SOCET GXP® and GXP InMotion™ Desktop v4.5.0.5 release enhancements

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SOCET GXP® v4.5.0.5 release enhancements

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SOCET GXP v4.5.0 release enhancements

- This presentation contains the enhancements included in SOCET GXP **v4.5.0.5**.

  - Released September 30, 2022*.

  - SOCET GXP v4.5.0.5 is patch 5 of the SOCET GXP v4.5.0.0.272 release build. Because all SOCET GXP patches are full installations, users have two options:

    - Upgrade an existing SOCET GXP installation by installing this patch, or

    - For brand new installations, install this patch for a full installation that includes both the patch and the v4.5.0.0.272 base installation.

* Items in Teal Indicate new features included in the v4.5.0.5 patch update

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Infrastructure updates

- New Sensors, Imagery, and other GEOINT data:

  - MSP v1.7.0.

  - Pleiades 30 centimeter images.

  - Cosmo Skymed second generation.

- Coordinate System Support:

  - Support CRS-1 (Open Geospatial Consortium Coordinate Reference System) for lossless image space streaming of raw image pixels.

  - Support for Web Mercator EPSG:3857 for Map streaming from sources such as Esri®.

  - Added GEOID18.

- Licensing:

  - New licenses are required with the release of SOCET GXP v4.5.0.x.

- Increase cache memory sizes for SOCET GXP and GXP InMotion™ to improve application performance.

- Third-party software updates:

  - GDAL v3.1.0.

  - Libtiff v4.3.0.

  - HDF5 v1.12.

  - Java 8u322b06.

  - Microsoft® Visual Studio® 2019.

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New for v4.5.0.5

Improved performance for opening Esri file geodatabase

- In previous versions of SOCET GXP, large file geodatabases would take a long time to load.

- To reduce that load time a "More Esri Rows" button was added, allowing the user to add more rows as needed.

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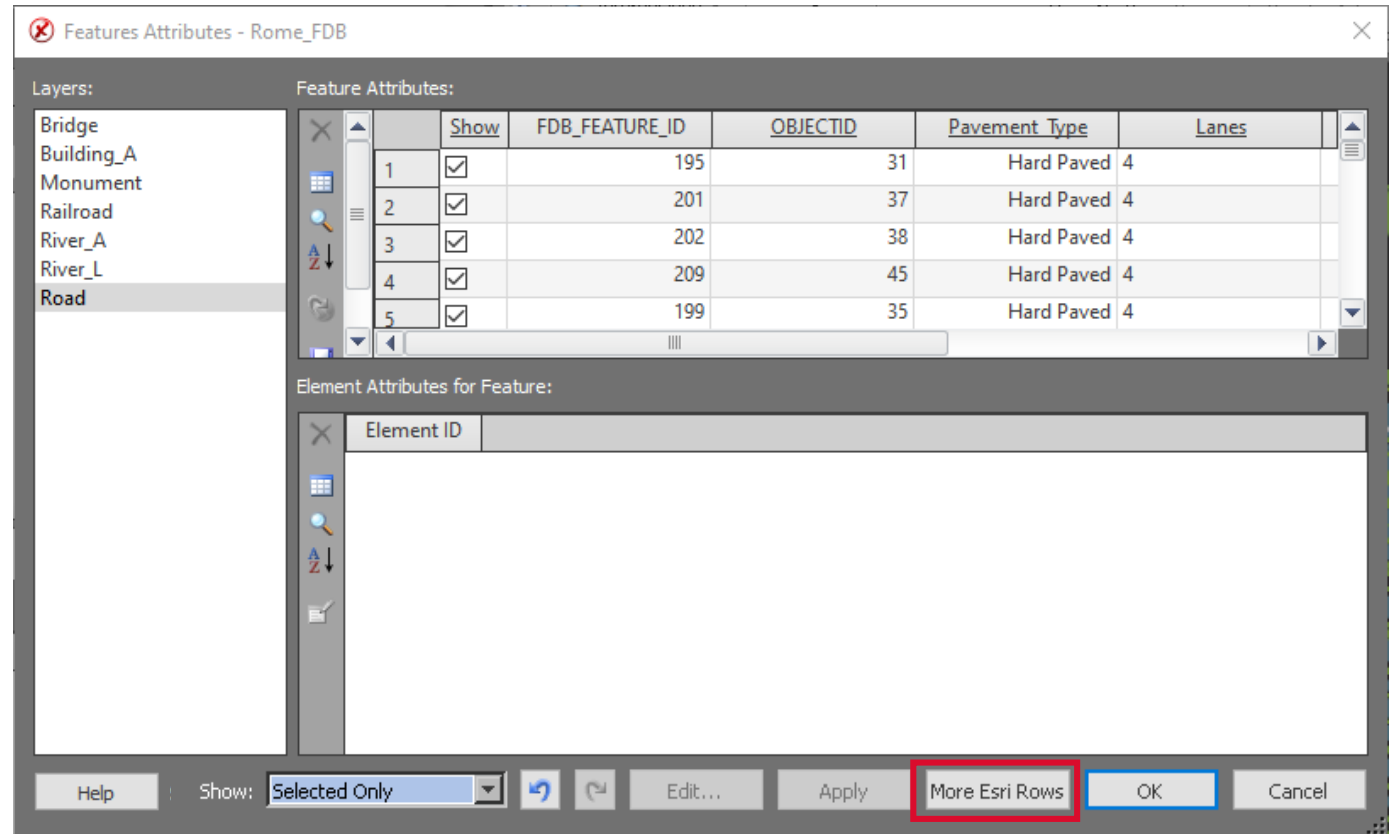
New for v4.5.0.5

Use a shapefile to define boundaries for geospatial tools

- Users can now define boundaries for all of the geospatial tools, this includes:

  - AutoSOCET.

  - Automatic Terrain Generation.

  - Triangulation.

  - Build Orthophoto.
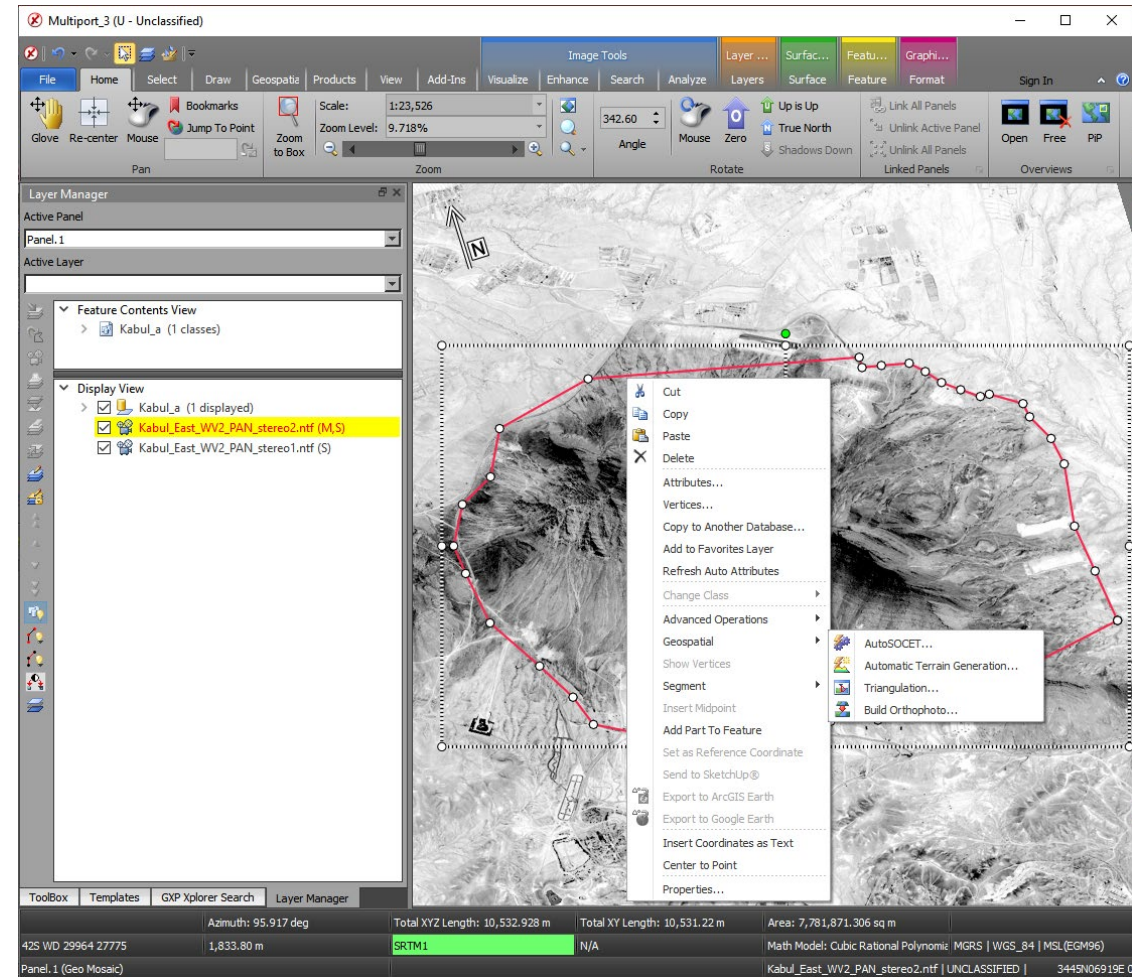
Image © 2022 Maxar Technologies.

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Improved Help

> New Help documentation template for improved navigation of the online users manual layout and style.

- SOCET GXP, GXP InMotion, and the License Manager have all been updated to the new User Manual format with focus on improvements to the layout and style.

- Improved font and management of content including the table of contents based on web page design practices.

- Expand all / collapse all within a help topic section.

- Highlight and print the document.

- Code Snippets – copy and paste command line arguments into a CMD prompt.

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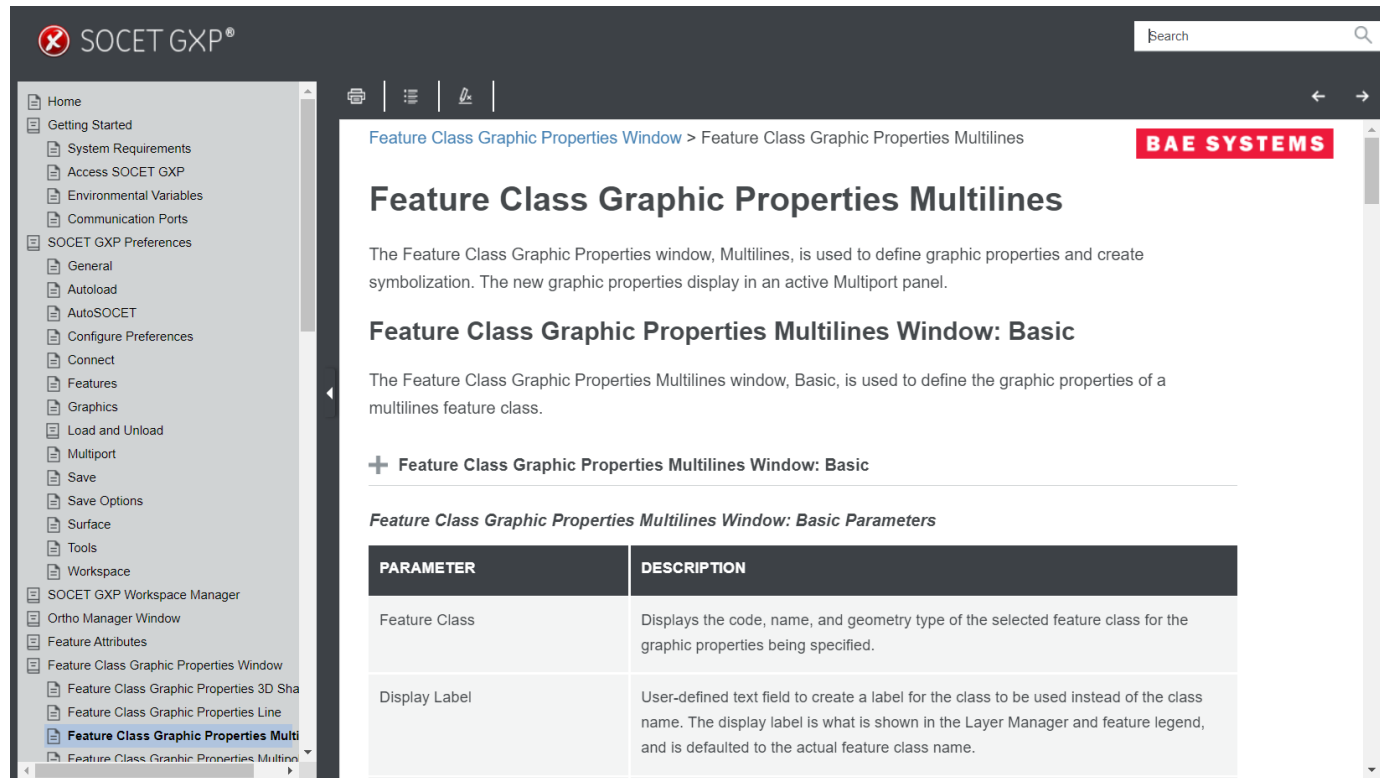
Task Manager Image List

- Update the Task Manager user interface.
  - View long image names in the Task Manager Image List simple operations including resizing Image list and/or Task Manager window.

