

GXP® Desktop v4.6.0 cumulative release enhancements

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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.

SOCET GXP v4.6.0.0 release enhancements



Infrastructure updates

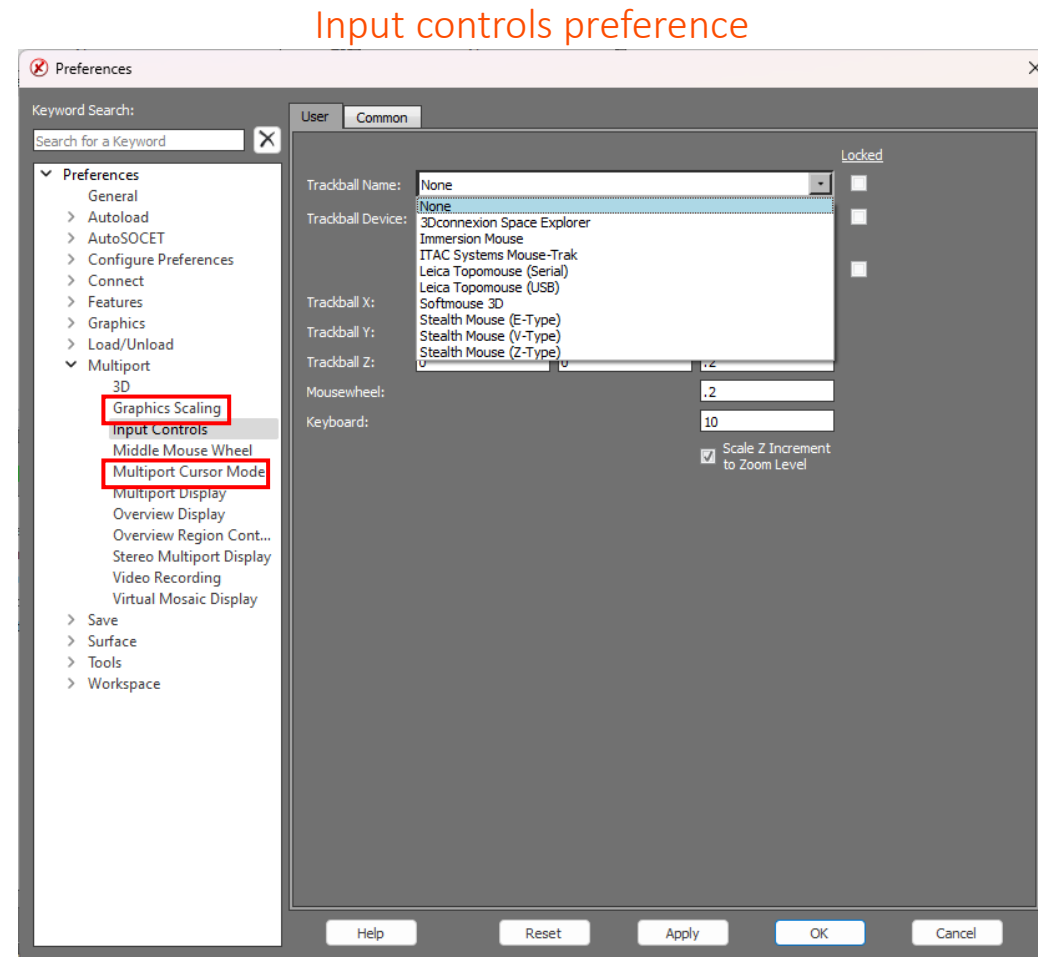
- Added support for Microsoft Windows® 11.
- Removed LEAD video filter dependencies.

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.

Trackball name preference

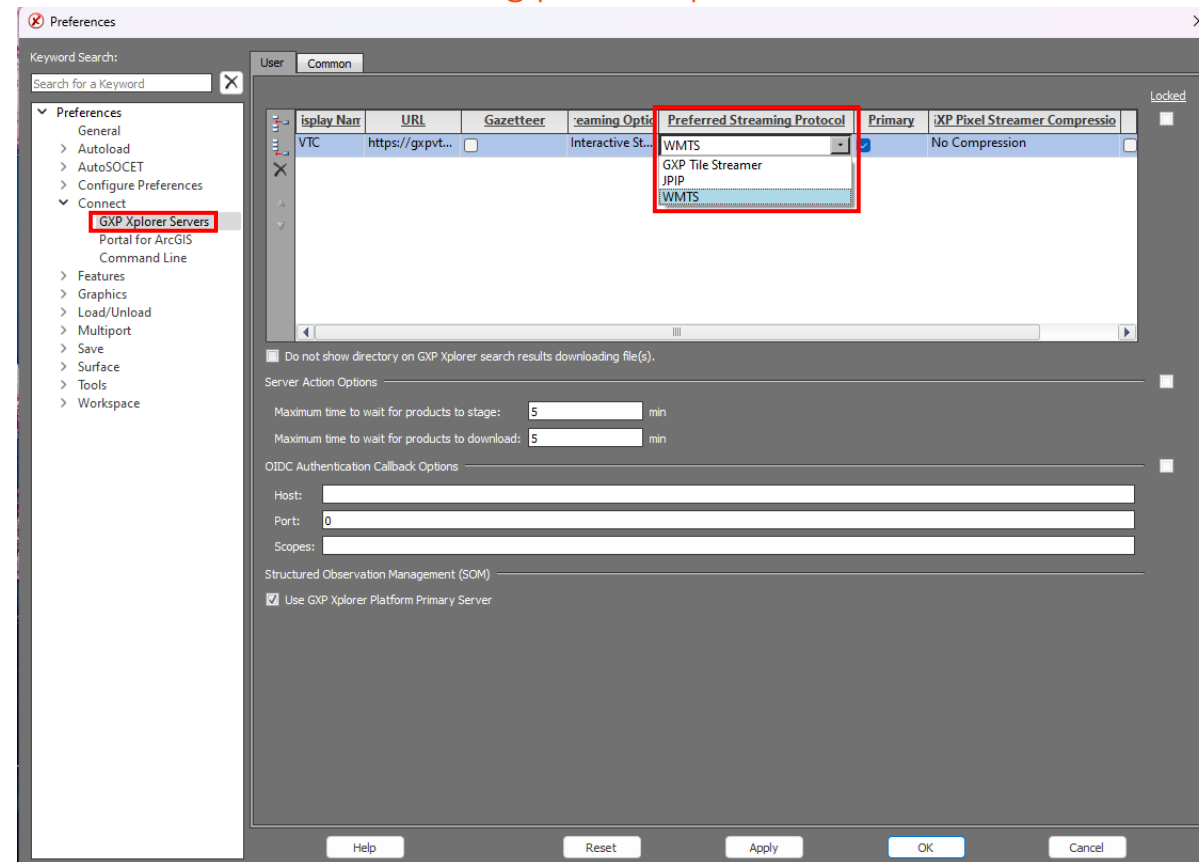
- We added trackball as a dropdown to allow users to quickly select their input type.



Preferred Streaming Protocol preference

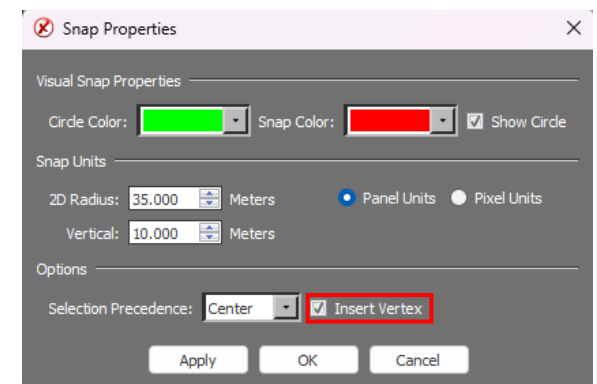
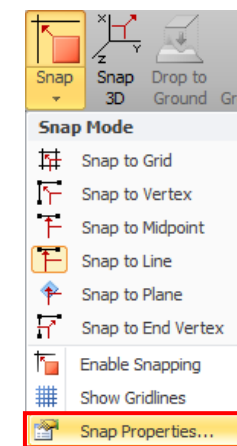
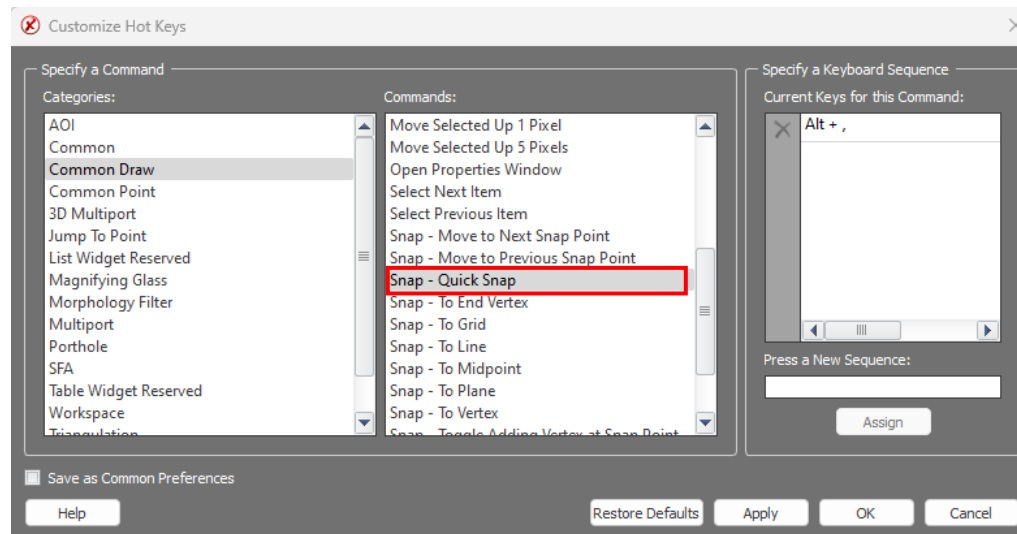
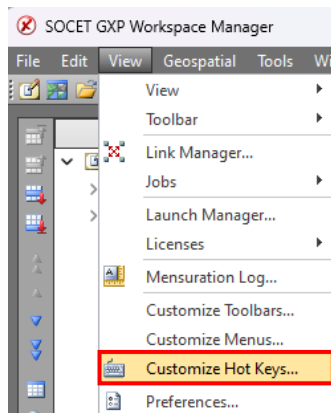
- Allows users to select how they want their imagery streamed into SOCET GXP from their GXP Xplorer® Platform server.

Streaming protocol preference



Quick Snap Hotkey

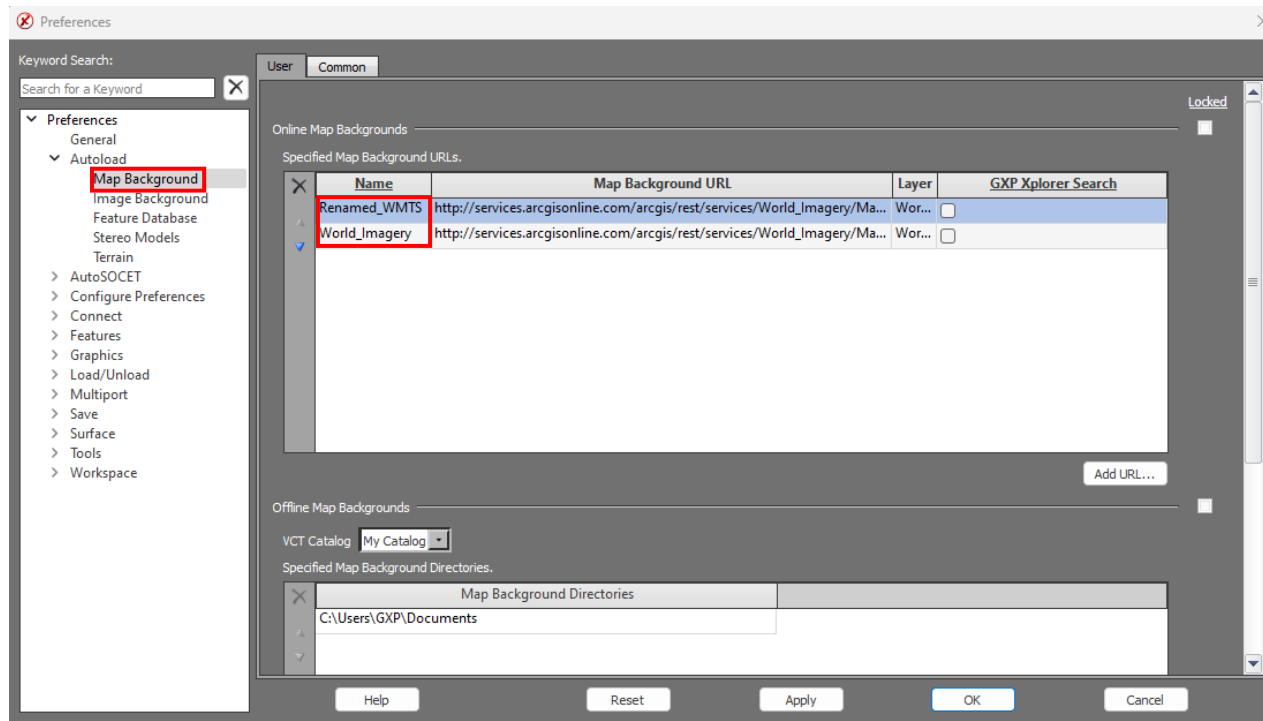
- Allows users to quickly snap to a point using a hotkey.
- Insert Vertex must be enabled.



