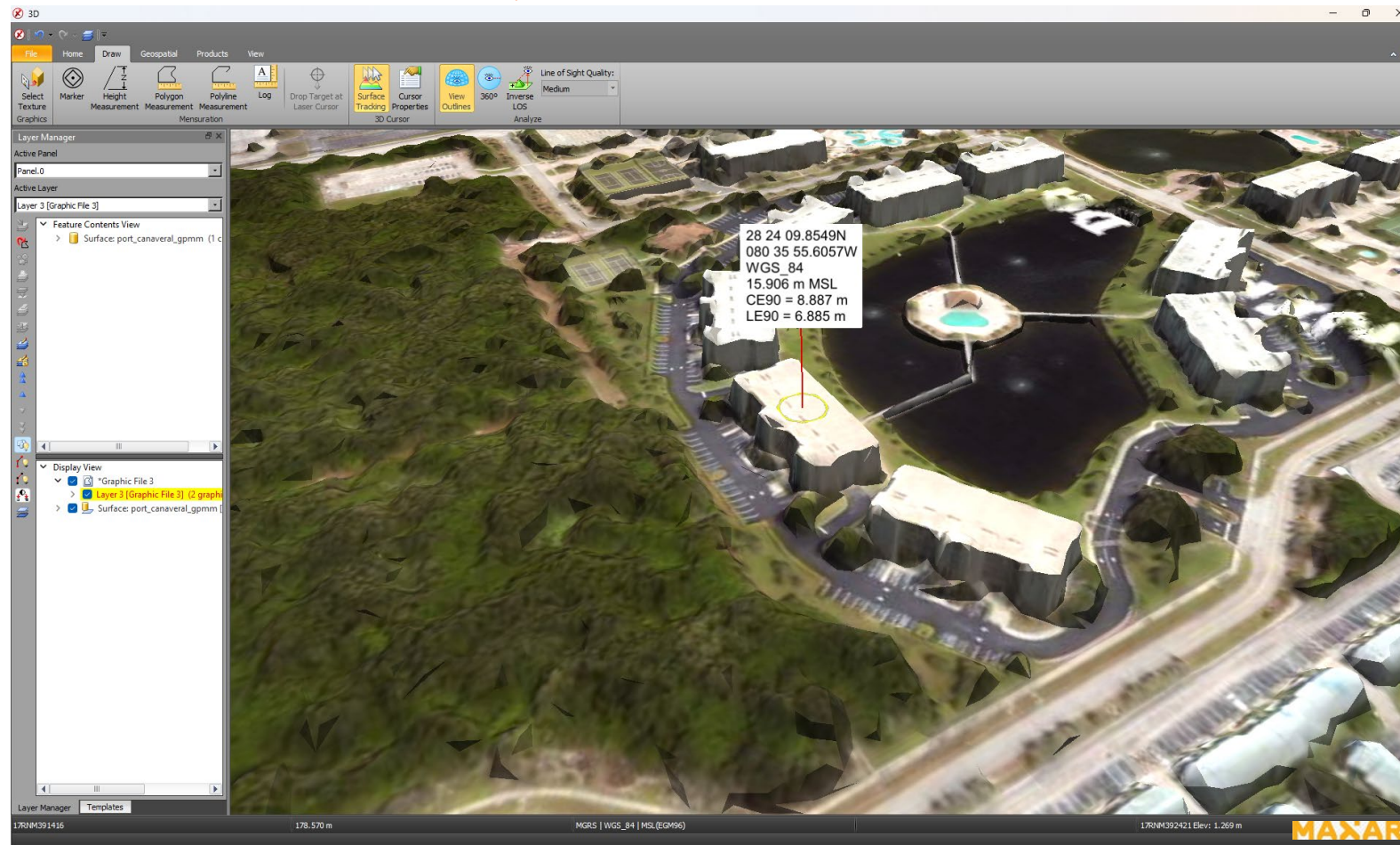.3tz file loaded in the Workspace Manager
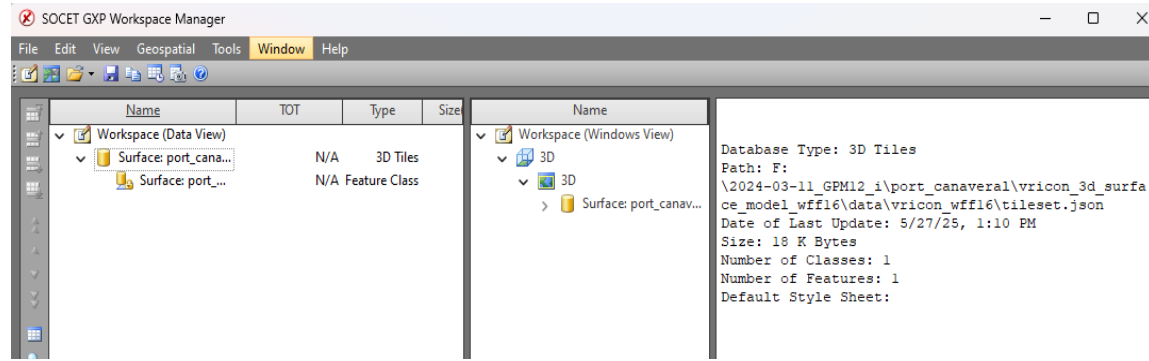
3-D Tile Visualization in a 3-D Multiport