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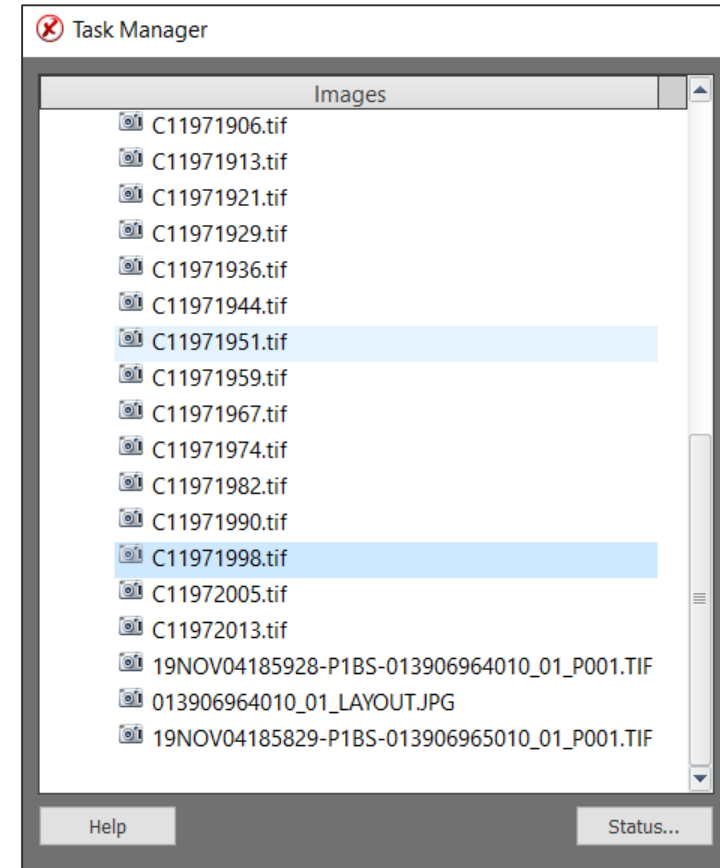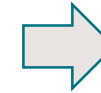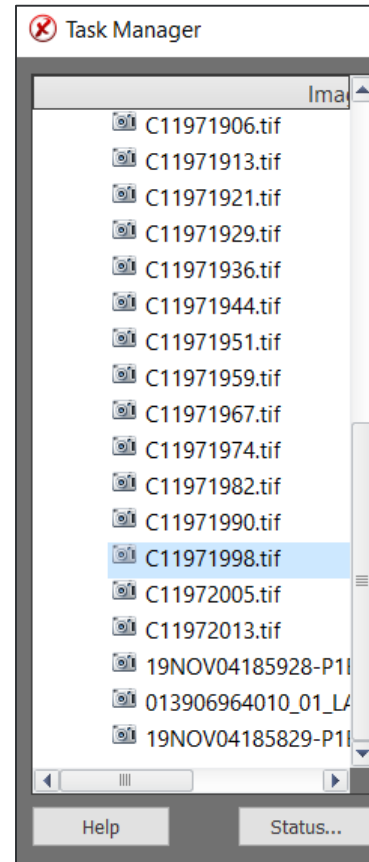
Integration of Esri Services cataloged in GXP Xplorer® Platform

- The Workflow Improvement Module (WIM) has been updated to search Esri Map Servers cataloged by GXP Xplorer.

- Updates include authentication for Esri hosted services.
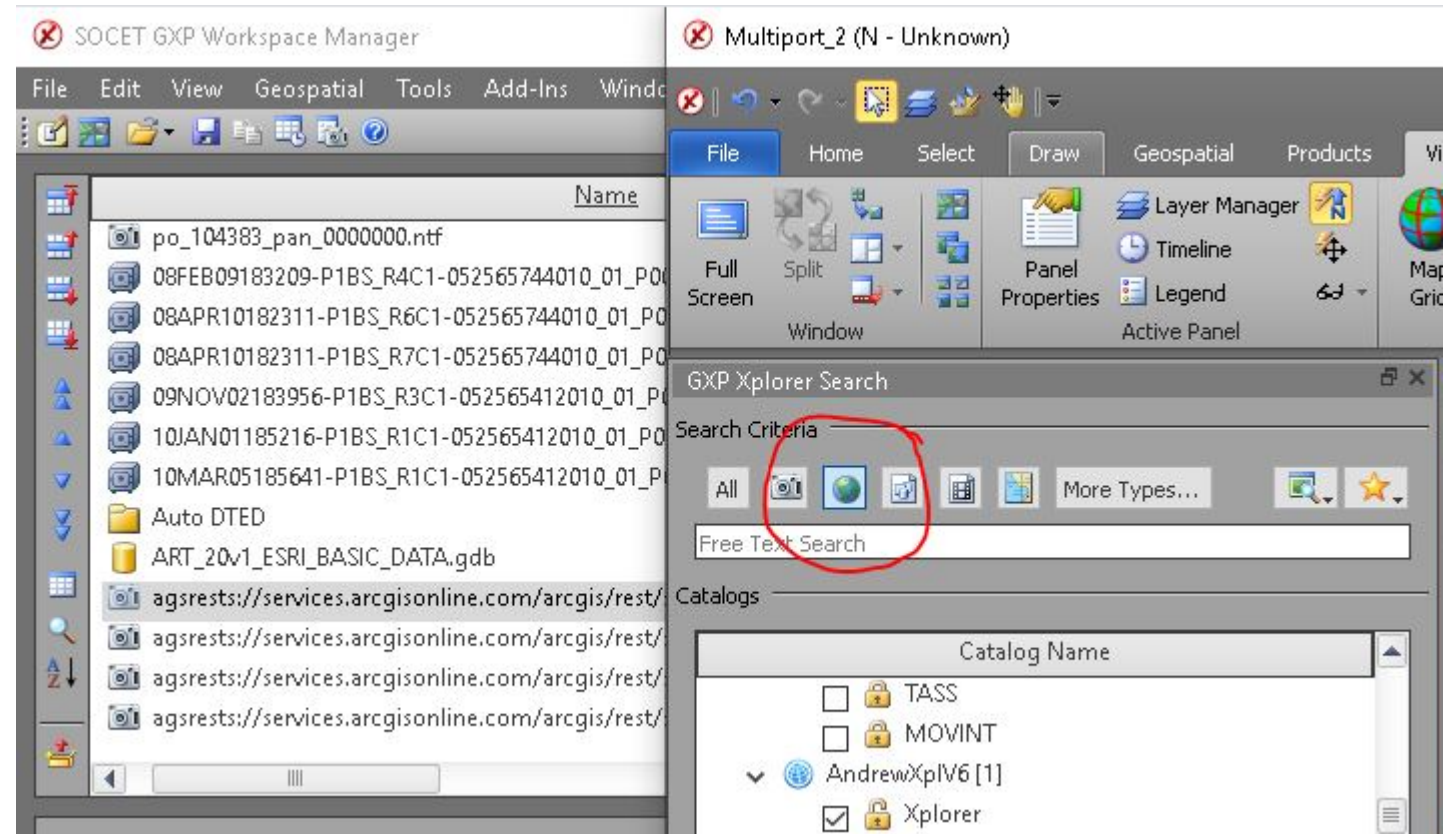
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Integration of SOCET GXP with Esri ArcGIS® Earth

- Interface with ArcGIS Earth using a simple button interface from the SOCET GXP Multiport™ Add-ons tab.

  - Add image overlay layer ArcGIS Earth.

  - Add image footprint(s) layer ArcGIS Earth.

  - Add selected graphics layer ArcGIS Earth.

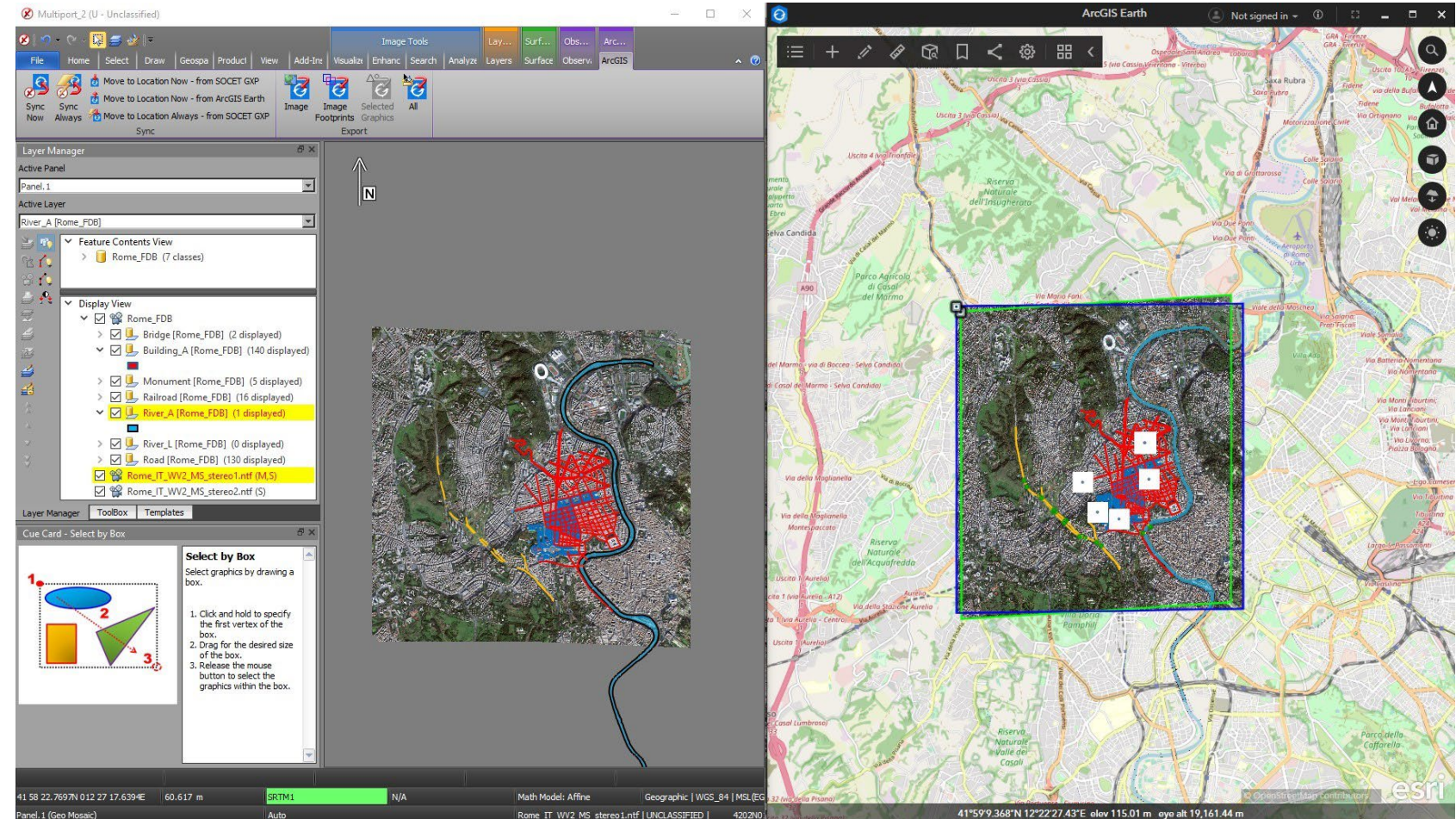 - Add all visible scene layers ArcGIS Earth.

Image © 2022 Maxar Technologies.

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Integration of SOCET GXP with Esri ArcGIS Earth ...2