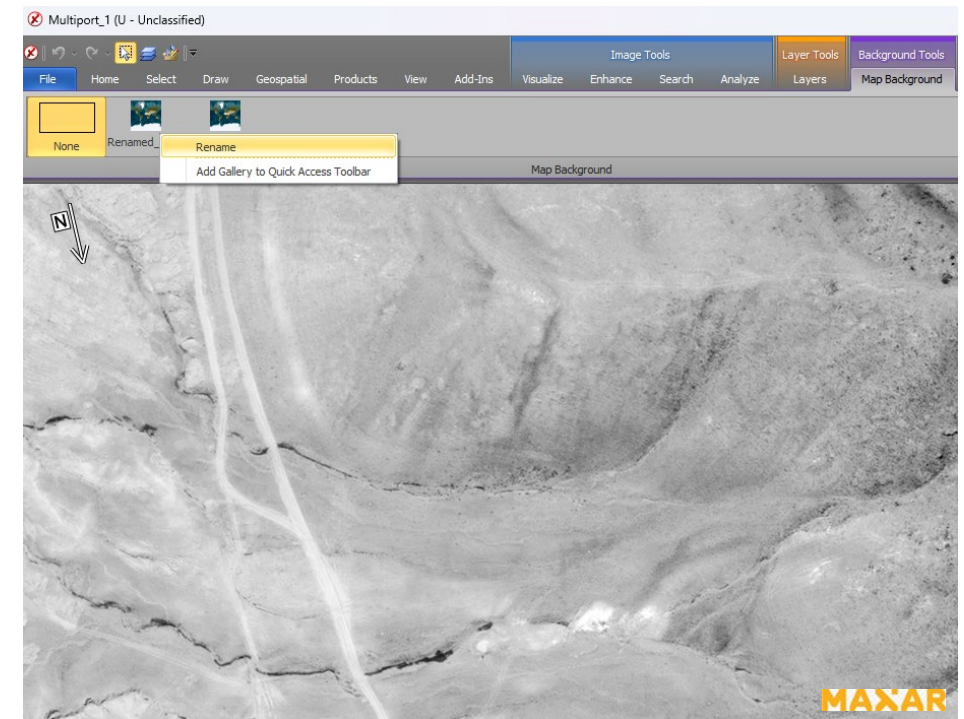
Map Background functionality

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

Map Background Preference



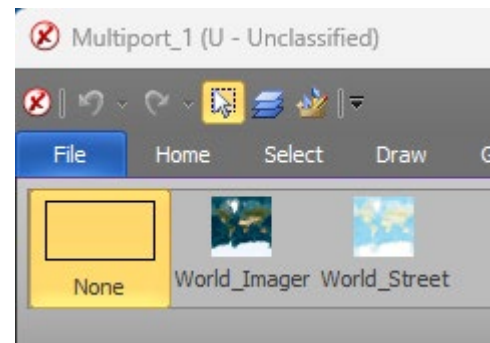
Map Background Rename from Multiport



Map Background thumbnails

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

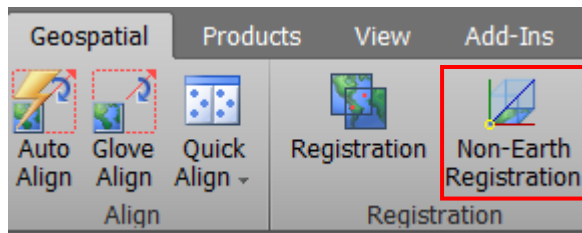
Map Background Thumbnails



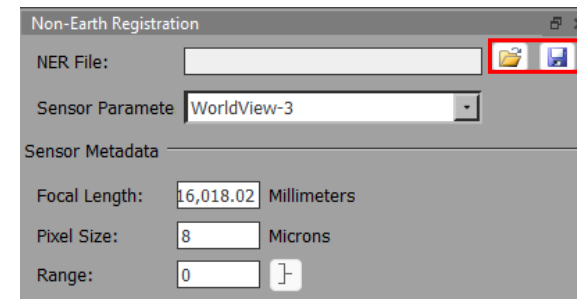
Non-Earth Registration (NER) load/save

- Allows users to load previously saved NER work.
- Enables users to save work prior to workflow completion.

NER button location



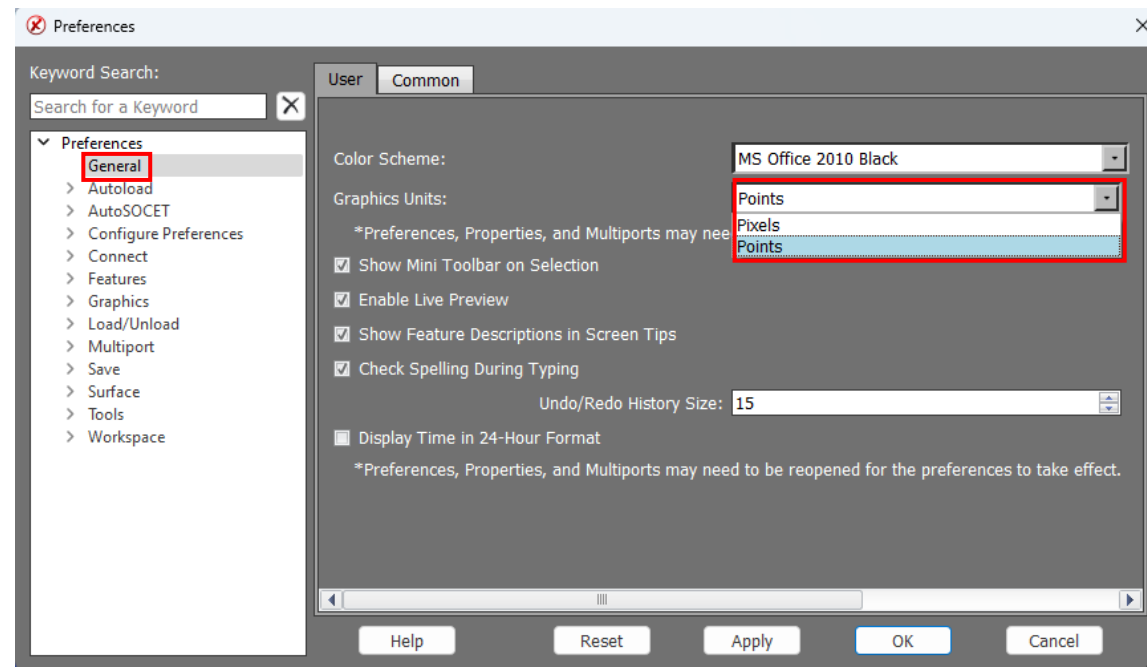
NER Open/Save button



Point graphics units preference

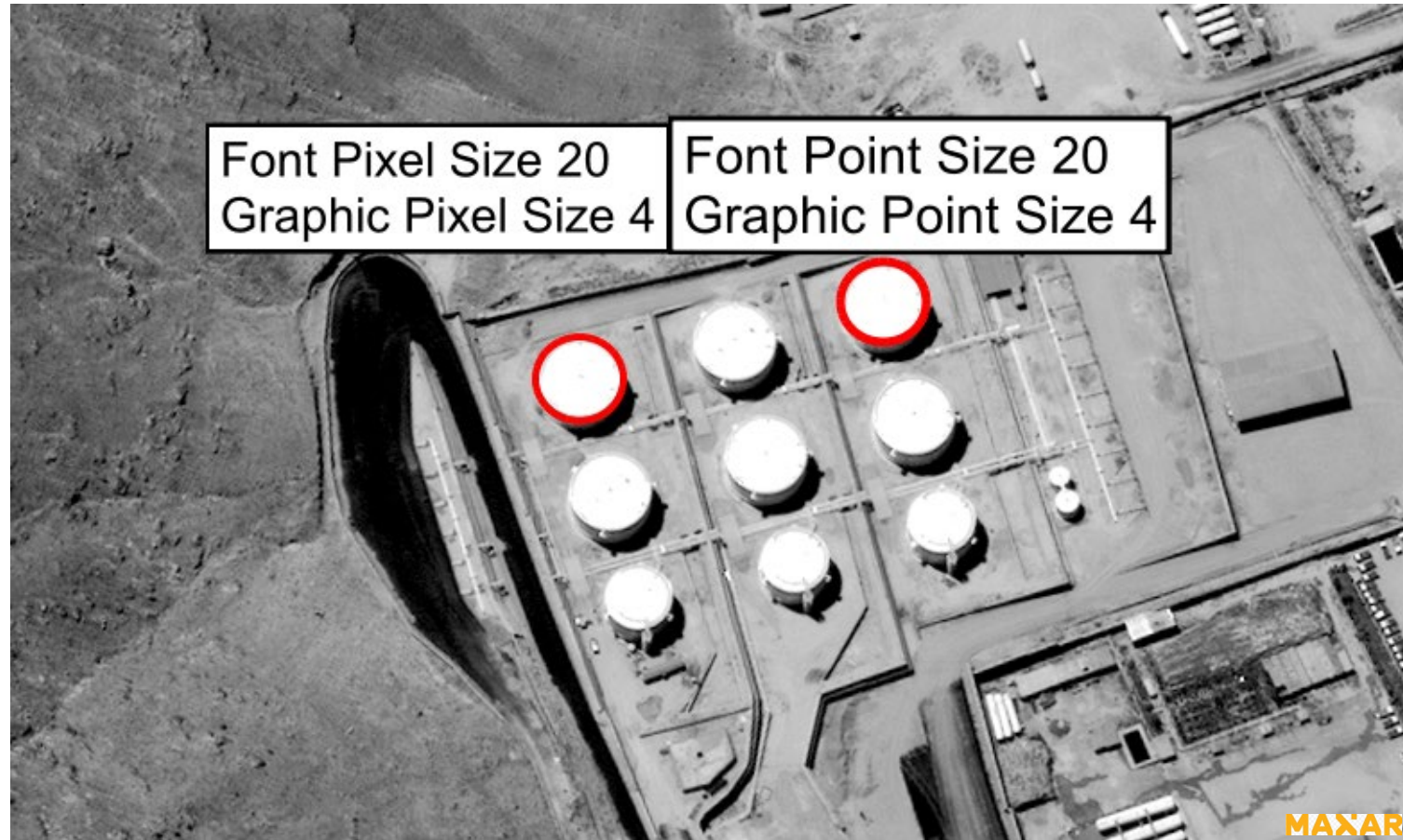
- Users can now use point size instead of pixels.
- Maintains graphic size across different screen resolutions.
- Can be updated on the fly.

Graphics Units Preference



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.

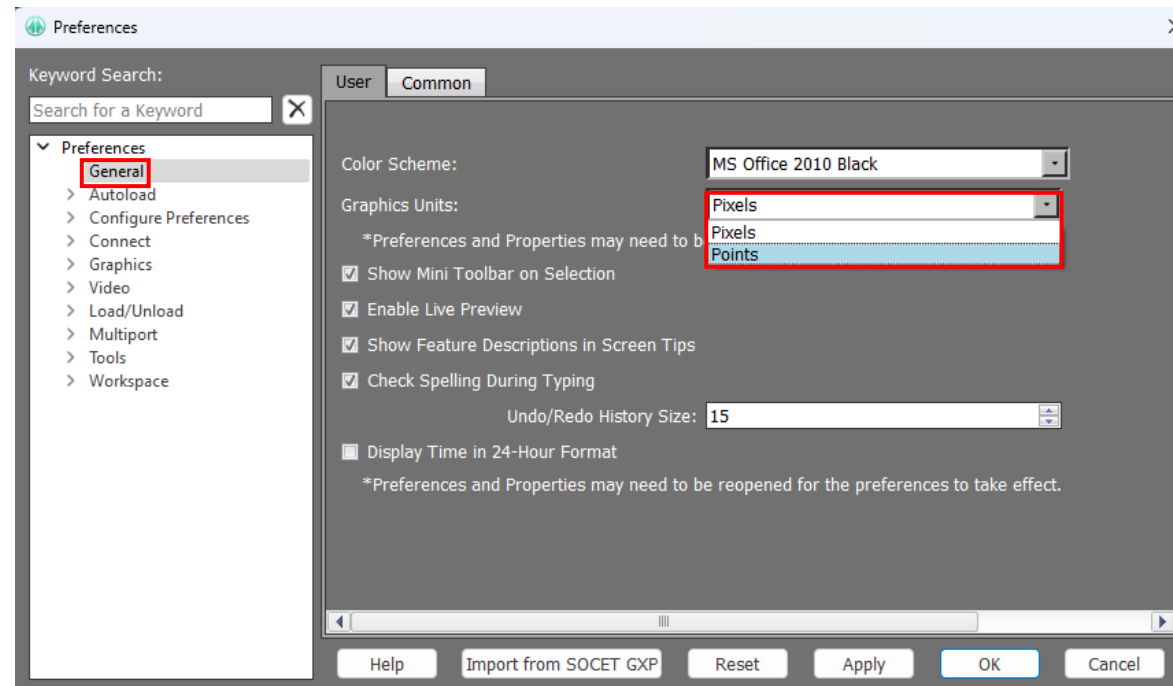
GXP InMotion v4.6.0.0 release enhancements



Point graphics units preference

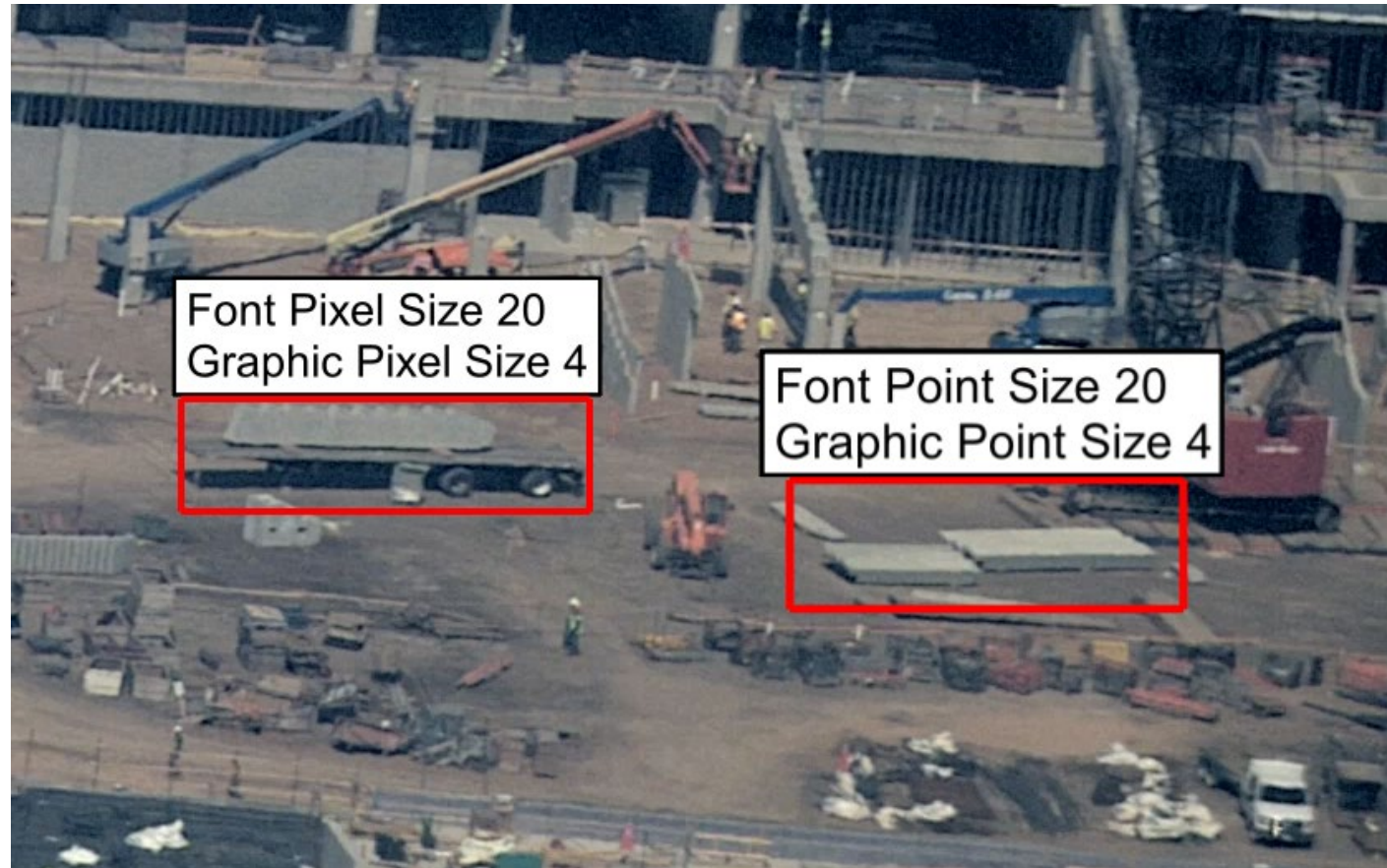
- Users can now use point size instead of pixels.
 - Maintains graphic size across different screen resolutions.
 - Can be updated on the fly.