Updated the GPM Plugin

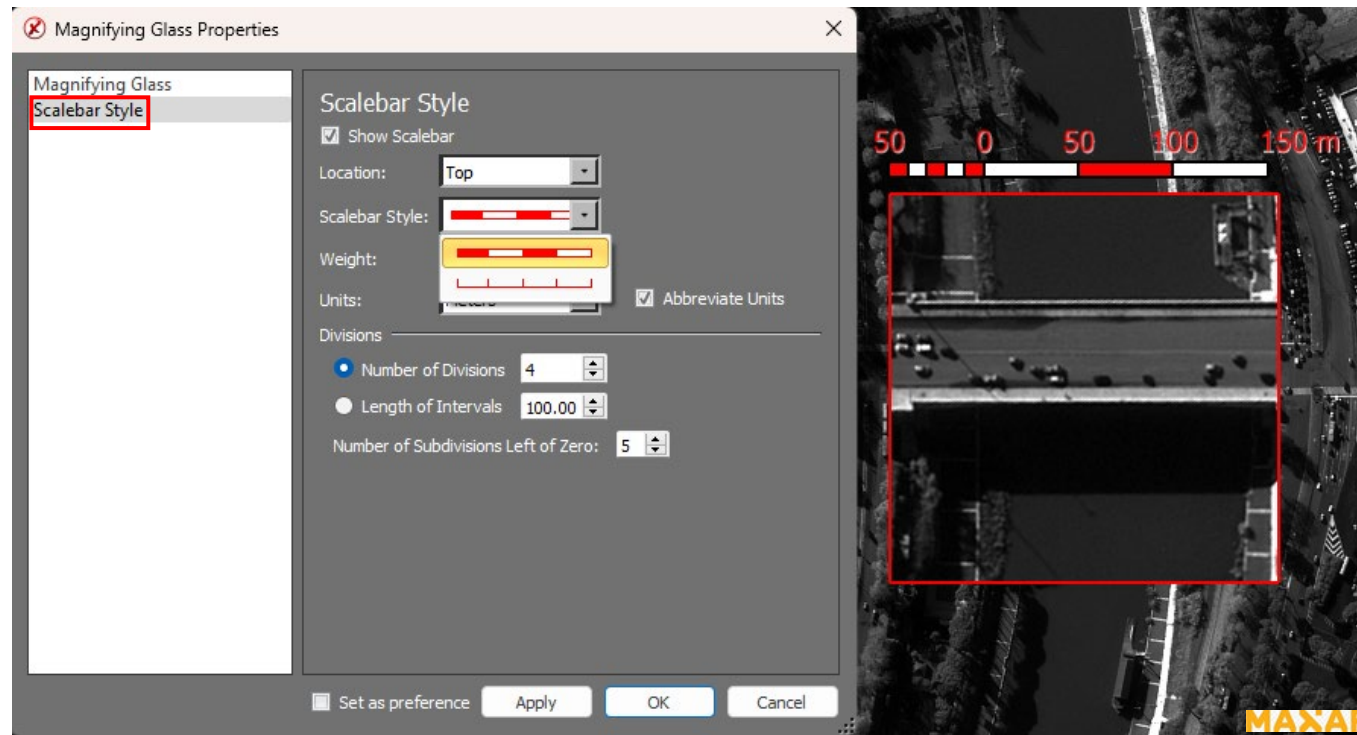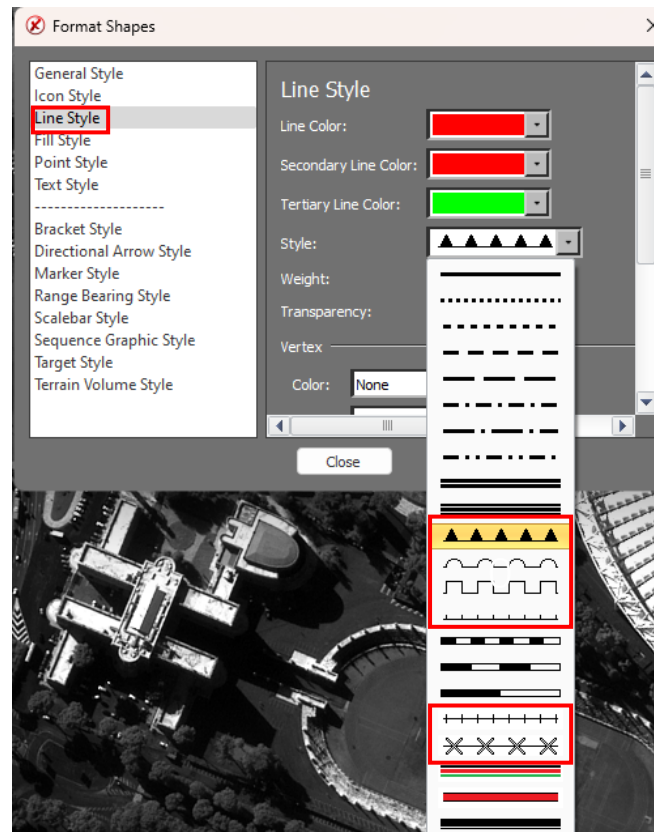## CE/LE is now retrieved with GPM data