- Synchronize ArcGIS Earth with SOCET GXP.
  - Move SOCET GXP to ArcGIS Earth location.
  - Move ArcGIS Earth to SOCET GXP location.
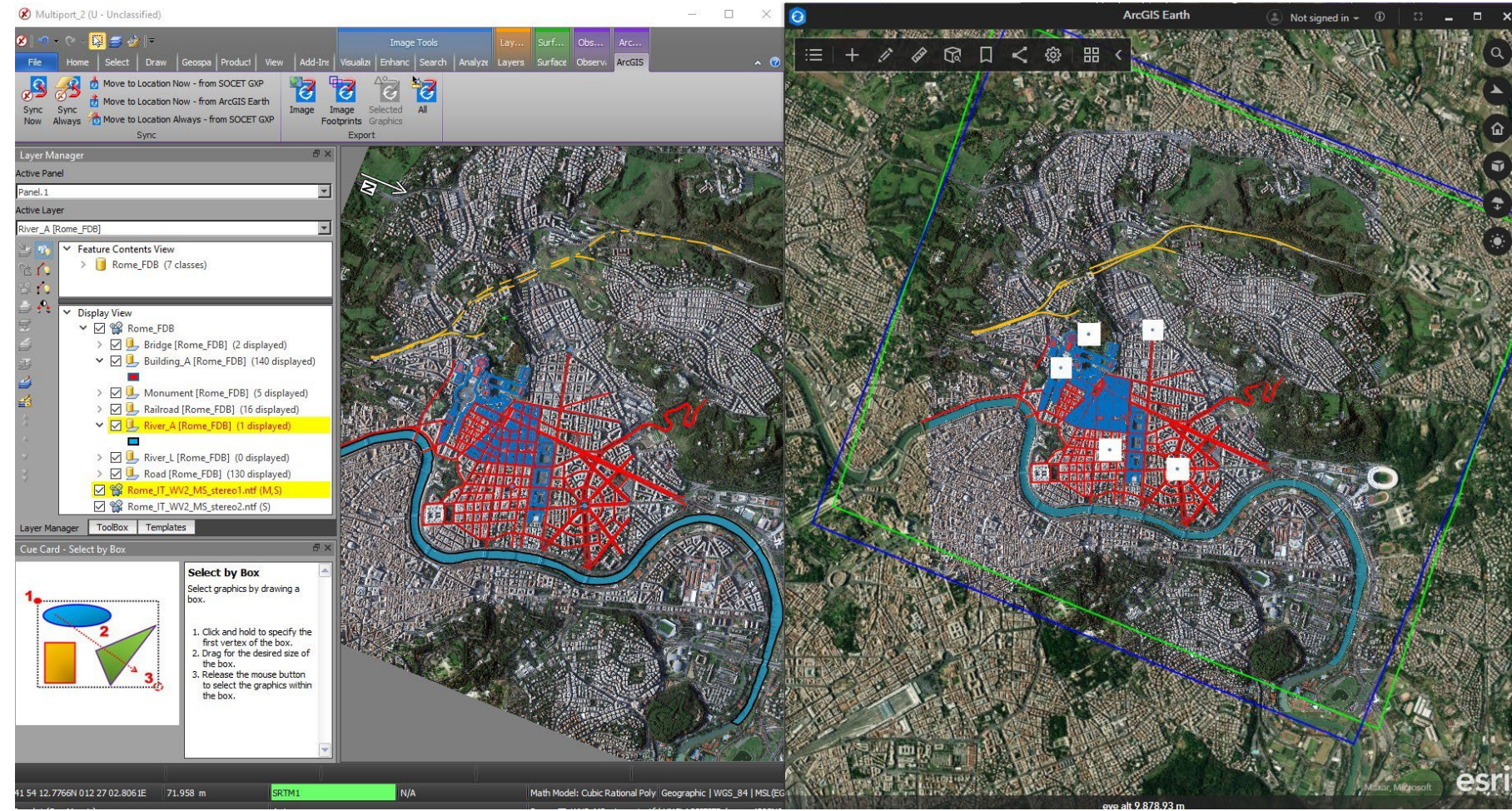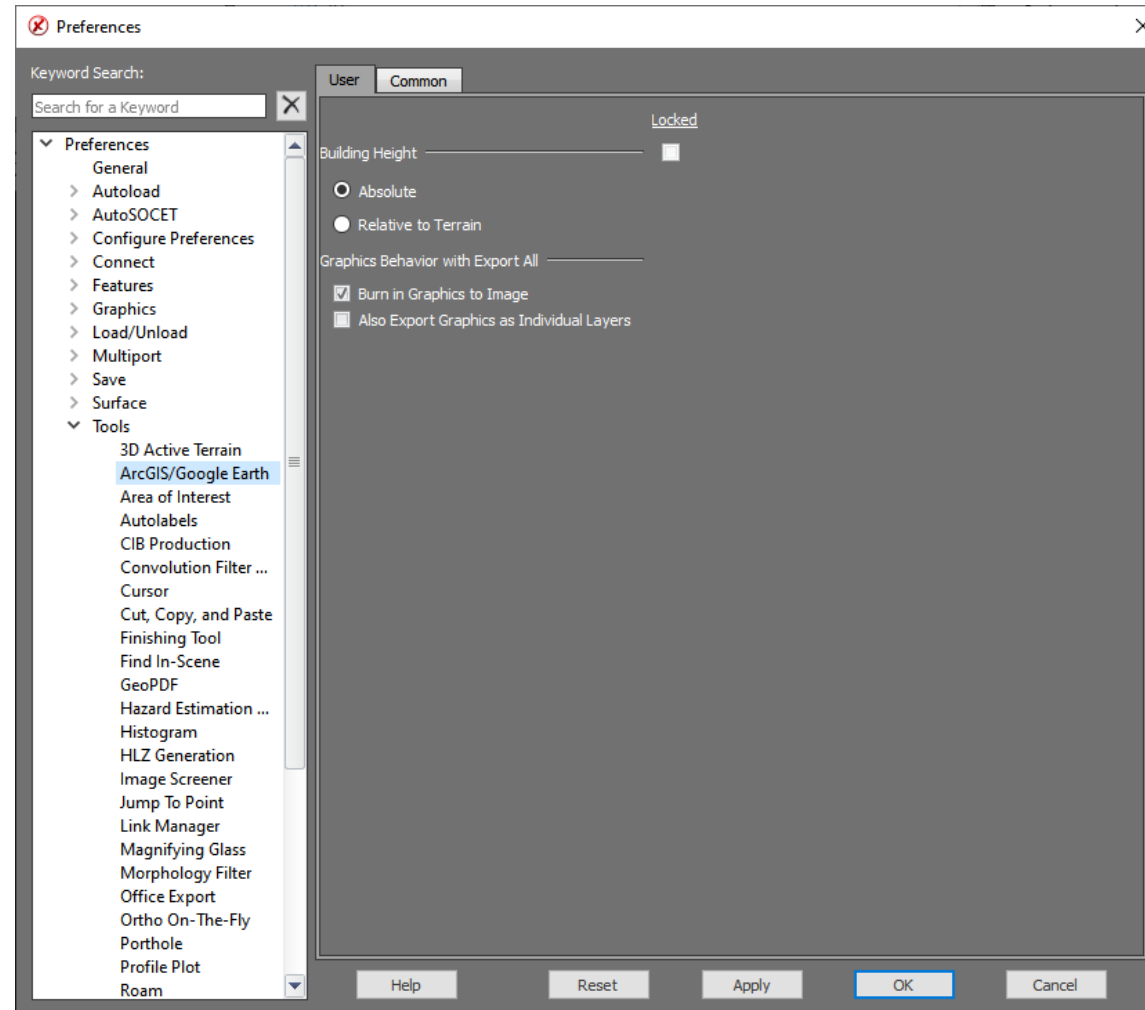 - Move ArcGIS Earth to SOCET GXP location always.

Image © 2022 Maxar Technologies.

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Integration of SOCET GXP with Esri ArcGIS Earth …3

- Preference to automatically burn graphics into an image before synchronizing SOCET GXP with ArcGIS Earth.

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New for
v4.5.0.4

New GXP Xplorer Search Functions

- Download a copy of the image from GXP Xplorer to the local workstation.
  - New option in the Right Mouse Menu.
  - Download Status in the GXP Xplorer Results panel.
- Image Thumbnail now available for preview.

Load into Workspace
Download to Folder
Open New Multiport
Open New Panel
Replace in Search Panel
Add To Search Panel
Remove

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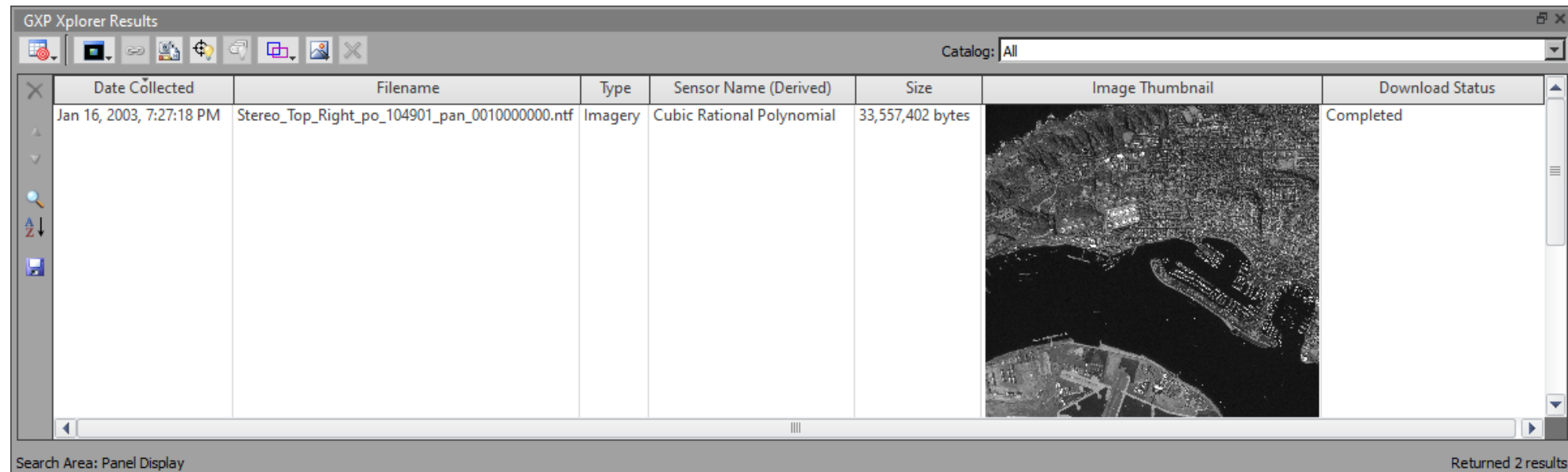
Ability to change color of feature when selecting the feature

- Changing color for selecting feature:
  - Choose a color, style and weight.
- Ability to display vertices:
  - Choose a color, style and weight.
- Moved the Edit Frame display from Configure → Performance Preference location.

Image © 2022 Maxar Technologies.

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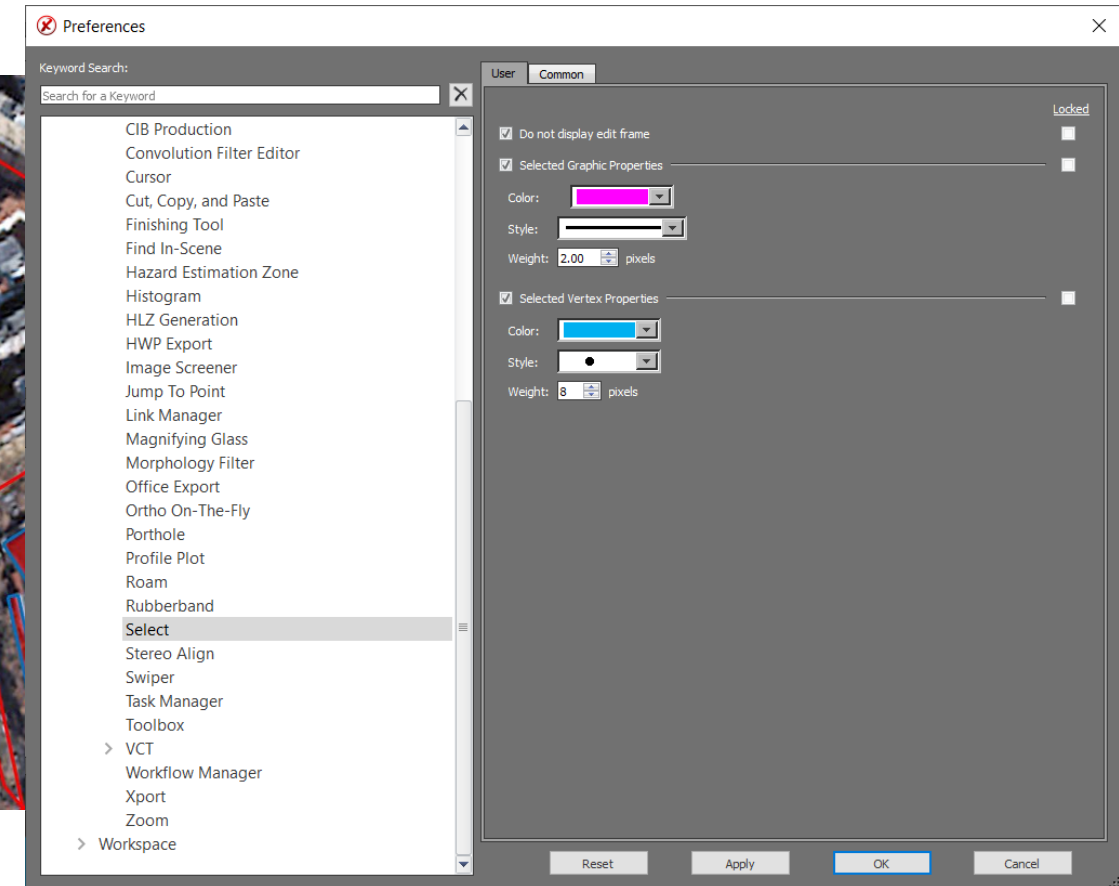
Ability to change vertex values with Edit Vertices Window

- Changing vertex values in Edit Vertices Window:

  - Ability to change coordinates and elevation values.
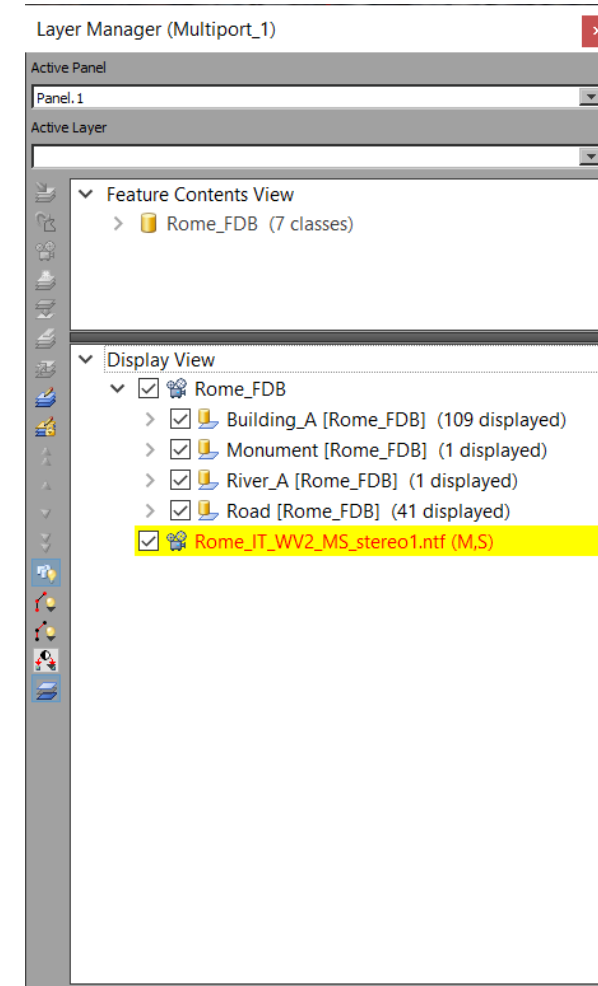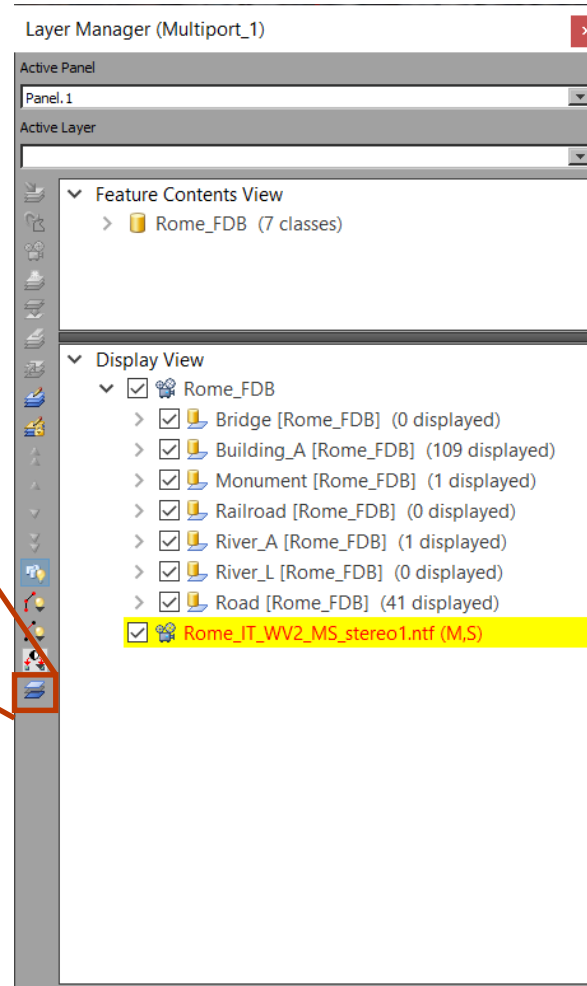
  - Highlight a row and jump to vertex.
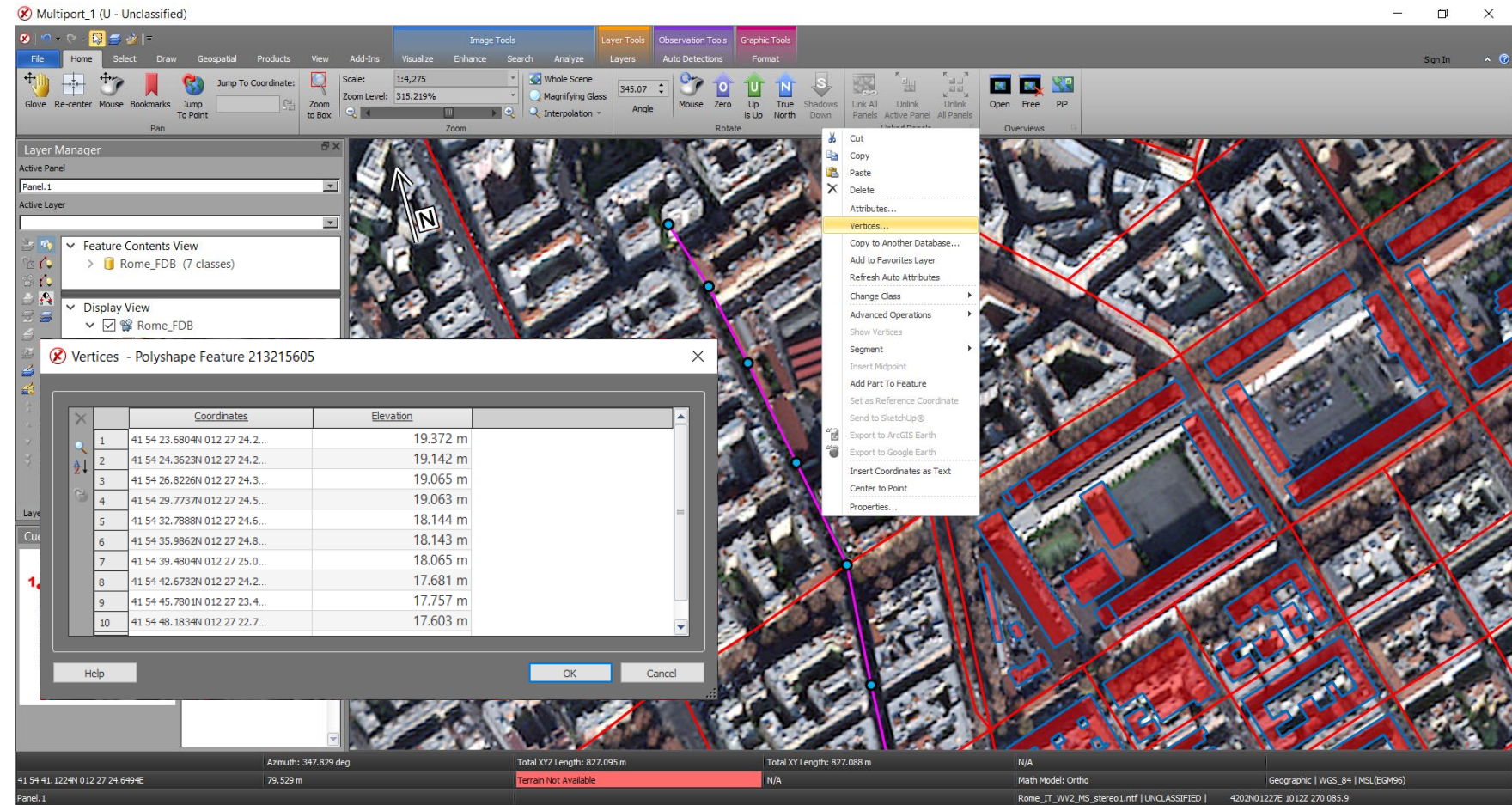
Image © 2022 Maxar Technologies.

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Hide Empty Layers in a database

- Ability to hide layers in a database that do not have any features collected in them.
    - Toggle On/Off to hide or to show all available feature classes.

Layer Manager (Multiport_1)   ☒

Active Panel
Panel.1   ▾

Active Layer
                                                                              ▾

❯ Feature Contents View
   ❯ 🗄 Rome_FDB (7 classes)

❯ Display View
   ❮ ☑ 🎞 Rome_FDB
      ❯ ☑ Bridge [Rome_FDB] (0 displayed)
      ❯ ☑ Building_A [Rome_FDB] (109 displayed)
      ❯ ☑ Monument [Rome_FDB] (1 displayed)
      ❯ ☑ Railroad [Rome_FDB] (0 displayed)
      ❯ ☑ River_A [Rome_FDB] (1 displayed)
      ❯ ☑ River_L [Rome_FDB] (0 displayed)
      ❯ ☑ Road [Rome_FDB] (41 displayed)
     ☑ 🎞 Rome_IT_WV2_MS_stereo1.ntf (M,S)

Layer Manager (Multiport_1)   ☒

Active Panel
Panel.1   ▾

Active Layer
                                                                              ▾

❯ Feature Contents View
   ❯ 🗄 Rome_FDB (7 classes)

❯ Display View
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      ❯ ☑ Road [Rome_FDB] (41 displayed)
     ☑ 🎞 Rome_IT_WV2_MS_stereo1.ntf (M,S)

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Feature Attributes Menu

- Enhanced Feature Attribute Window Interaction:
  - Select multiple features from one or more classes.
  - From multiple features, the analyst can set features as active.
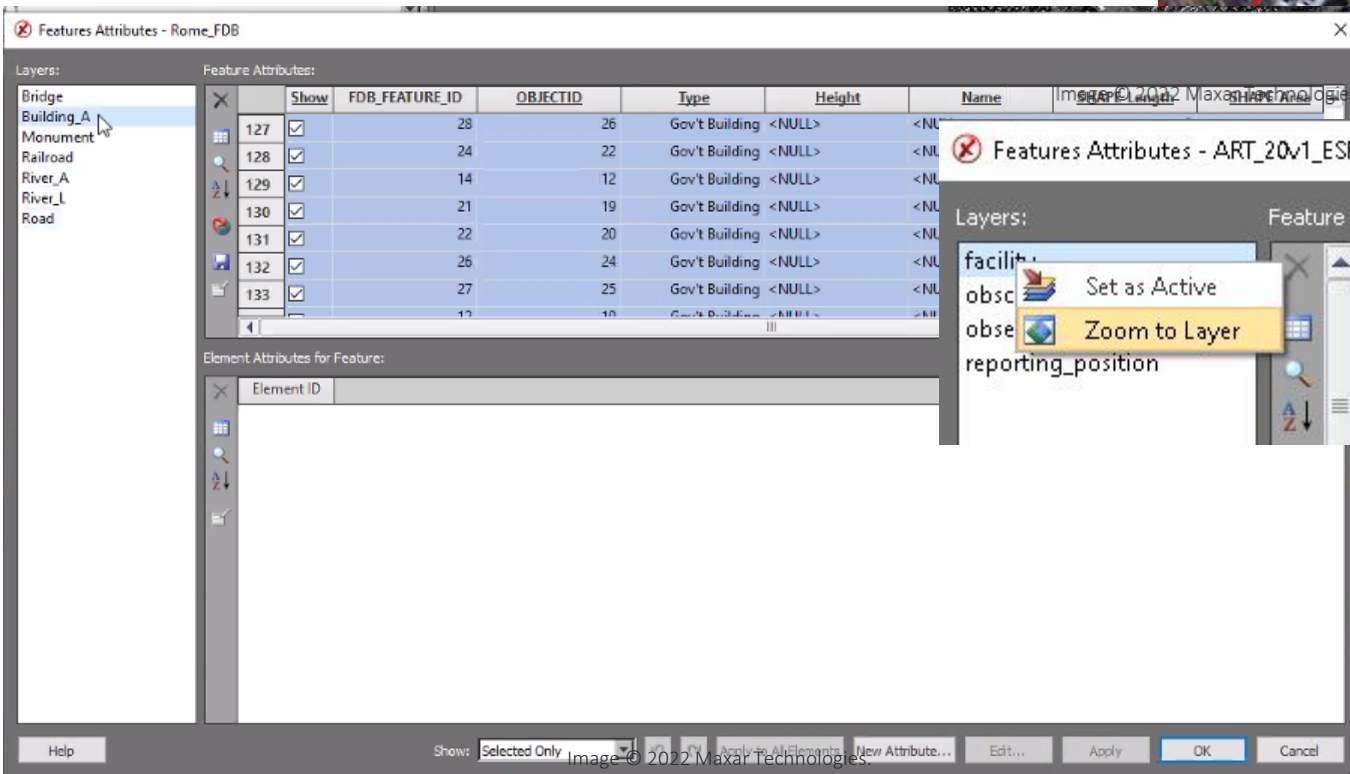 - From multiple features, the analyst can zoom into the selected set.

Image © 2022 Maxar Technologies.

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Ellipse Tool update

- Ability to define the amount of vertices used to create circle.