Graphics Units Preference



New point graphics units preference

- Example:



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

GXP Desktop v4.6.0.1 release enhancements

Evan Miller
GXP Product Development



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.

SOCET GXP v4.6.0.1 release enhancements



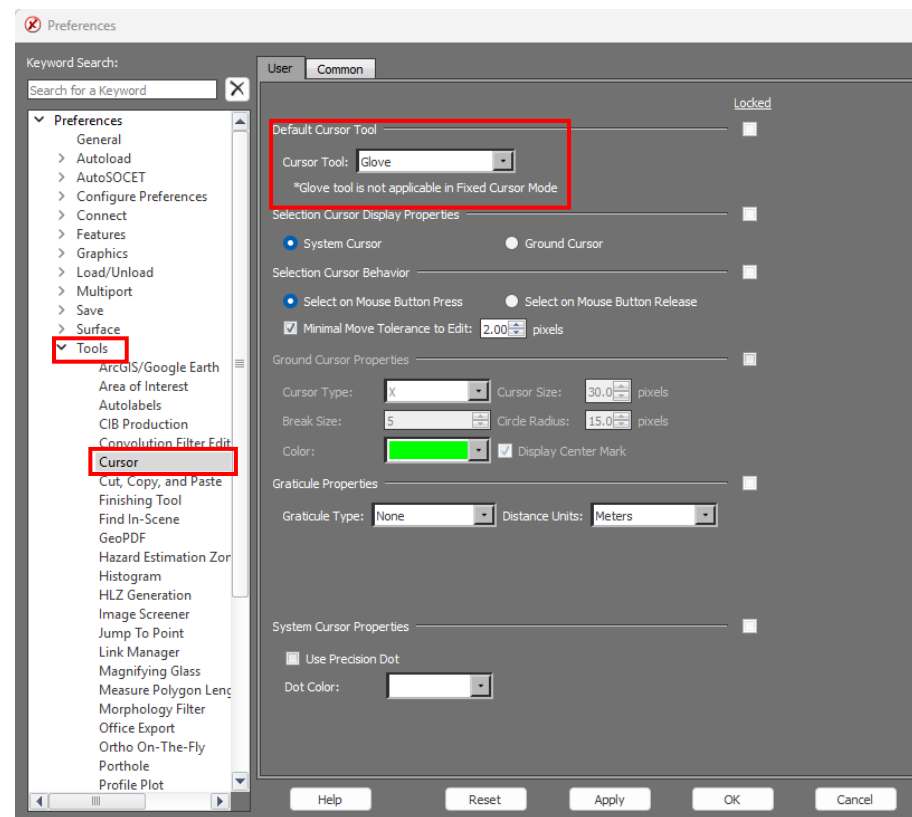
Infrastructure updates

- Updated to Java 11.
- Updated PostgreSQL.
- Updated OpenSSL.
- Added support for .NET 8.
- Integrated OAuth2.0 authentication.
- Updated UnicodeDateTime.

Added preference for Default Cursor Tool

- Allows cursor to default to Glove tool.

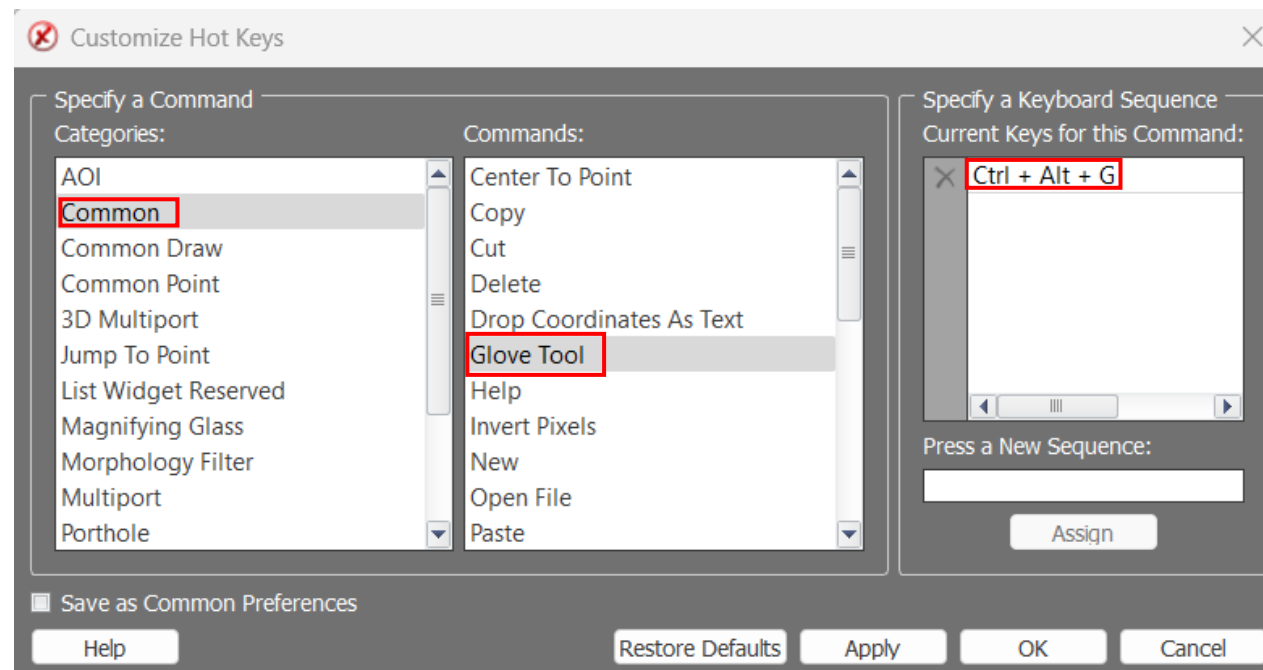
Default Cursor Tool preference



Added Hotkey for Glove tool

- Allows cursor to quickly change to Glove tool.

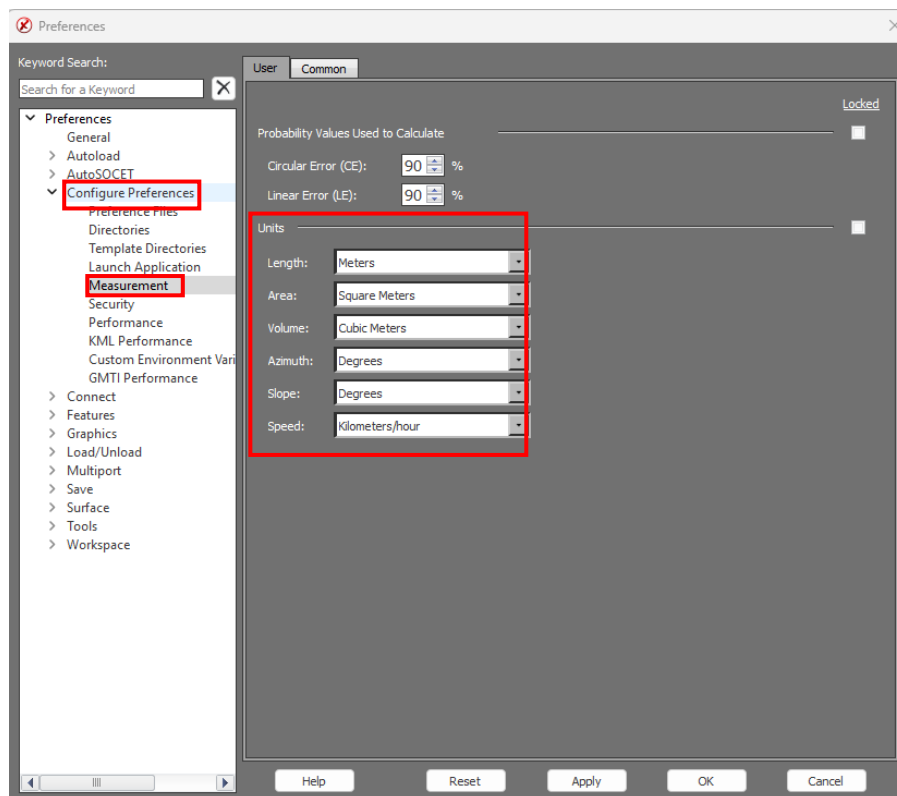
Glove tool Hot Key location



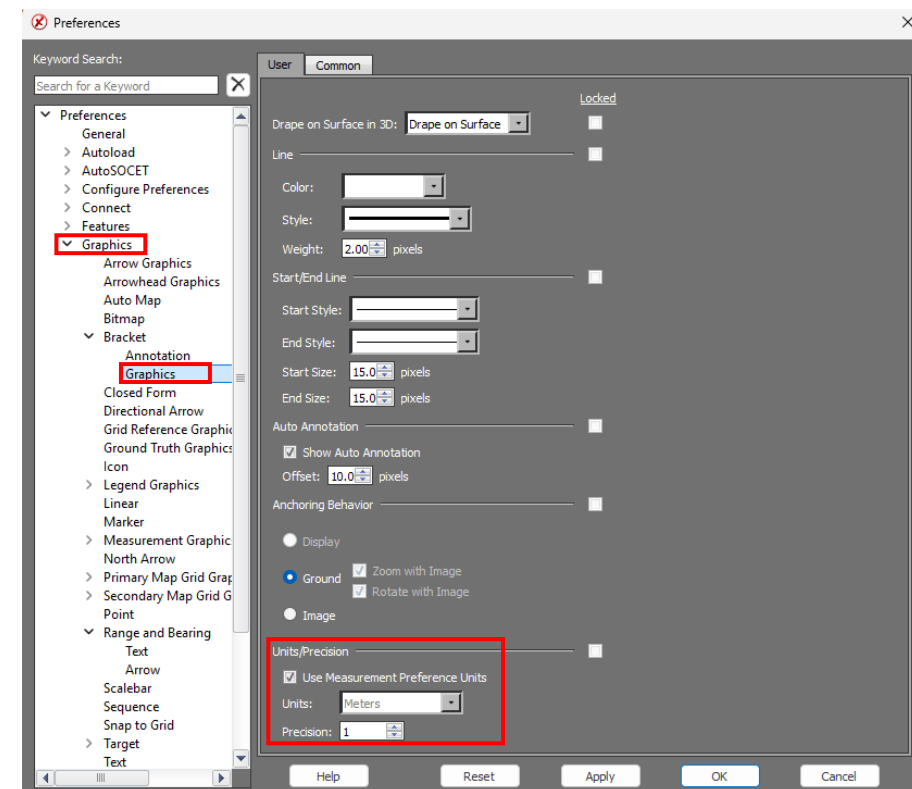
Added Measurement Override to Preferences

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

Measurement preference location



Override Measurement preference location

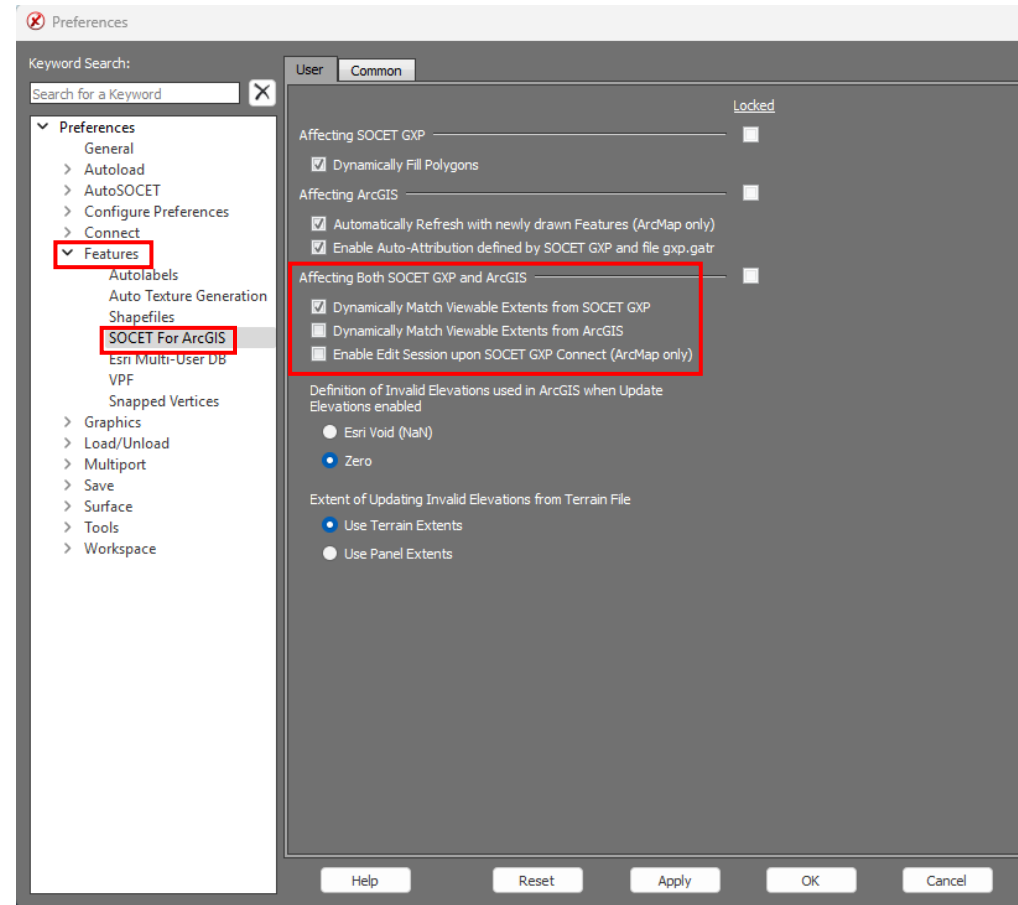


Sync Cursor

- 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”.