Magnifying Glass with Scalebar Support

- Allows users to add a scalebar to their Magnifying Glass.

- Works for all output product types.
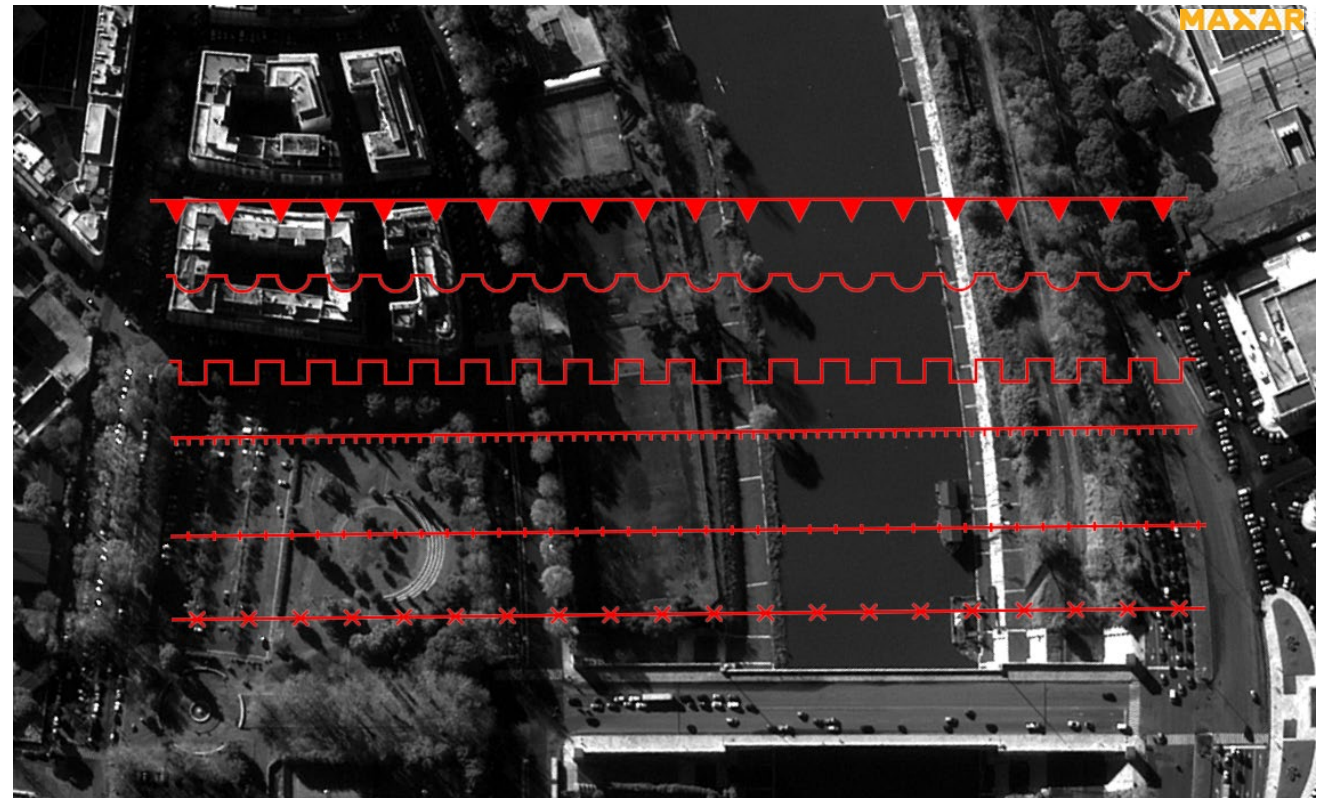
Scalebar Style Properties

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Improved Line Style Weighting.