  - Ellipse tool can create triangle, square, pentagon, hexagon based on the amount of vertices used.
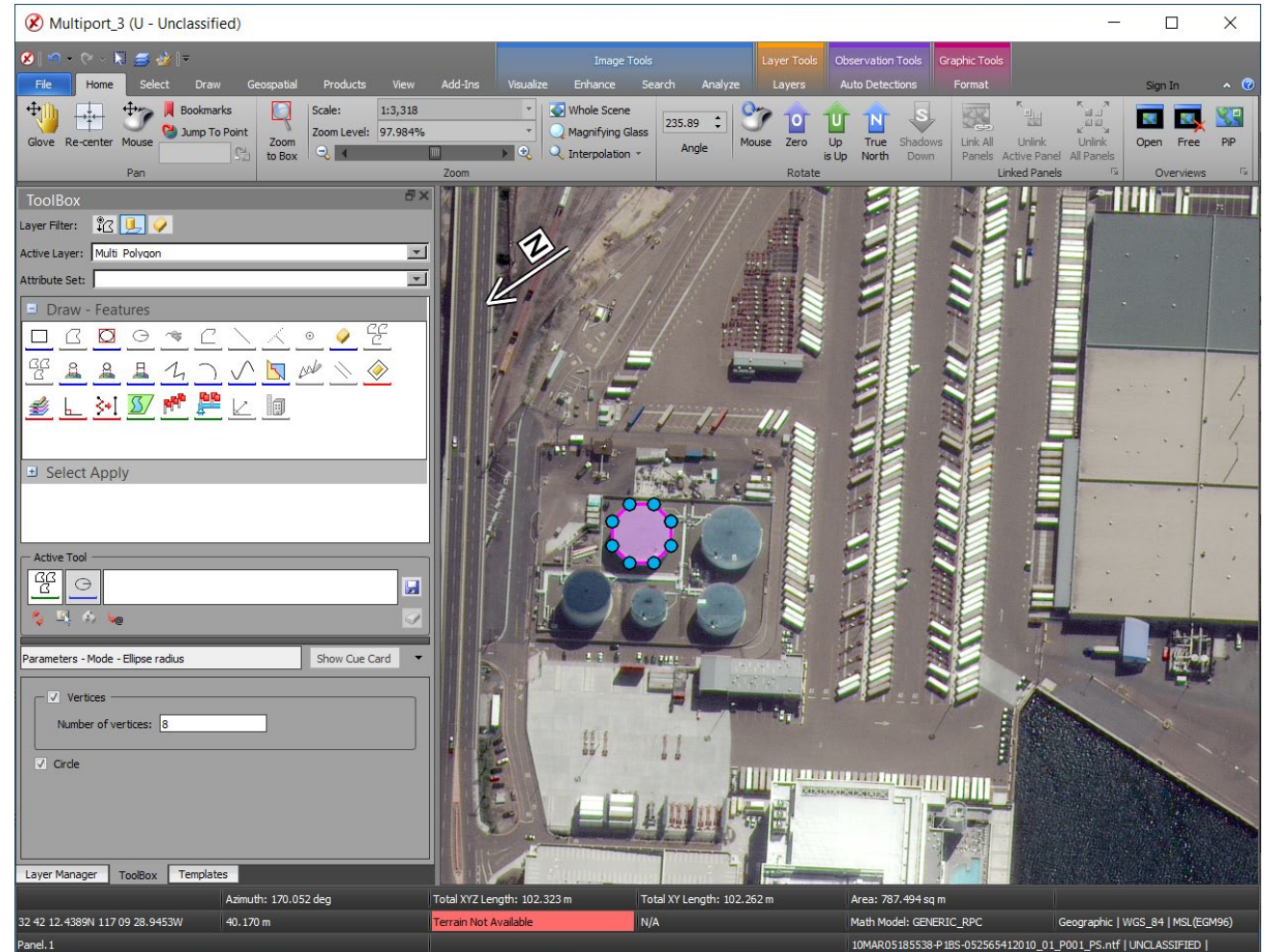
Image © 2022 Maxar Technologies.

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Vertex Selection priority

- Moving a vertex has been updated to allow only the vertex of the feature selected to move.
  - Very useful when two vertices from different features are sharing same location.

Image © 2022 Maxar Technologies.

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Topology Check

- User interface for new topology tools and algorithms:
  - Ribbon tab for expansion.
  - Dockable window.
- Features are validated against relevant geometric rules and associated parameters.
- Validation results are displayed and worked off by the analyst.
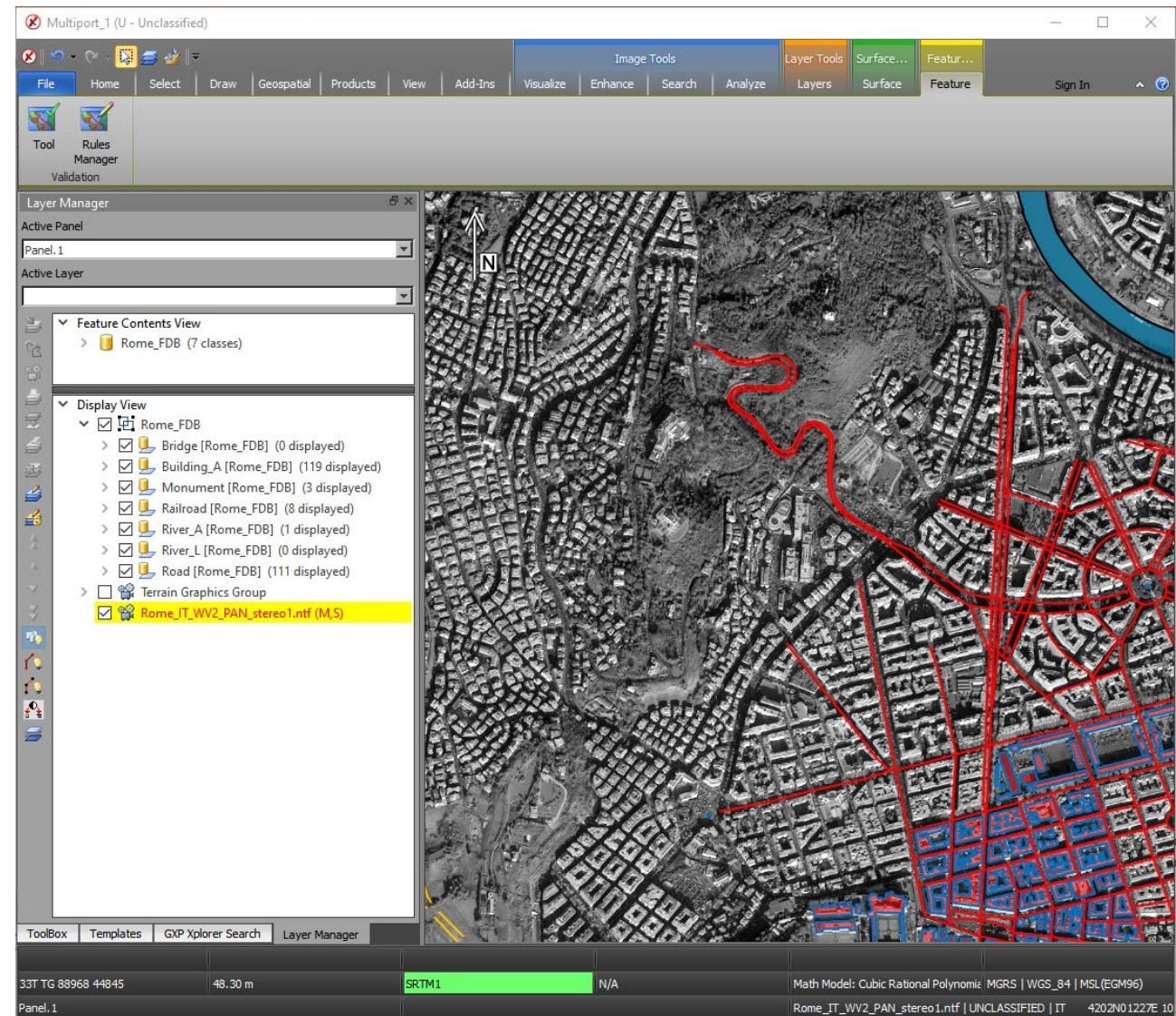
Image © 2022 Maxar Technologies.

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Drop to Ground Attribute

- Planimetric – Set each vertex to the average terrain Z plus the attribute height value.

- Topographic – Set each feature vertex to the terrain value plus the height attribute value.

- Geomorphic – Set each feature vertex to the ground terrain value.

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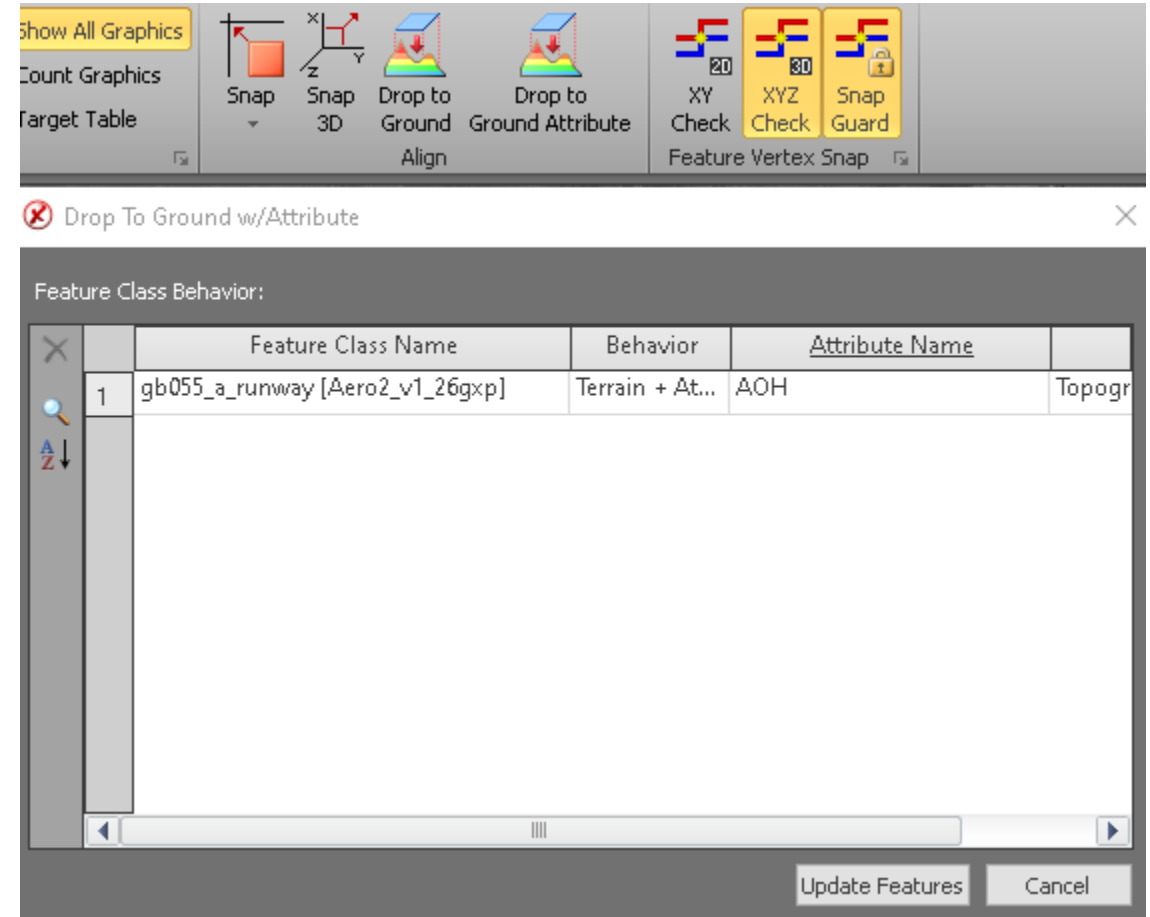
Terrain Tracking with Z-Offset
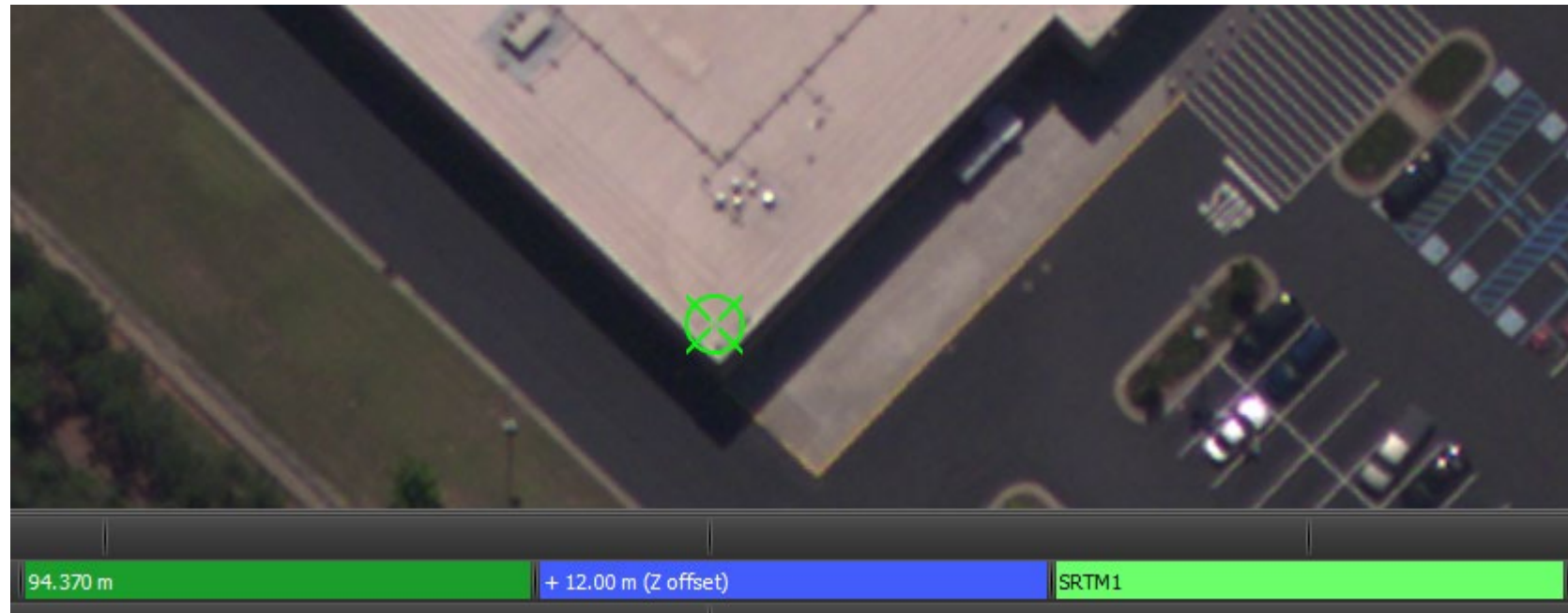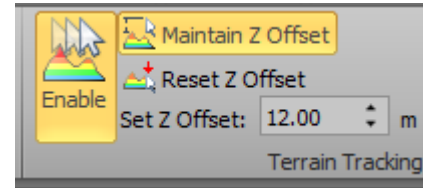
Imagery courtesy of NOAA/NGS.