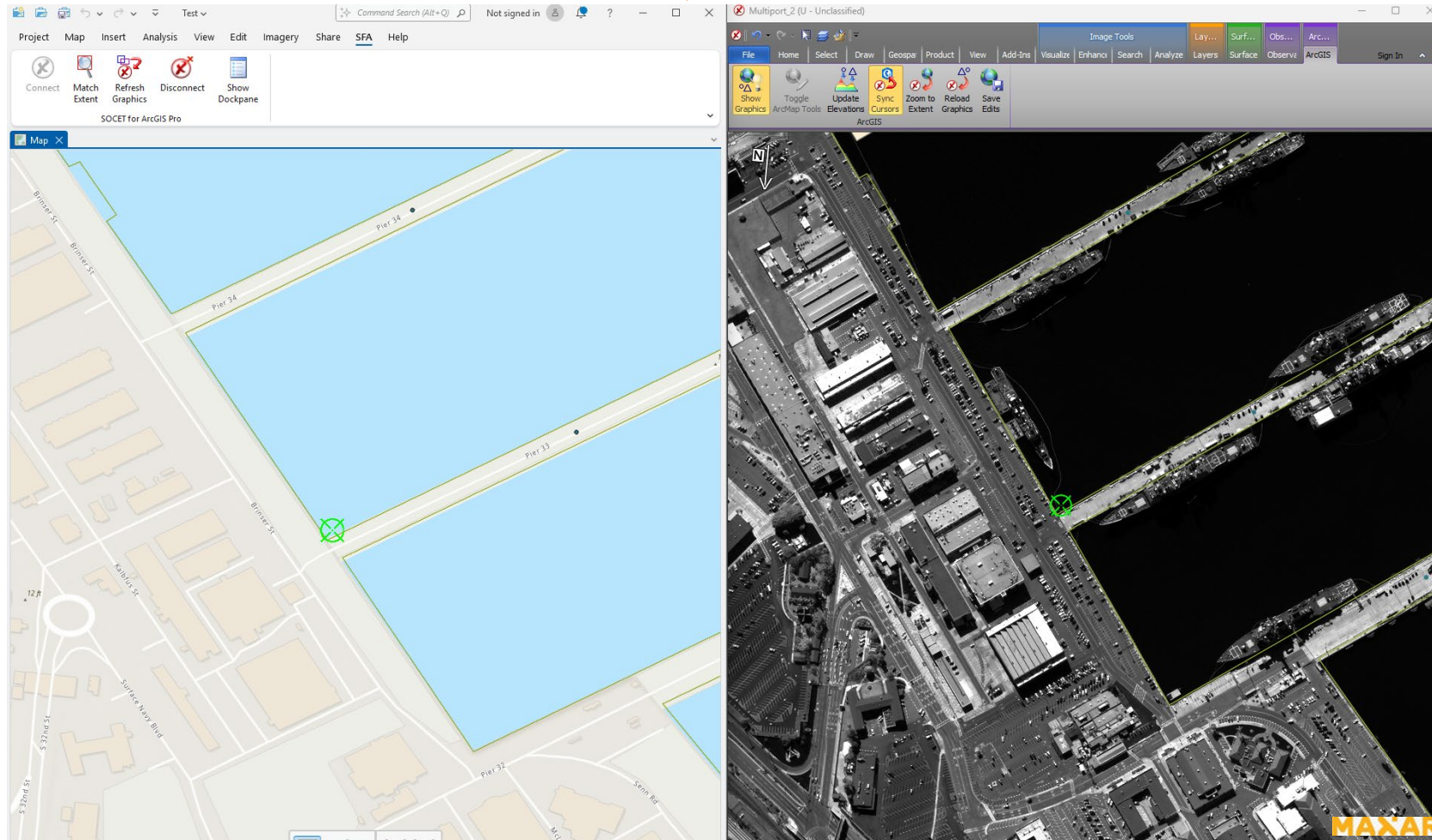
Sync Cursor ...2

Sync Cursor Preference location



Sync Cursor ...3

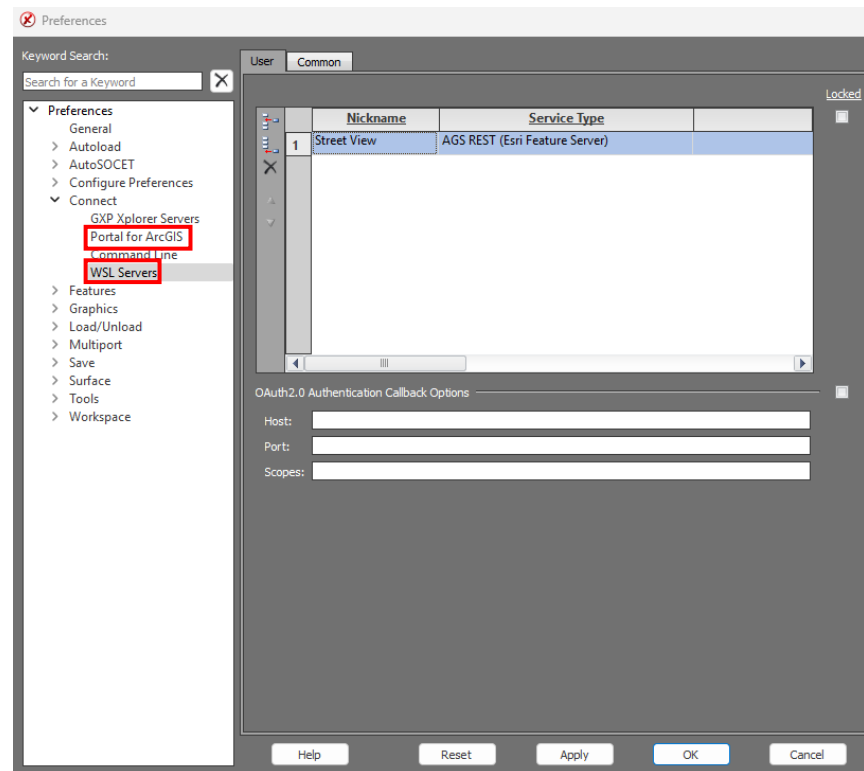
Sync Cursor UI



Web Service Layer

- Added a preference for Web Service Layers.
 - Allows for easier configuration and management.
 - Added OAuth2.0 authentication support.

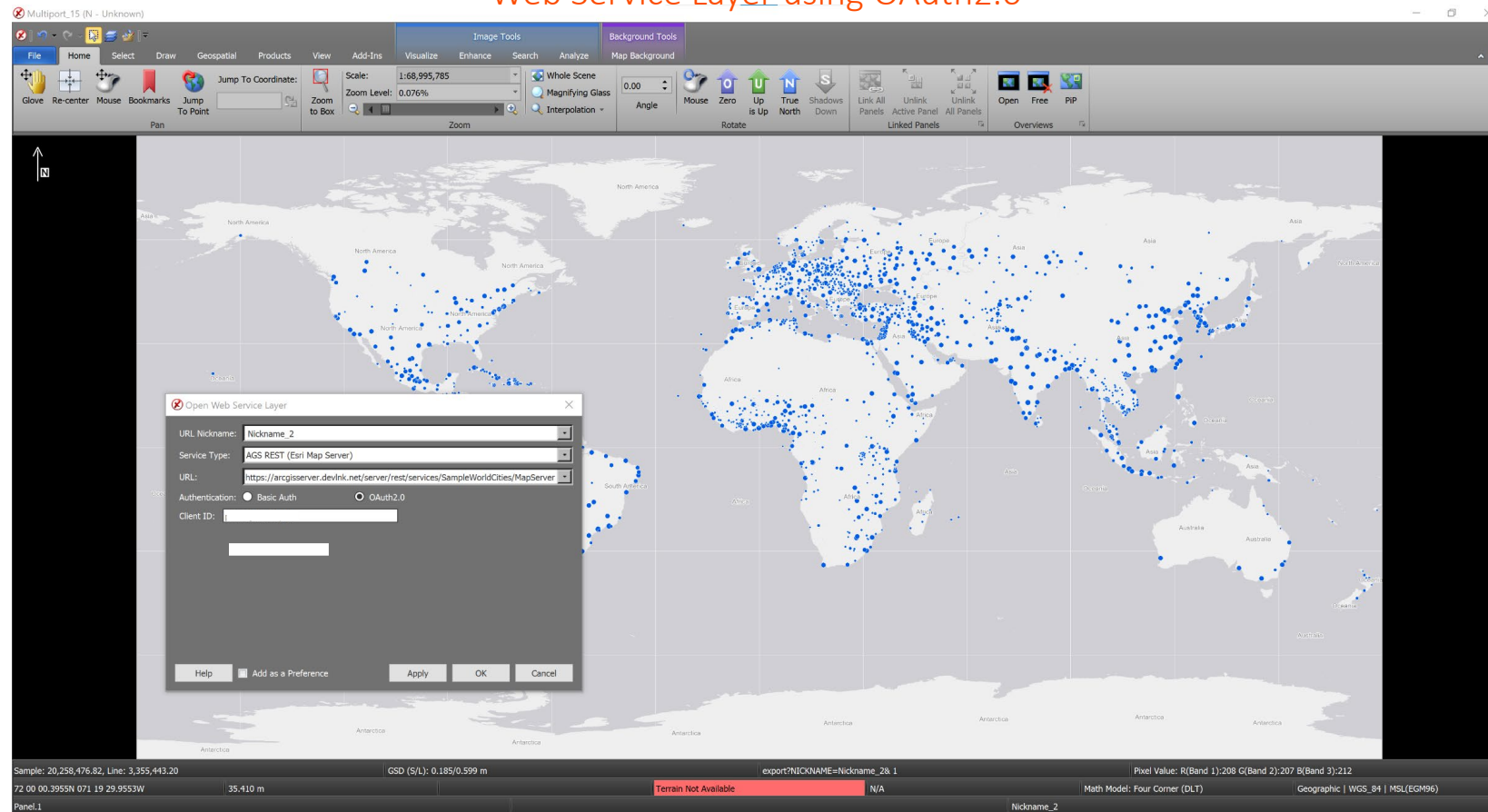
Web Service Layer Preference



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.

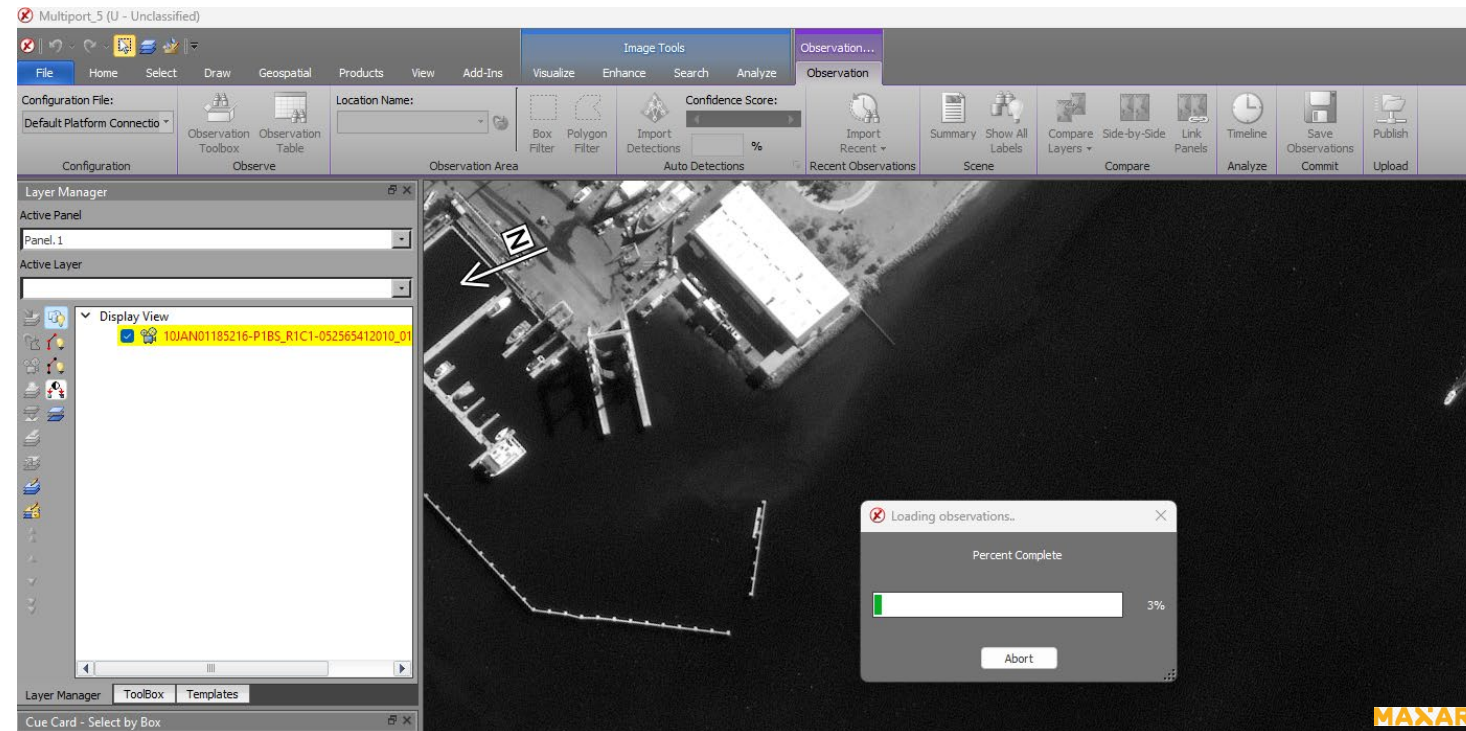
Feature Service Layer

The screenshot shows the GXP Xplorer Connector interface. On the left, a search panel displays a tree view of data types, with 'FeatureService' checked. The main map area shows a world map with several yellow rectangular bounding boxes. Below the map, a 'Search Results' table is displayed, showing a list of search results. The first result is highlighted in red.