- Improved line style smoothing.

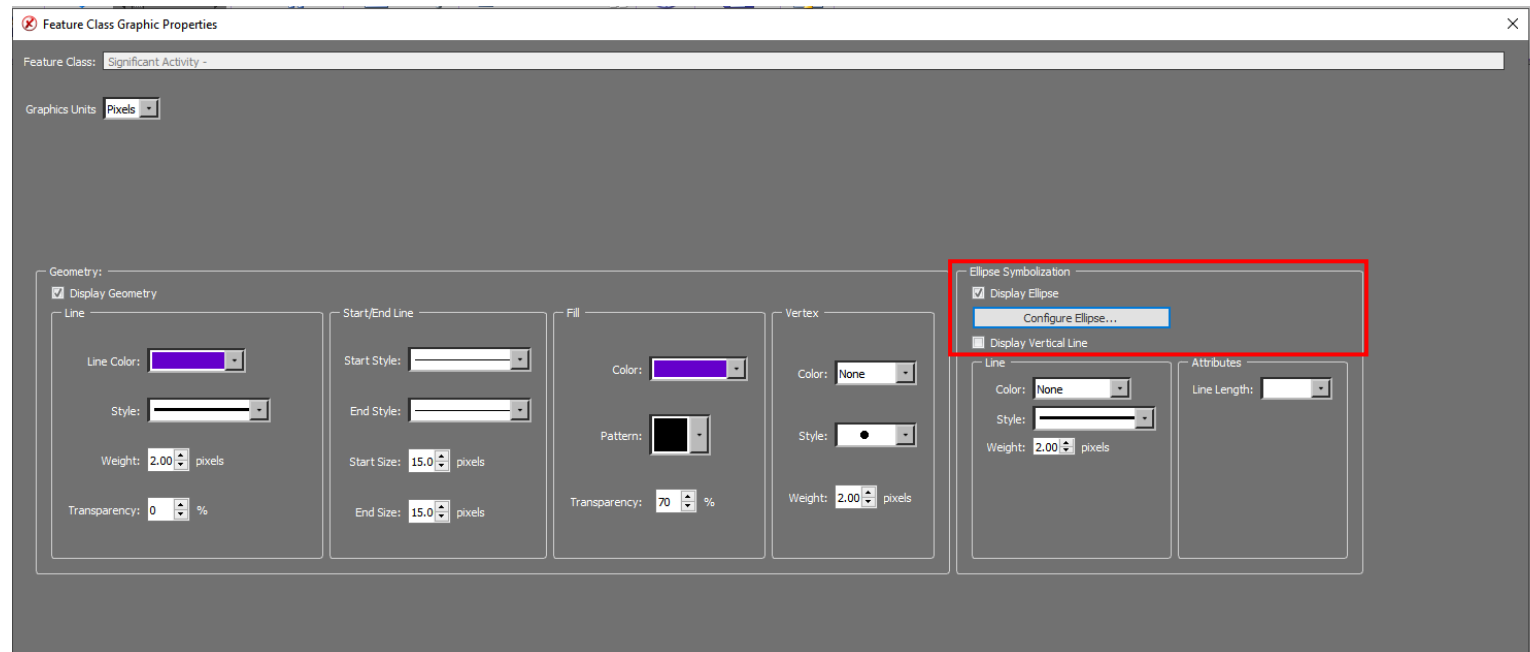- Weight is now the entirety versus individual pieces that make up the line.

Additional Line Style Weighting

Added Ellipse Symbolization

- Enables users to configure ellipses for feature data.

Ellipse Symbolization Properties

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Additional new features

- Added support for PKI authentication for OGC® Web Feature Services.

- Added "Ground to Image" capability with our JavaScript API.

- Cleaned up Debug log (Phase 2 effort).

- Added support for CIB and ECIB in the Polar Zones.

- Updated sensor models and coordinate systems in Polar Zones.

- Added heterogeneous collection from PostGIS databases directly to SOCET GXP.

- Added observation Progress Bar for Esri Geodatabases.

- Removed "All Equipment" node from the Observation Toolbox.

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GXP InMotion v4.6.0.2 release enhancements

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New features

- Updated our SENSRB plugin.

- Cleaned up Debug log (Phase 2 effort).

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Thank you

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