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Feature Extraction and SOCET for ArcGIS (SFA)

- Enable the view/edit attributes option when multiple features are selected from multiple classes.

- Enhance edit undo/redo capabilities to work with PostGIS and Geodatabase files.

- Graphics drawing performance improvements for SFA Pro when zooming.
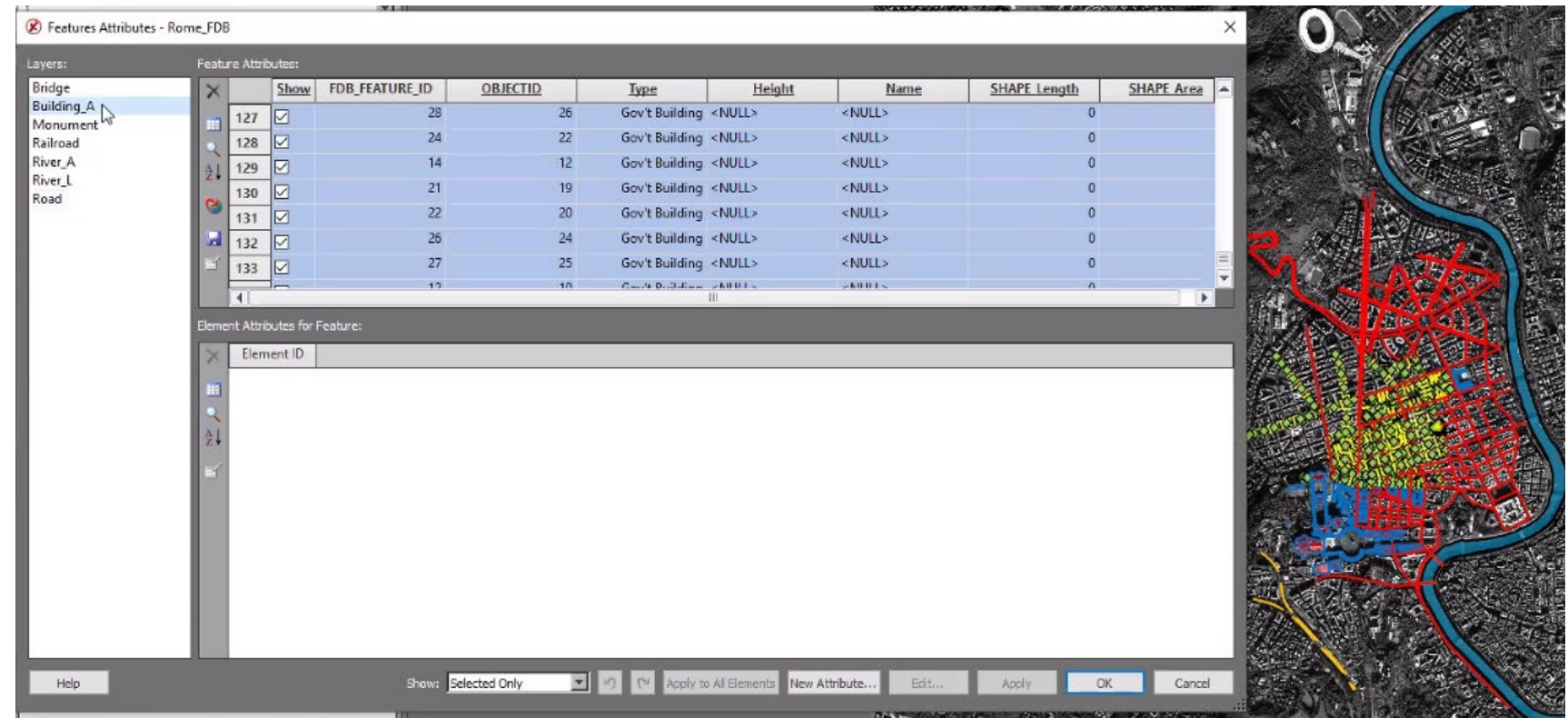
Image © 2022 Maxar Technologies.

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Structured Observation Management (SOM)

- Provide image chips in JPG or NITF ICHIPB format with observations retaining metadata of the original image in the chip for NITF.

Image © 2022 Maxar Technologies.

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SOM ...2

- Added the ability to view observations across multiple facilities.

- Allow observations to be collected with a single click.

- Select multiple observations in the observation table to set them to complete.

Image © 2022 Maxar Technologies.

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Registration for 3D tile mesh

- Register 3D tile mesh (tileset.json) to imagery in a 2D Multiport.

  - Enables a 3D tile mesh dataset to be translated in x,y or x,y,z to align with imagery from other sources.

  - Works with stereo Multiport.

3D tile mesh Images © 2022 Maxar Technologies.
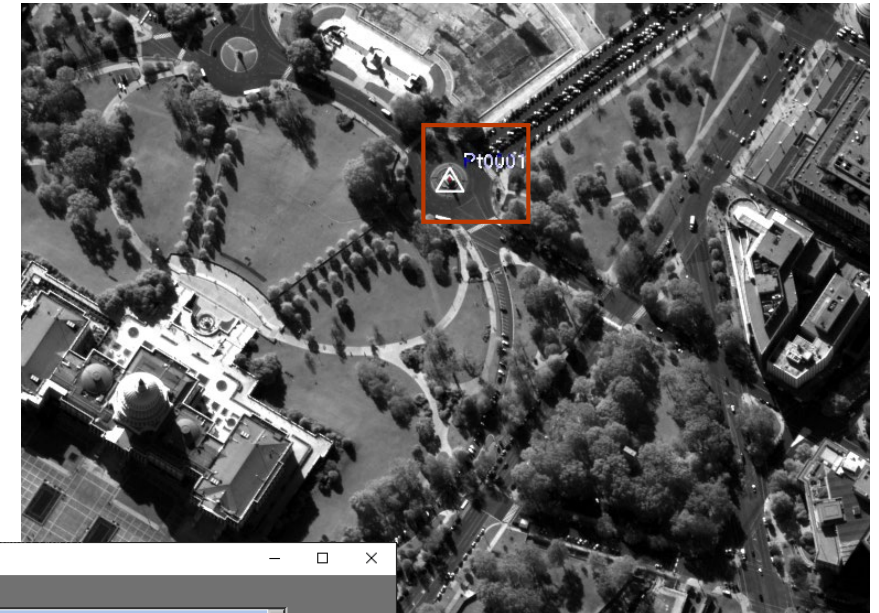
Image © 2022 Maxar Technologies.

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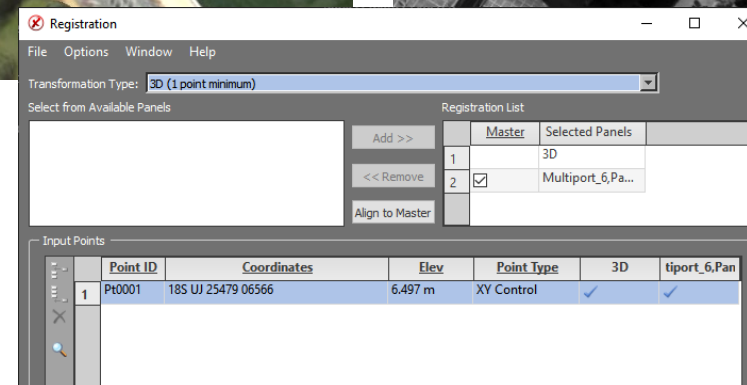
Export to Microsoft® Word

Export products to Microsoft Word directly from SOCET GXP.

Image © 2022 Maxar Technologies.
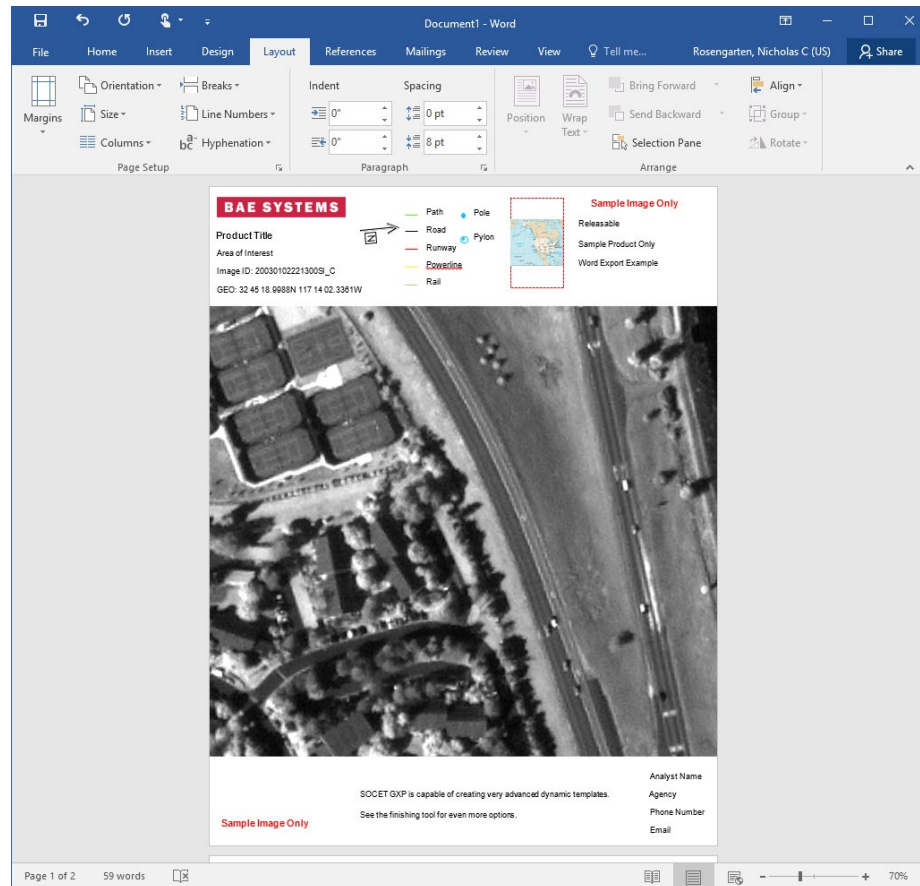
- Preference added to allow the format to be portrait or landscape.

- Users can also export to Hangul Word Processor.

- License product creation in Microsoft Word under the SOCET GXP GeoElement bundle and above.

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Videos for SOCET GXP Products

Create Video Templates in the SOCET GXP Finishing Tool and PowerPoint®.

- Video Player with video controls integrated into the SOCET GXP Multiport.

- Embed Videos in the Finishing Tool and PowerPoint from SOCET GXP animations exported as MPEG.
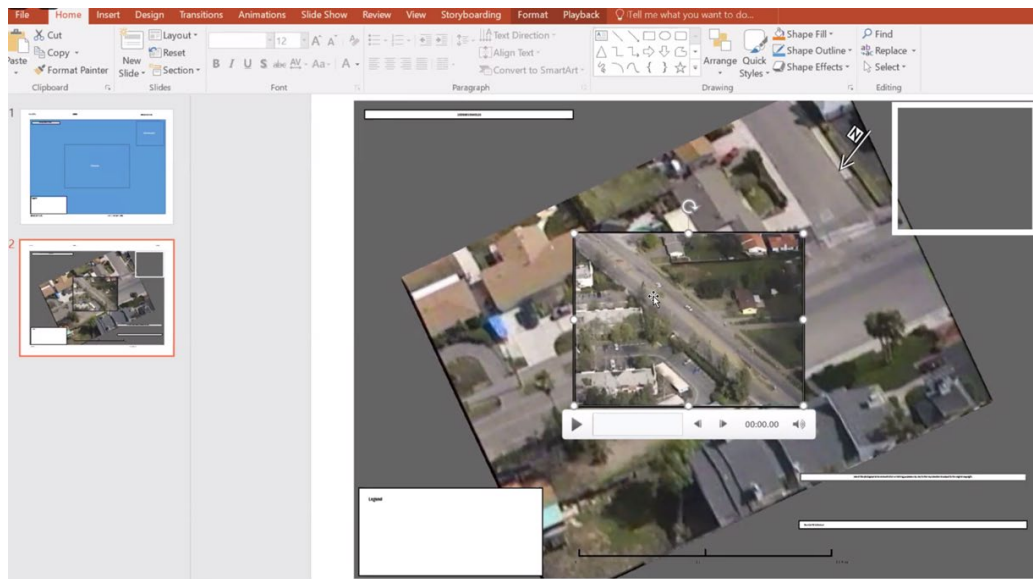
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

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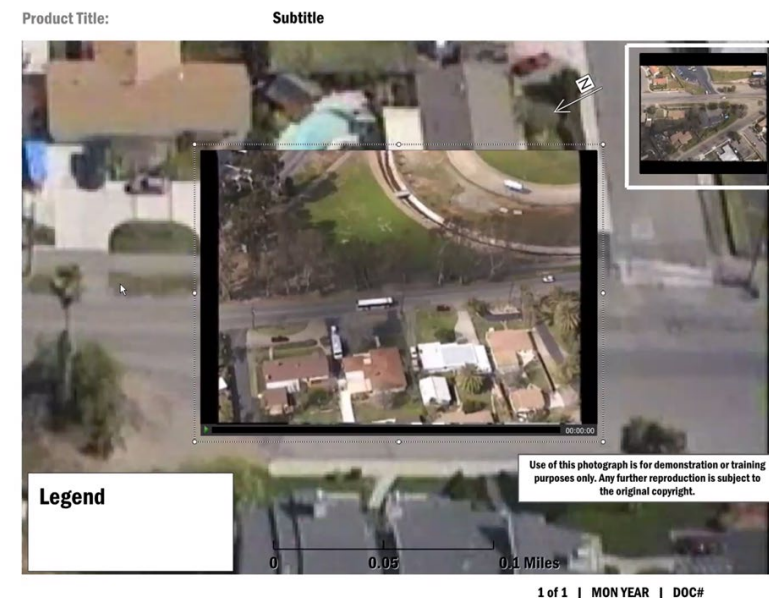
Updates for Cesium 3D Tiles® v1.0

- Cesium 3D Tiles v1.0 is a format for highly detailed geospatial models adapted by the OGC® Cesium® https://cesium.com/3d-tiling-pipeline/.