Date Collected	Filename	Tags (Type)	Sensor Name (Device)	Size	Related Files/Number of Files	Downloadable/Status
No filter selected	No filter selected	No filter selected	No filter selected	No filter selected	No	No
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Phenomena/FeatureServer-0 Dispatch	SERVICE ESRI FEATURESERVER		0 bytes	No	No
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/RedlandsEmergencyVehicles/FeatureServer - Ambulances	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/RedlandsEmergencyVehicles/FeatureServer - Police	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/RedlandsEmergencyVehicles/FeatureServer - Fire	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/ServiceRequests/FeatureServer - Service Requests	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/ServiceRequests/FeatureServer - Extract_Zoning_Layer3D	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/NapervilleShelters/FeatureServer - Shelters	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/OilandProjectBoundaries/FeatureServer - OShProjectPoint2015	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Hydrant Valves	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Curb Stop Valves	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Fittings	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water System Valves	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Mains	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Lateral Lines	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Casings	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Network Structures - City View	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Water_Network/FeatureServer - Water Network Structures - Block View	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Energy/Geology/FeatureServer - Fold (Line)	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown
	https://sampleserver1.arcgisonline.com/arcgis/rest/services/Energy/Geology/FeatureServer - Contacts (Line)	SERVICE ESRI FEATURESERVER		0 bytes	No	Unknown

Loading Observations Status

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

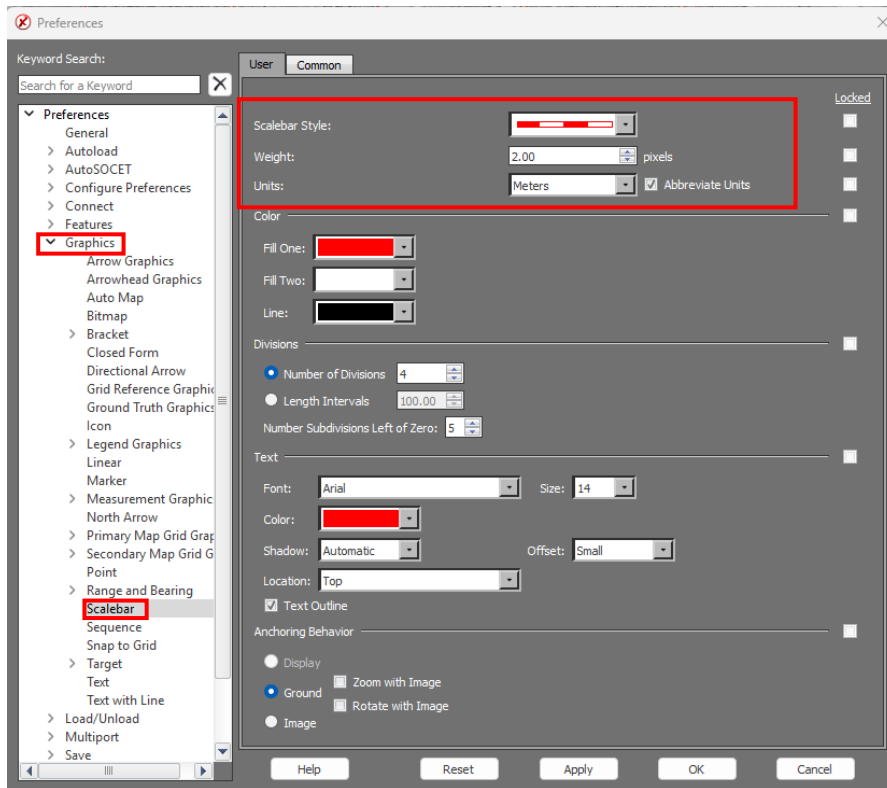


Scalebar Improvements

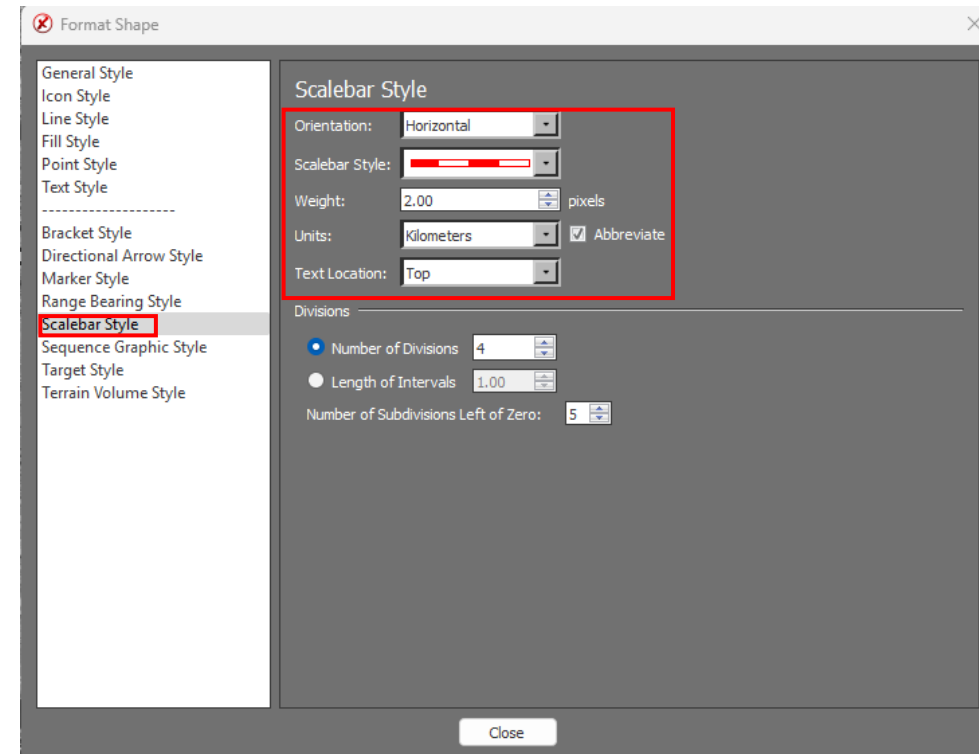
- Abbreviated units of measurement.
 - m = Meters.
 - km = Kilometers.
- Dynamically update via preferences.
- Enables users to save work prior to workflow completion.
- Convert orientation of scalebar.
 - Vertical/Horizontal.

Scalebar Improvements ...2

Scalebar Preference

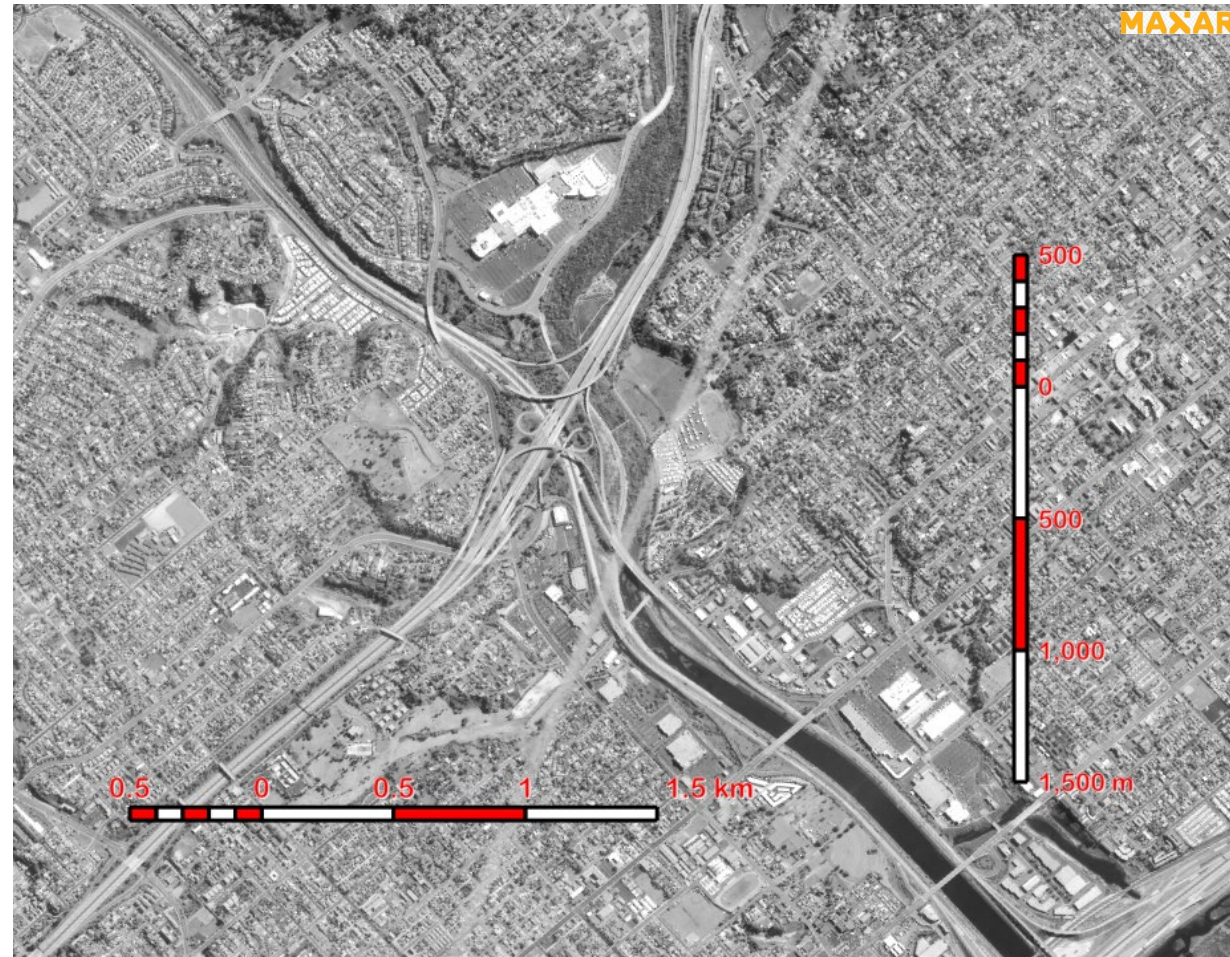


Scalebar Properties



Scalebar Improvements ...3

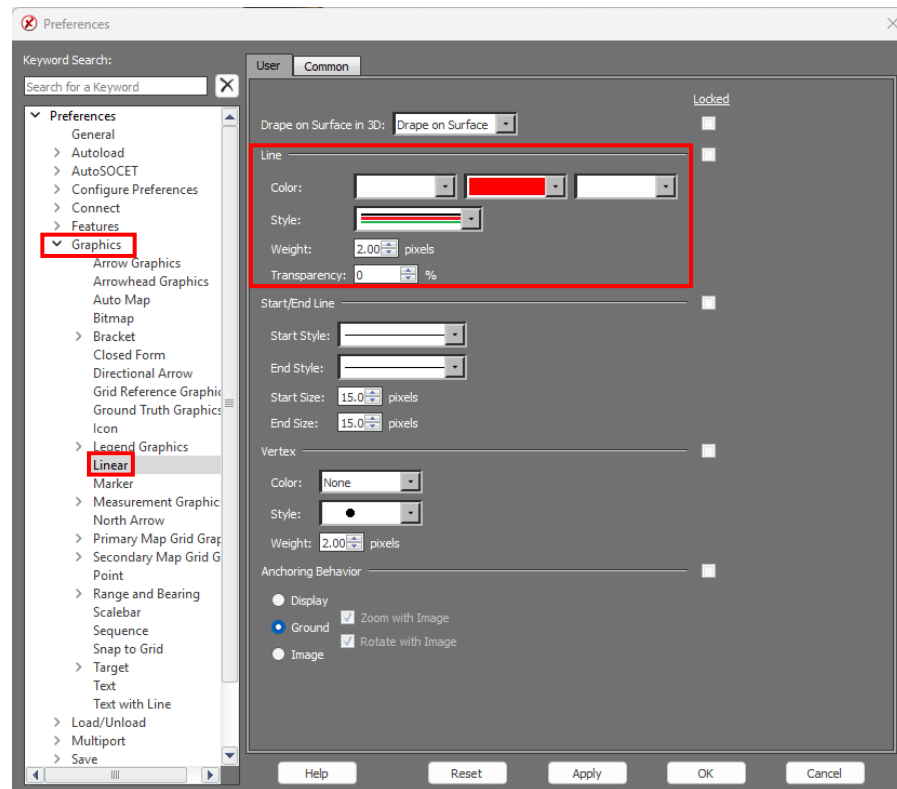
Scalebar Visualization



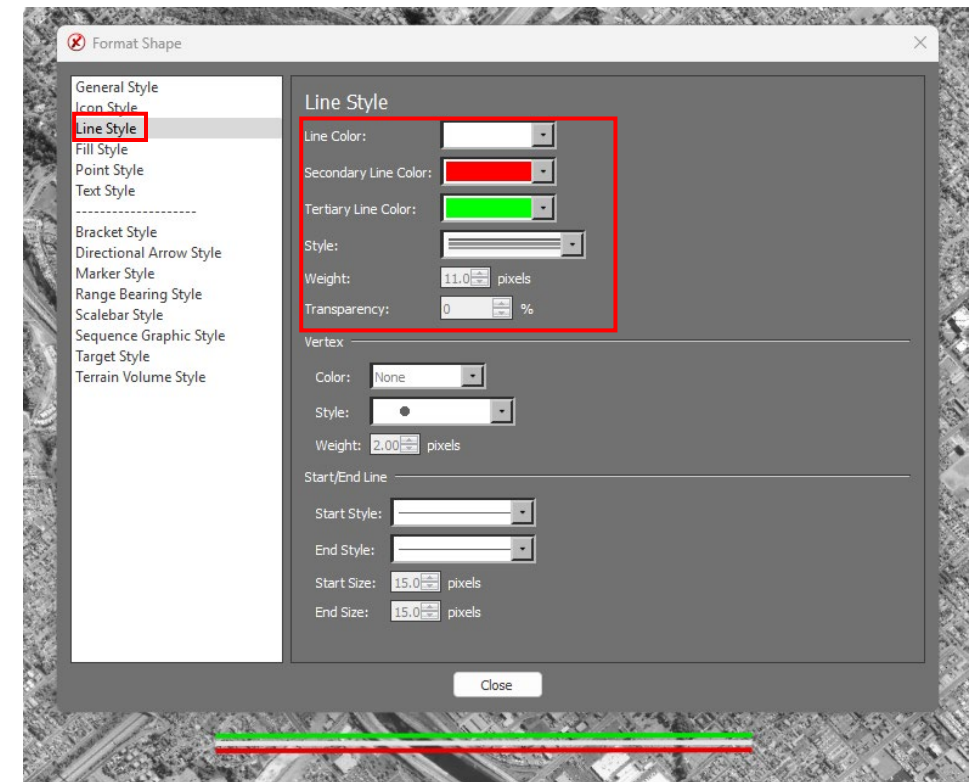
Multi-line style improvements

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

Linear Graphics Preference



Linear Graphics Properties



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.