- SOCET GXP provides support for allowing visualization, roaming, fly-through in the SOCET GXP 3D Multiport.

- Drape Annotations and Features on 3D Tiles.

- Improved cursor linking available for 3D to 2D Multiports.

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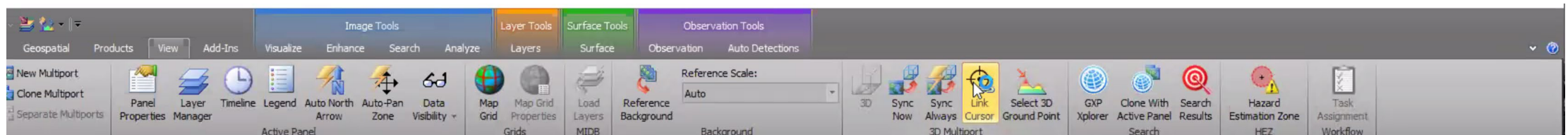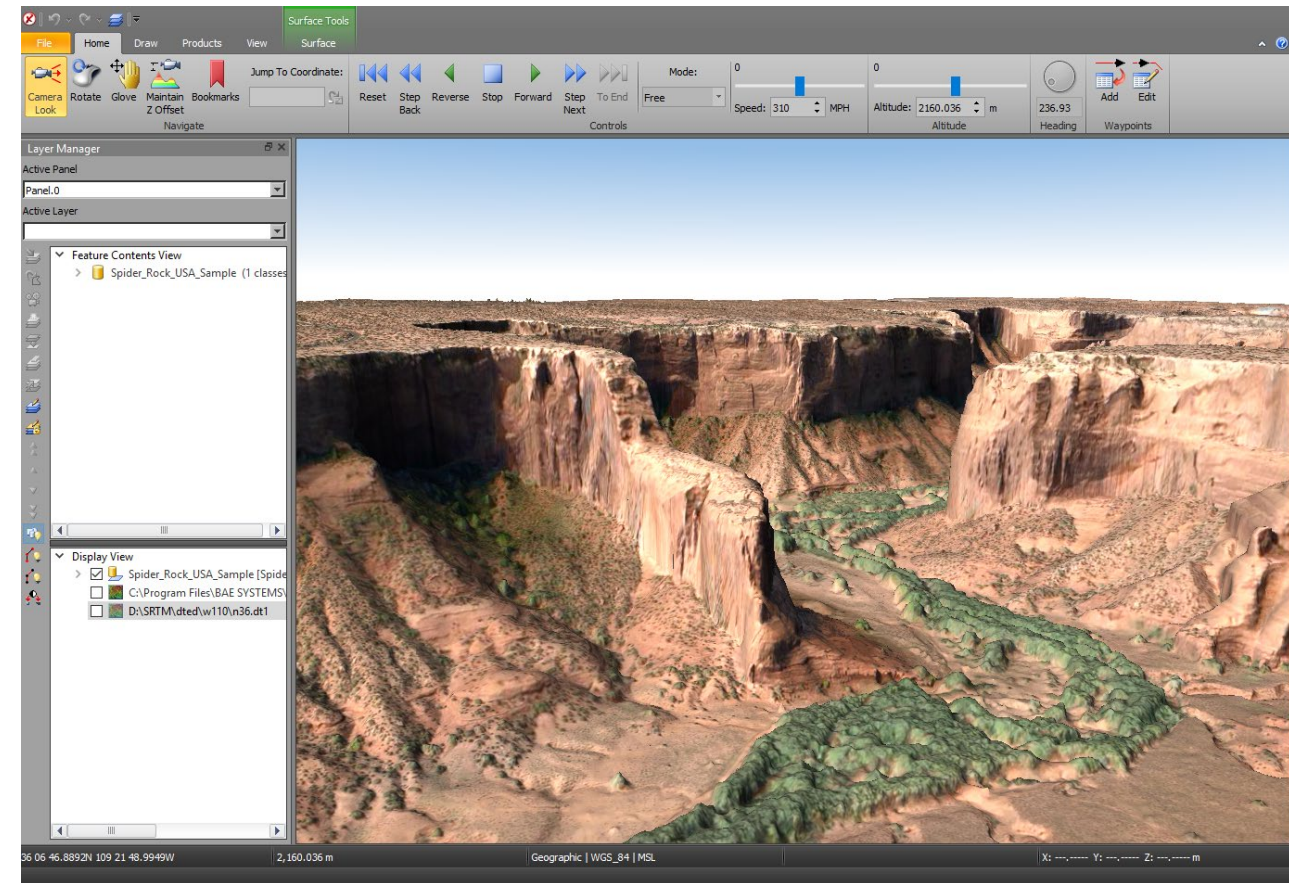
Updates for Cesium 3D Tiles v1.0 …2

- Support streaming services for 3D Tiles from a URL.

- Option to record animation and fly-thru as MPEG.

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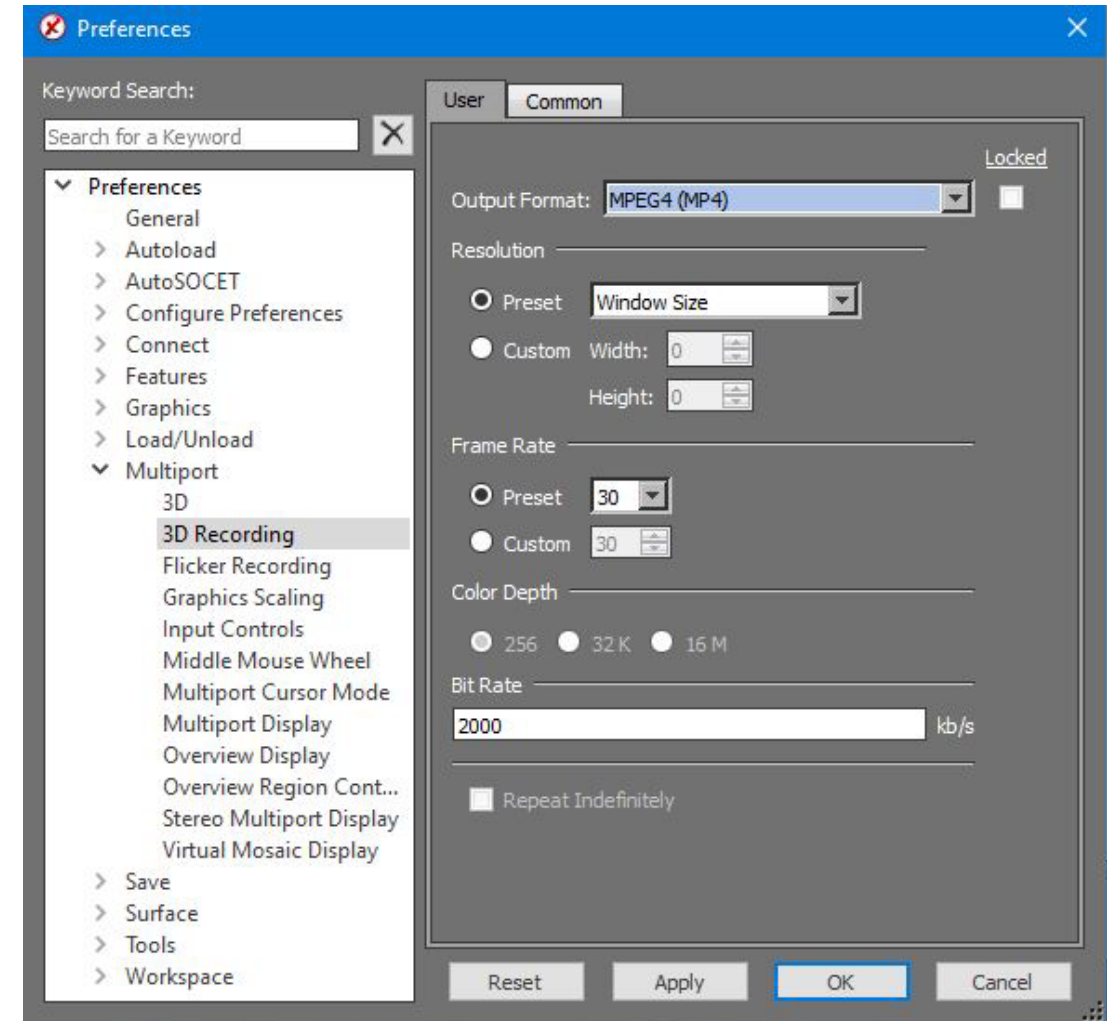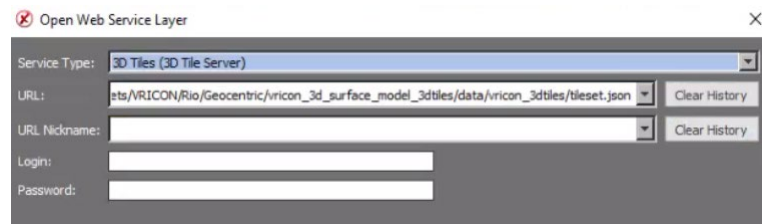
KML updates

- Added support for KML ScreenOverlays.
  - These are non-ground based features for overlays such as legends and icons, which are not fixed to a ground location.

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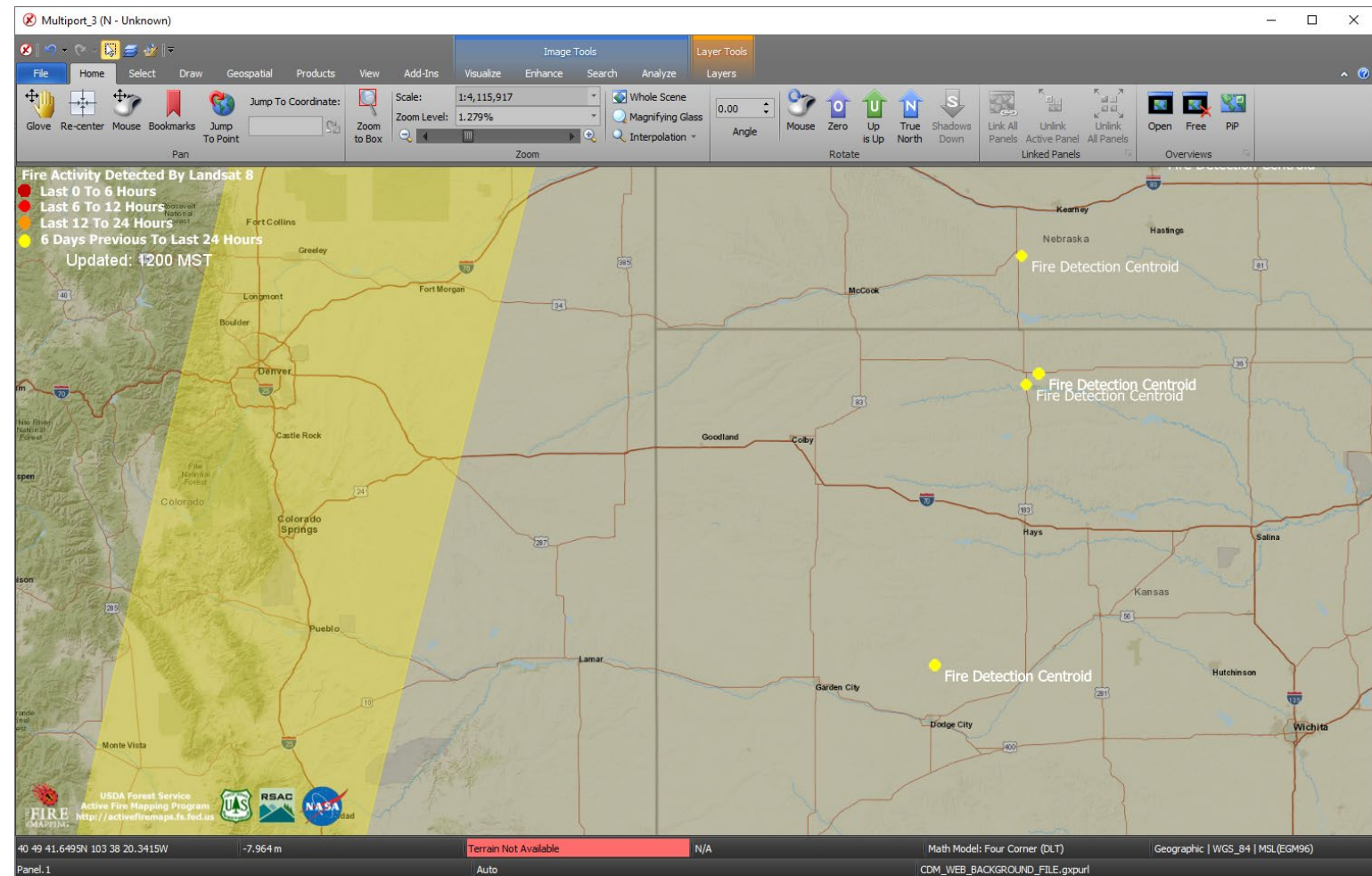
Link Stereo Multiports with 2D/3D Multiports

- Link Stereo, Mono, and 3D Multiports.