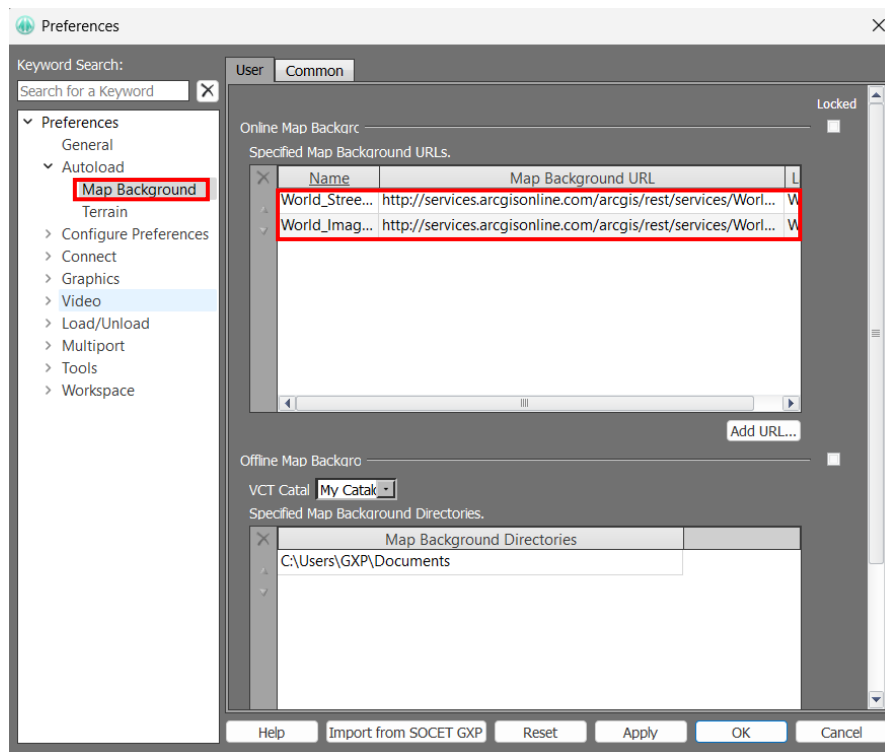
GXP InMotion v4.6.0.1 release enhancements



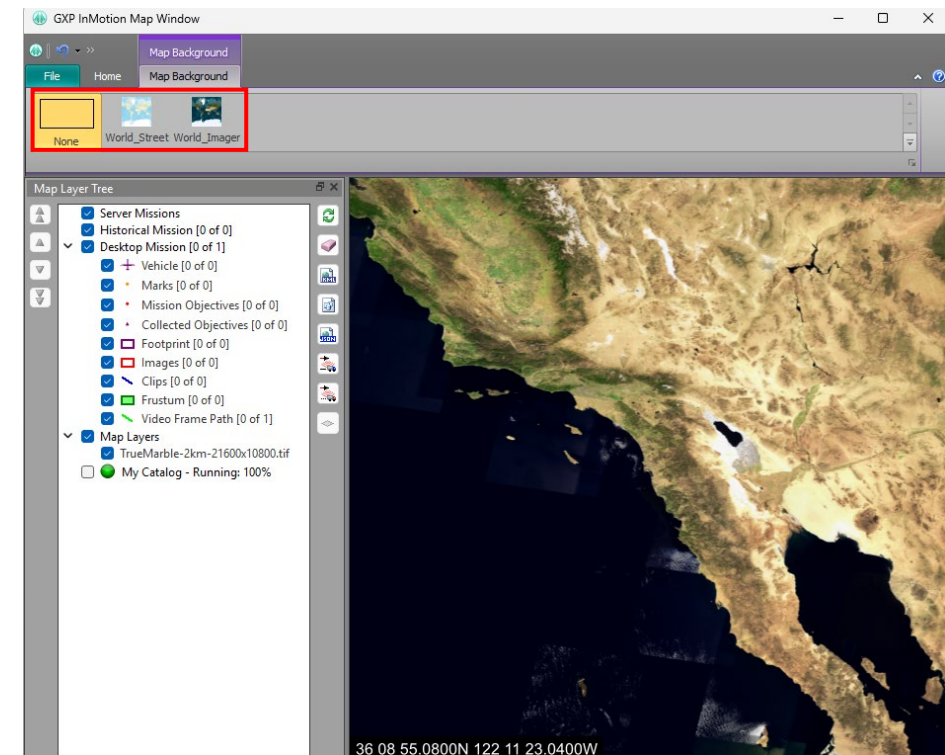
Map Background functionality

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

Map Background Preference



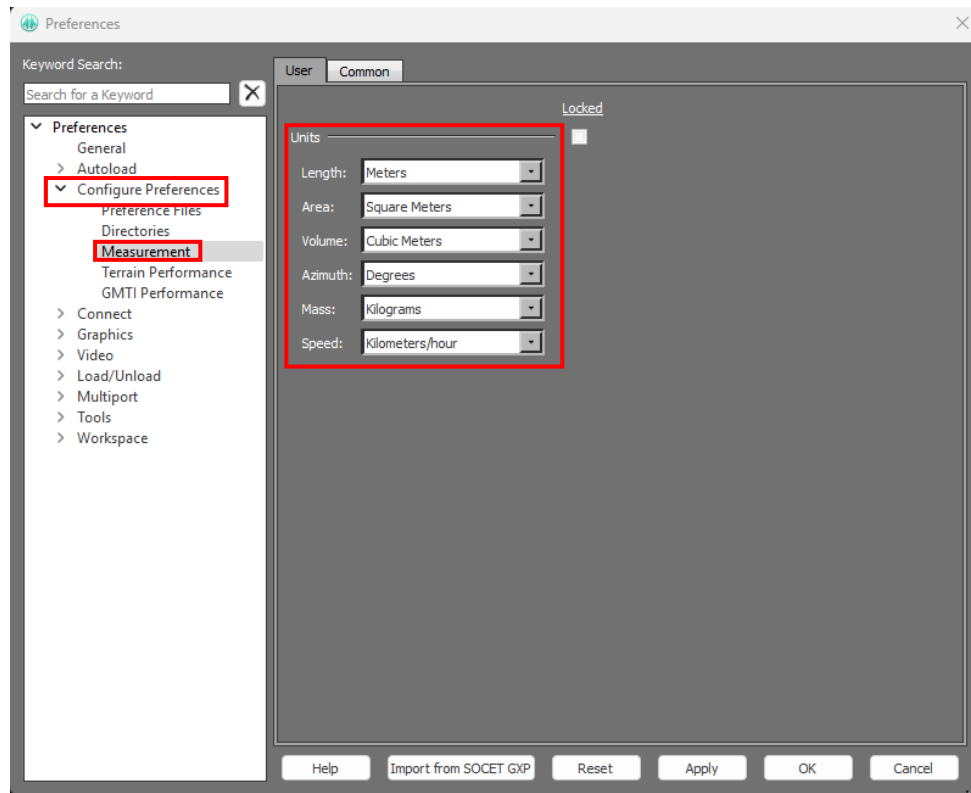
Map Background View and Rename from Map Window



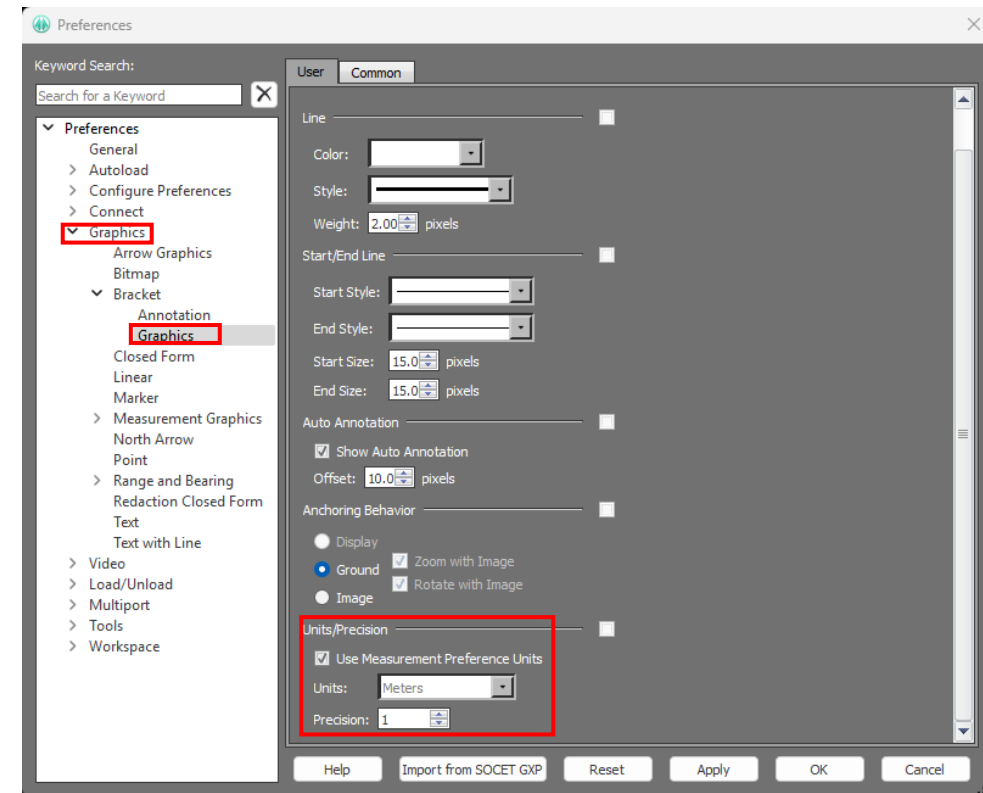
Added Measurement Override to Preferences

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

Measurement preference location



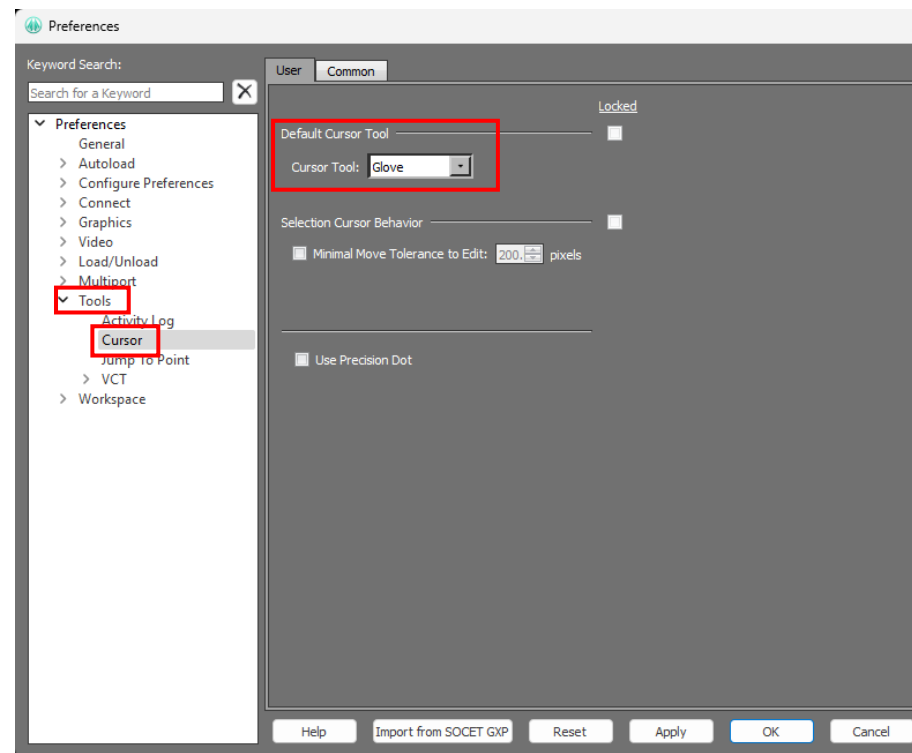
Override Measurement preference location



Added preference for Default Cursor Tool

- Allows cursor to default to Glove tool.

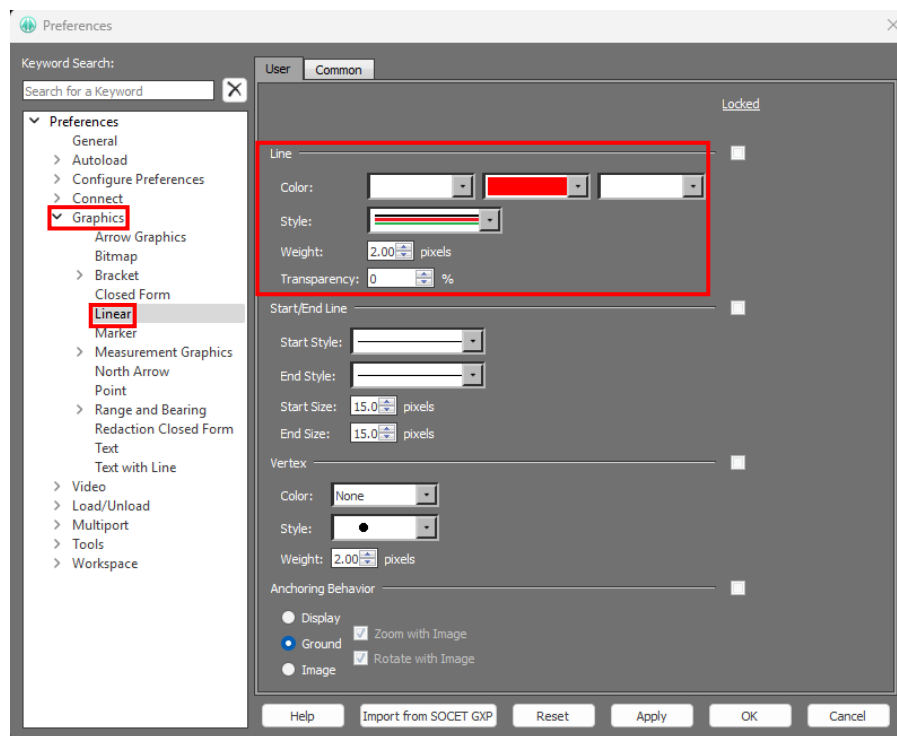
Default Cursor Tool preference



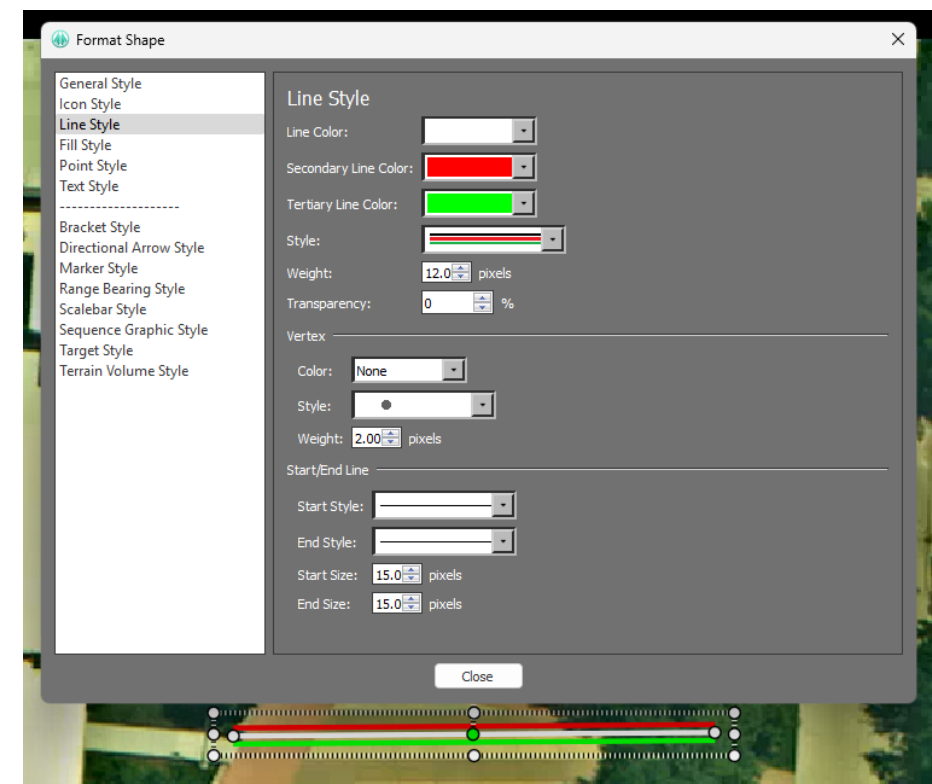
Multi-line style improvements

- 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.

GXP Desktop v4.6.0.2 release enhancements

Evan Miller
GXP Product Development



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.

SOCET GXP v4.6.0.2 release enhancements



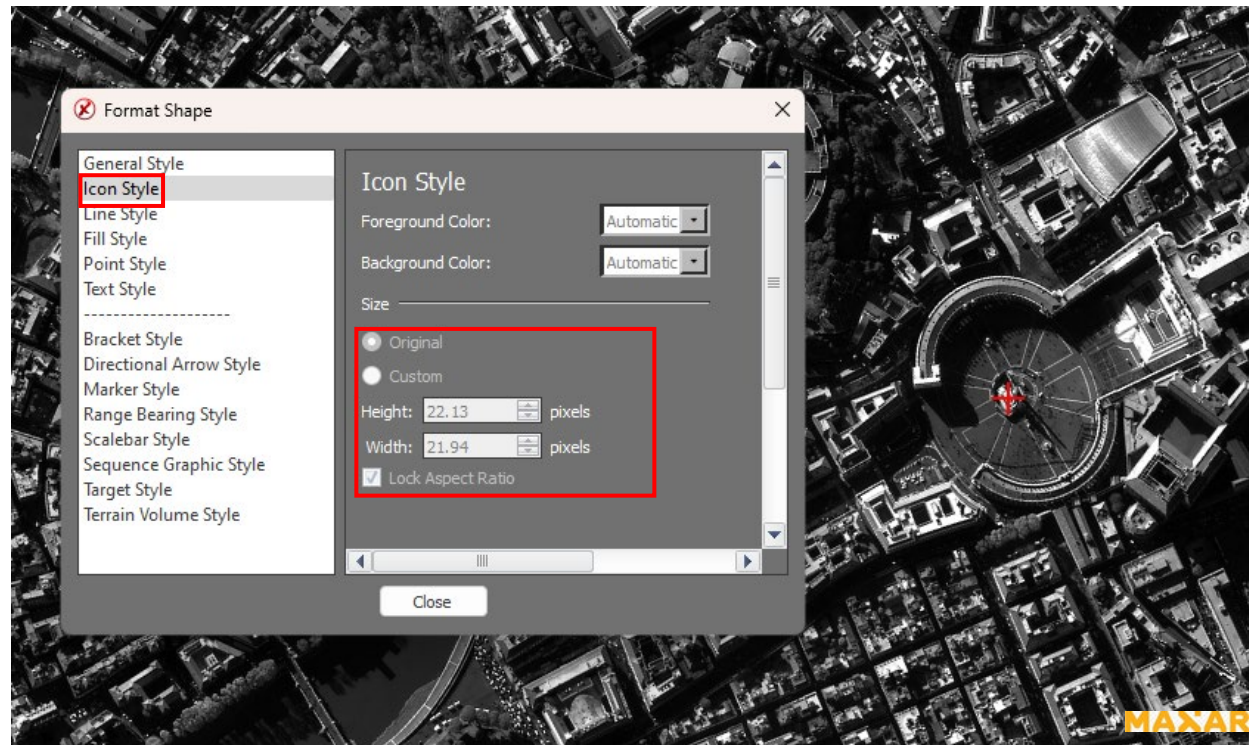
Infrastructure updates

- 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"/>.

Added 2-D Scene Feature and Icon Scaling

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

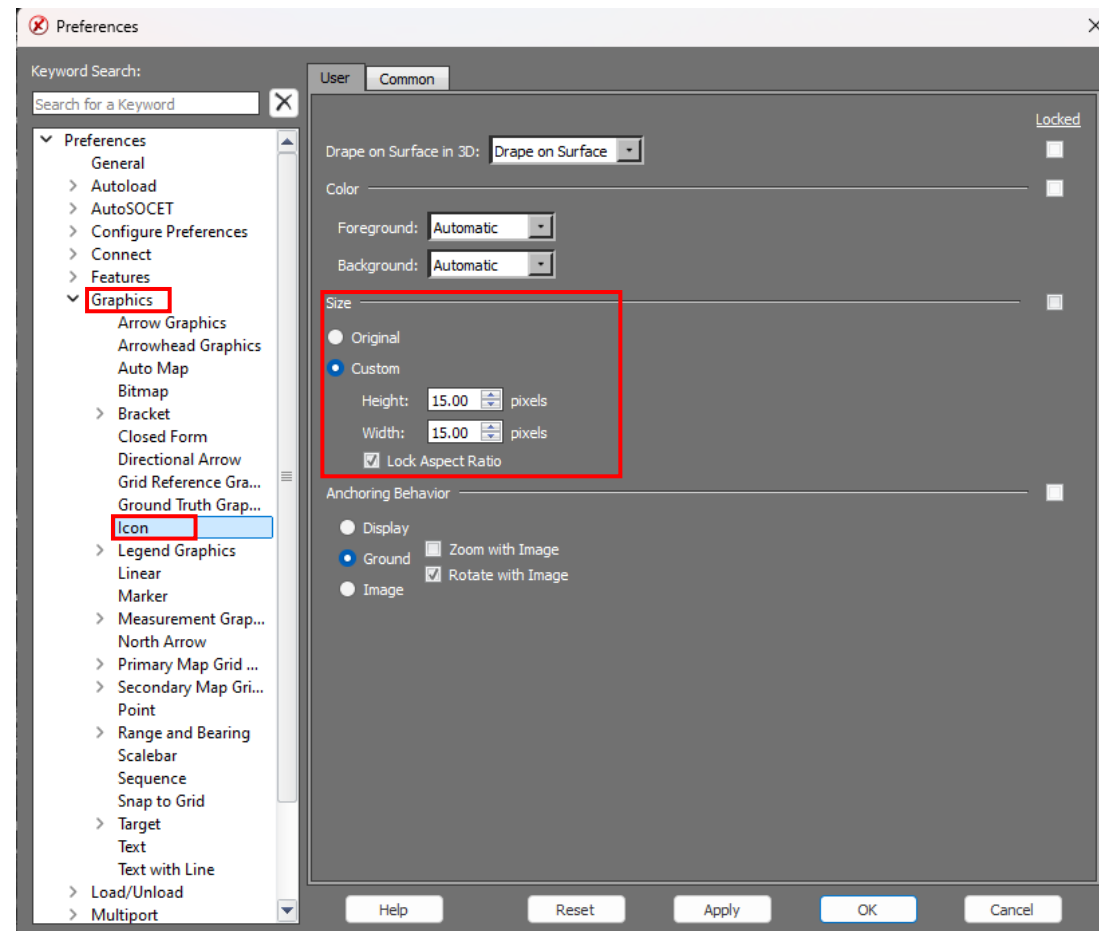
Default Icon Style preference



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.

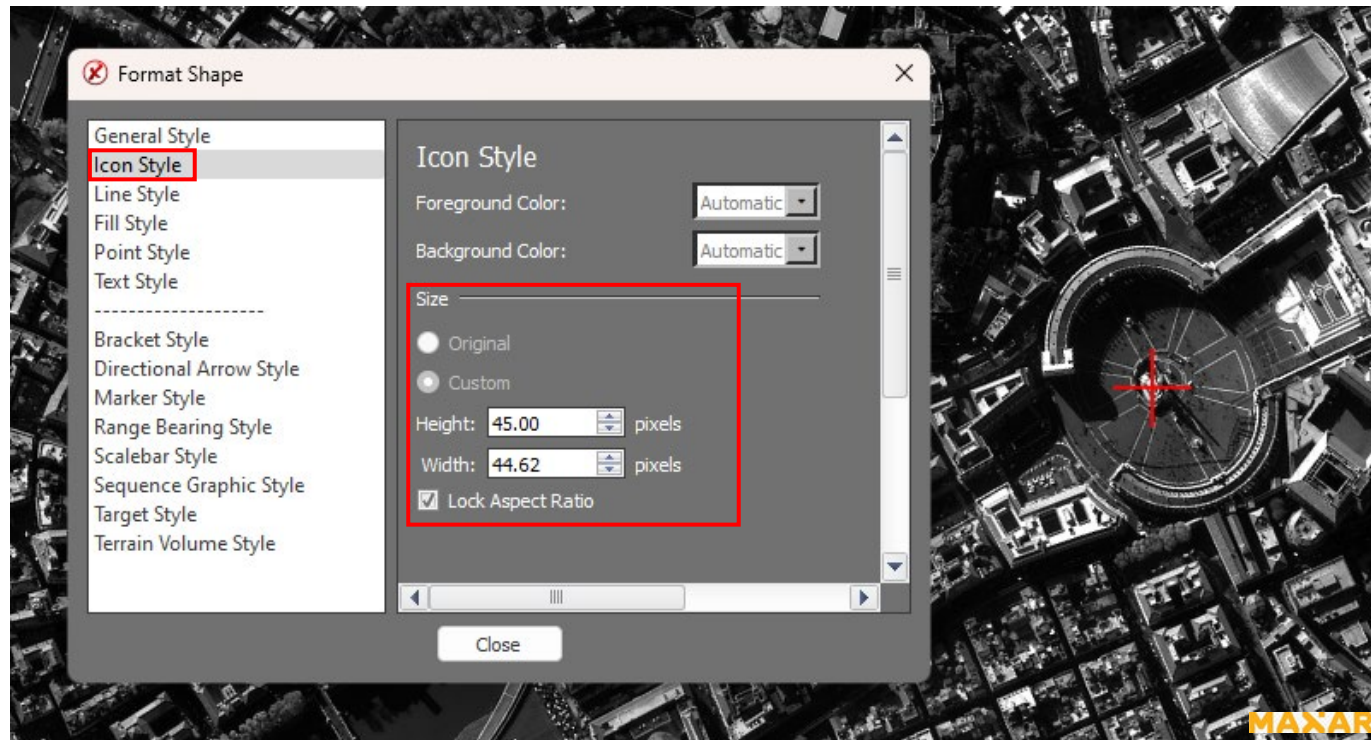
Default Icon Style Preference



Added 2-D Scene Feature and Icon Scaling ...3

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

Custom Icon Style preference



Removed “Unknown” Entities from the SOM Toolbox

- Improves Data Model load times.
- Added Observation Progress bar.

Entities Update

The screenshot displays the GEP software interface. The top menu bar includes File, Home, Select, Draw, Geospatial, Products, View, Add-Ins, Visualize, Enhance, Search, Analyze, Layer Tools, Surface Tools, Feature Tools, and Observation. The Observation Toolbox on the left contains a search bar and a tree view of entities. The main map area shows an aerial view of an airport with several aircraft. The Observation Table at the bottom right lists the observed entities.

Entities Update

The Observation Table shows the following data:

	Show	Entity Type	Entity Name	Registration	Type	Activity	Heading*	Classification	Object	Location	Source	Comments	Status
1	<input checked="" type="checkbox"/>	Fighter			Manual		0			None	Kabul West W...		Complete
2	<input checked="" type="checkbox"/>	Military			Manual		0			None	Kabul West W...		Complete
3	<input checked="" type="checkbox"/>	Military			Manual		0			None	Kabul West W...		Complete
4	<input checked="" type="checkbox"/>	Military			Manual		0			None	Kabul West W...		Complete

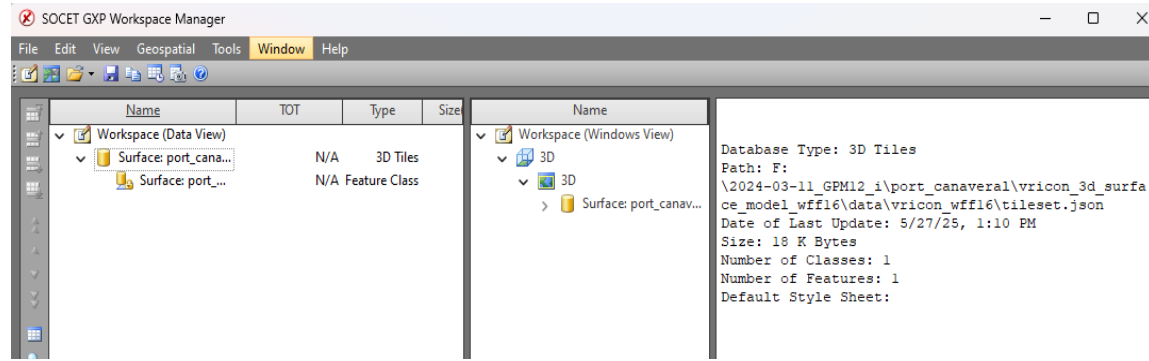
Number of observations: 4

Table Status: ● Complete

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

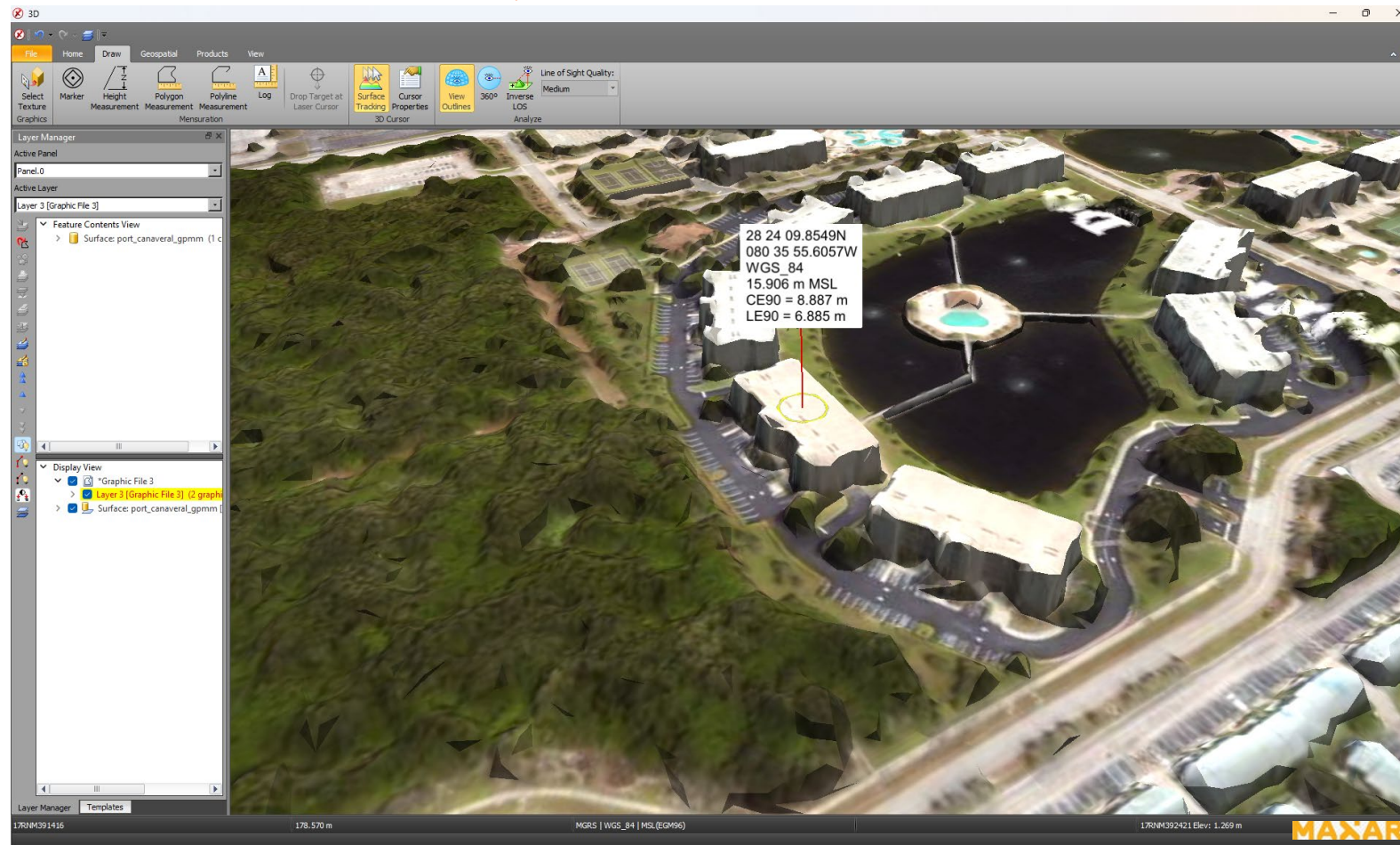


3-D Tile Visualization in a 3-D Multiport



Updated the GPM Plugin

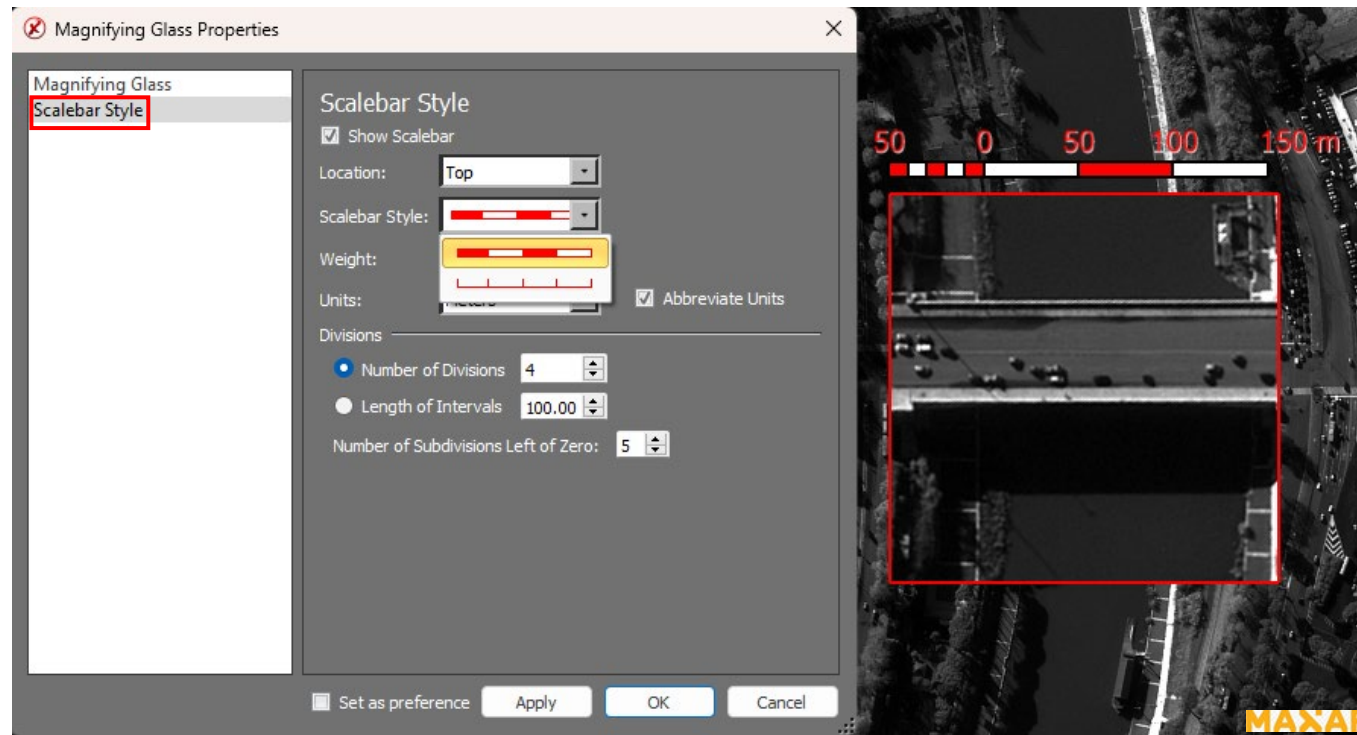
CE/LE is now retrieved with GPM data



Magnifying Glass with Scalebar Support

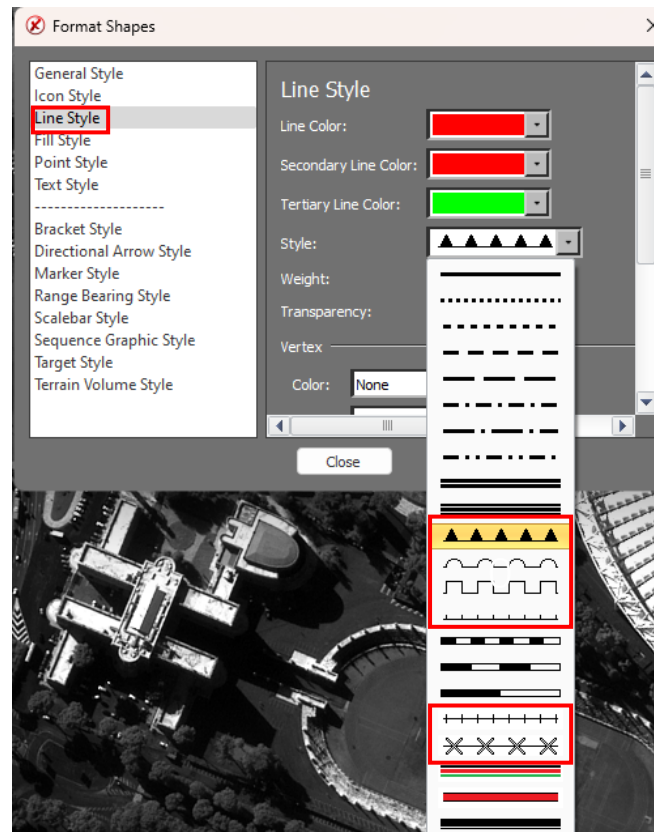
- Allows users to add a scalebar to their Magnifying Glass.
- Works for all output product types.

Scalebar Style Properties

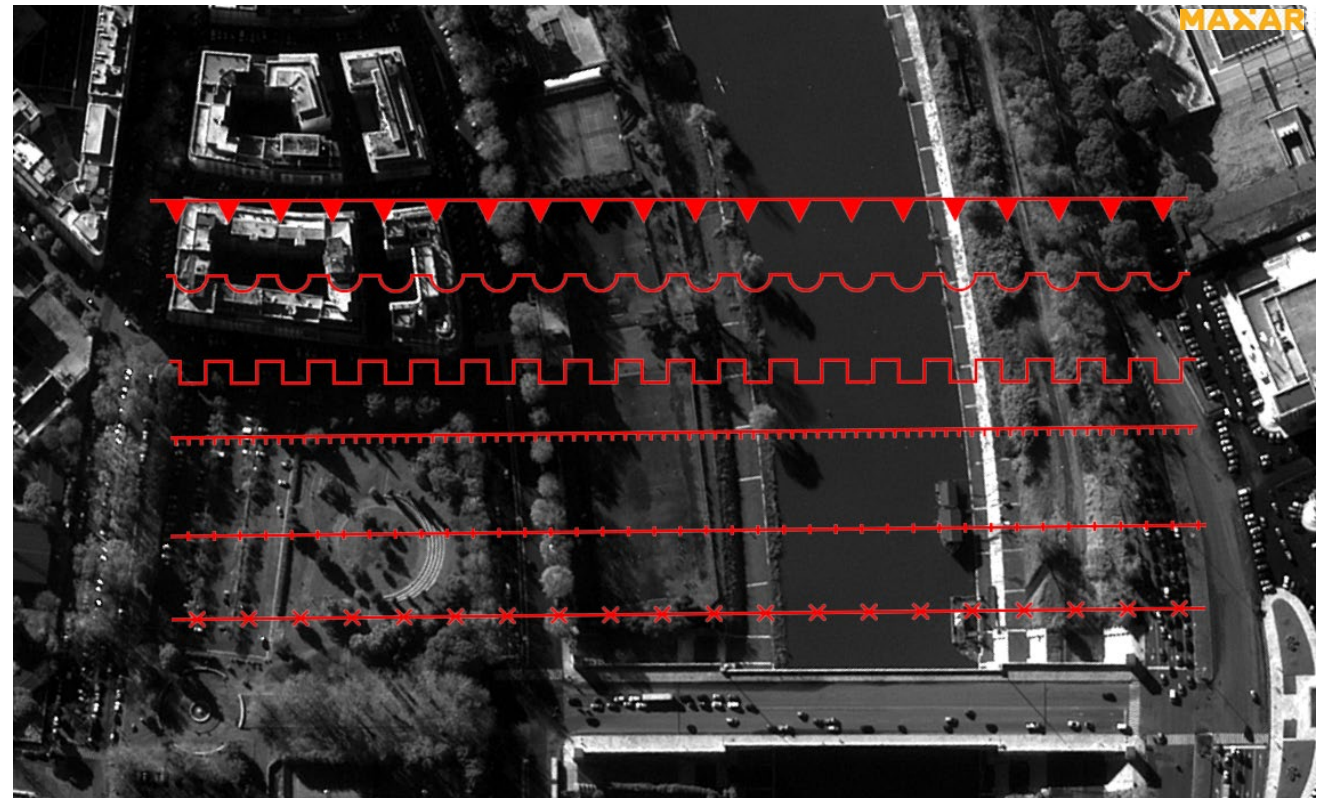


Improved Line Style Weighting.

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



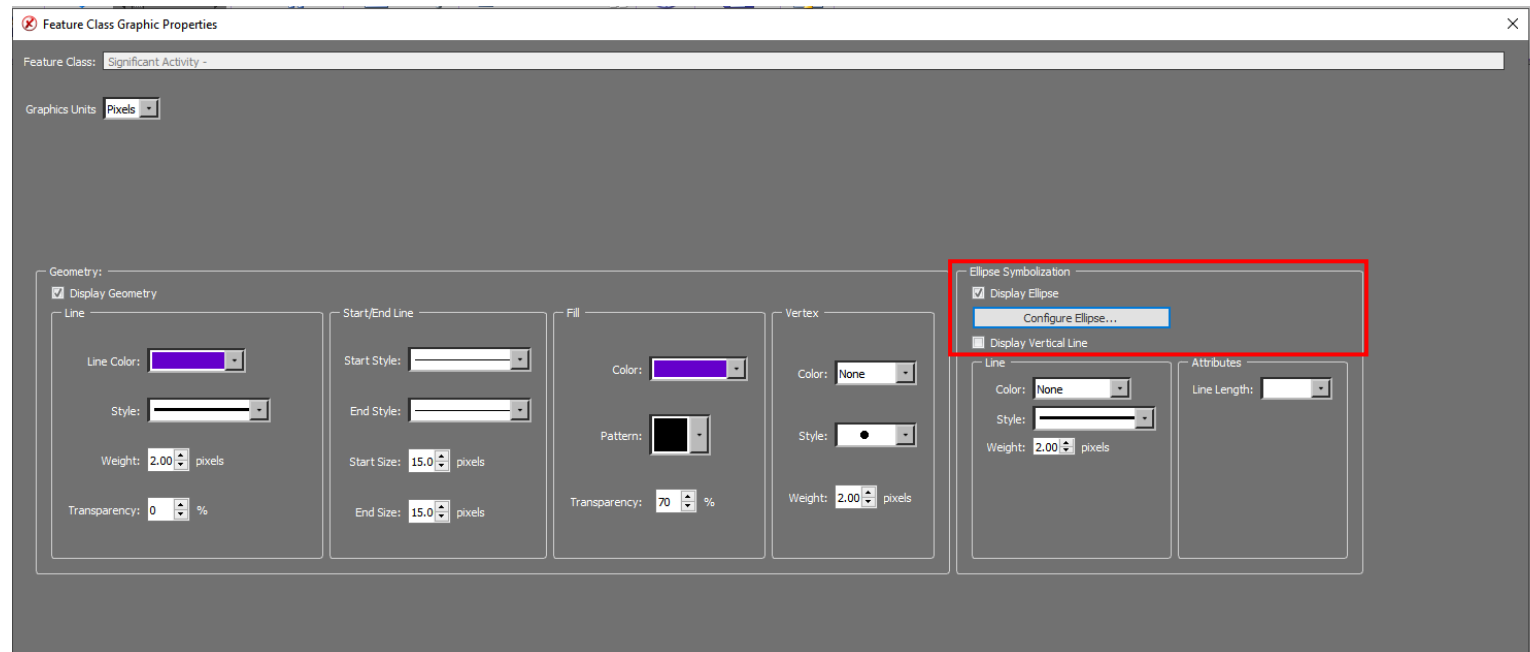
Additional Line Style Weighting



Added Ellipse Symbolization

- Enables users to configure ellipses for feature data.

Ellipse Symbolization Properties



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.

GXP InMotion v4.6.0.2 release enhancements



New features

- Updated our SENSRB plugin.
- Cleaned up Debug log (Phase 2 effort).

Thank you

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