- Uses the SOCET GXP link manager for 2D and Stereo linking.

- Environment variable required for 3D Multiport linking.
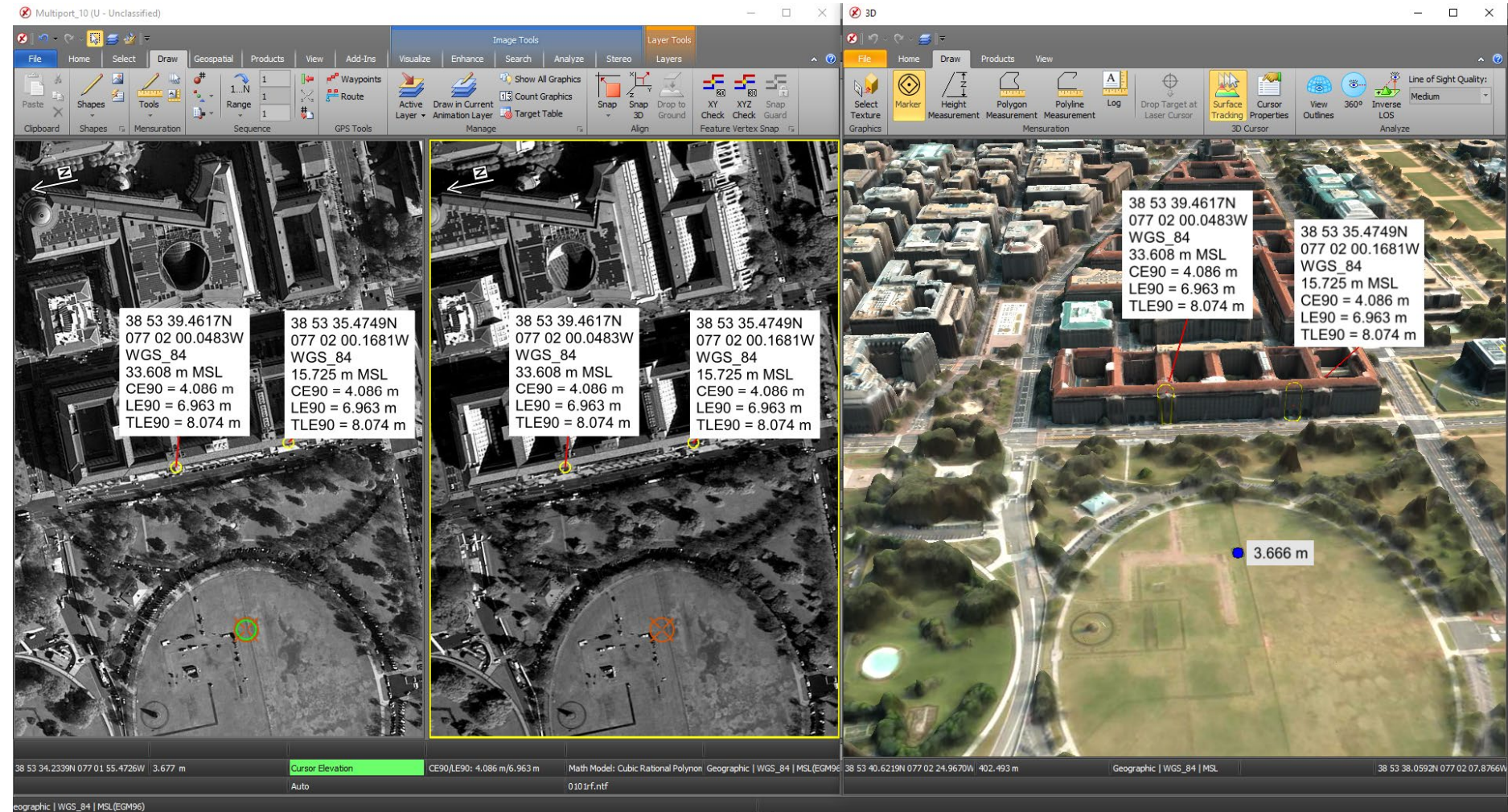
Images © 2022 Maxar Technologies.   3D tile mesh Images © 2022 Maxar Technologies.

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Multi-Polygon support for Interactive Terrain Editing (ITE)

- Multi-Polygons in ITE allow tools such as lake fill to flatten the lake surface while allowing islands within the lake to retain the original collected surface.
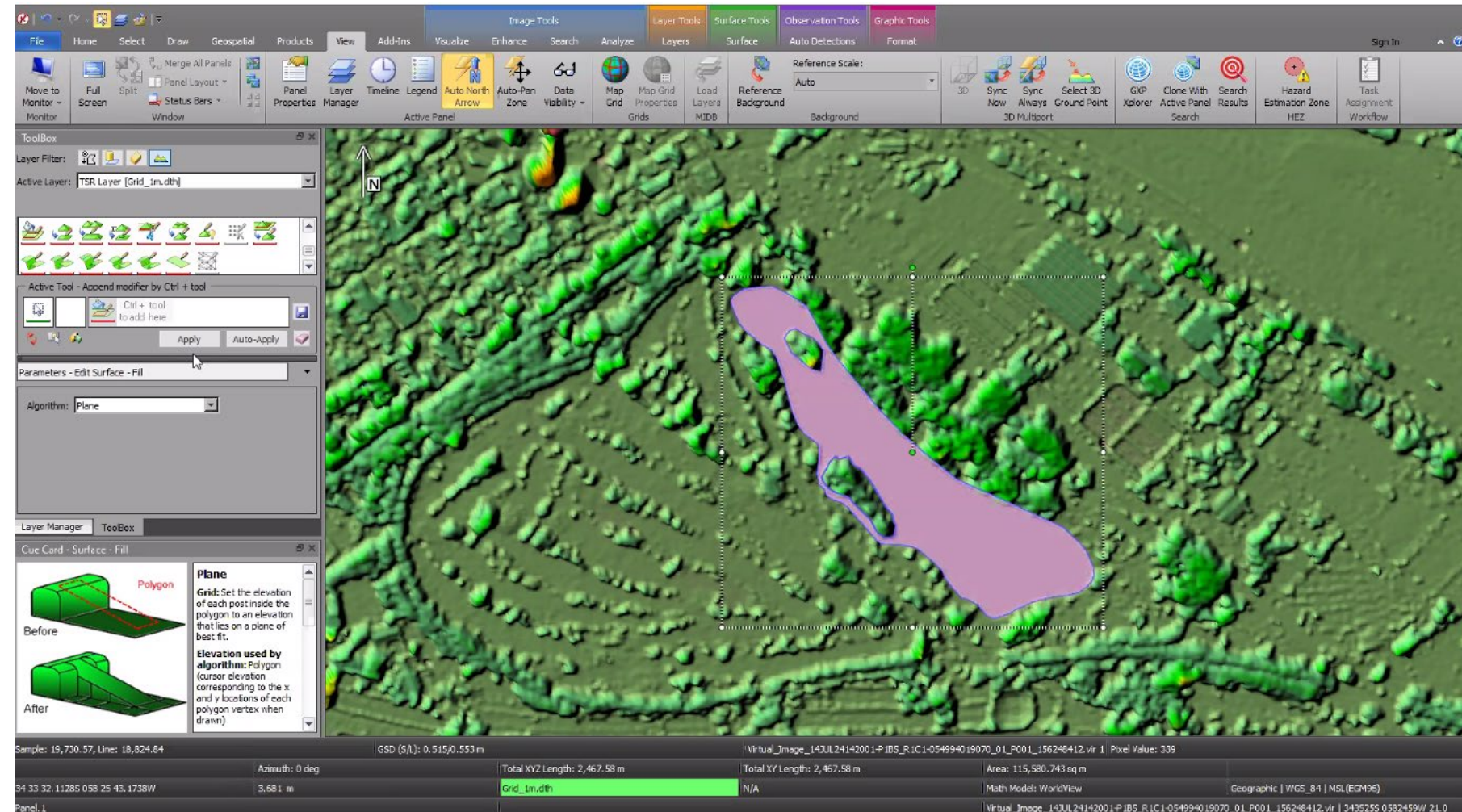
Edit a Grid Terrain file with TIN tools in ITE

- Define a region of interest (ROI) for editing a Grid Terrain File with TIN Tools.

- The ROI is automatically defined to be consistent in elevation with the grid for a seamless merge back into the grid when editing is finished.

- The ROI can be automatically populated with mass points from the grid or blank.

- Use breaklines and mass points to populate the ROI along with polygon tools such as delete mass points, etc.

Imagery courtesy of NASA and Arizona State University (ASU).
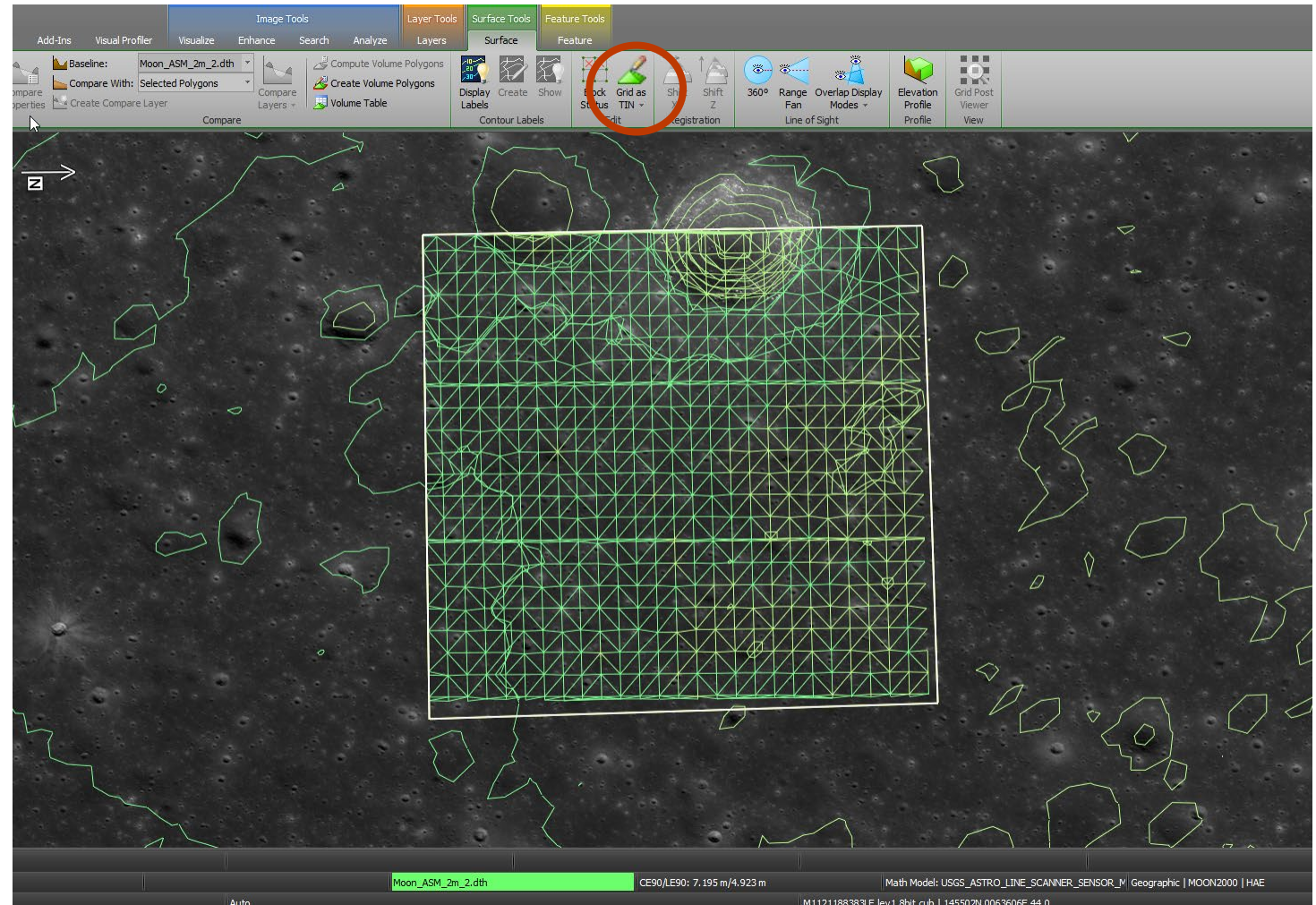
United States Message Text Format – USMTF Generation

- Create USMTF Messages using information derived from Imagery loaded into a Multiport.

- Transmit USMTF messages via interaction with the Common Message Processor (CMP) and the GTCS systems.

- The text message is created using image metadata and interactive graphics to auto-fill the USMTF with as many fields as possible.

- An XML schema template is provided, which can be customized for specific messaging requirements.

- Create a "cheat sheet" when using extracted fields from auto-labels within a USMTF.

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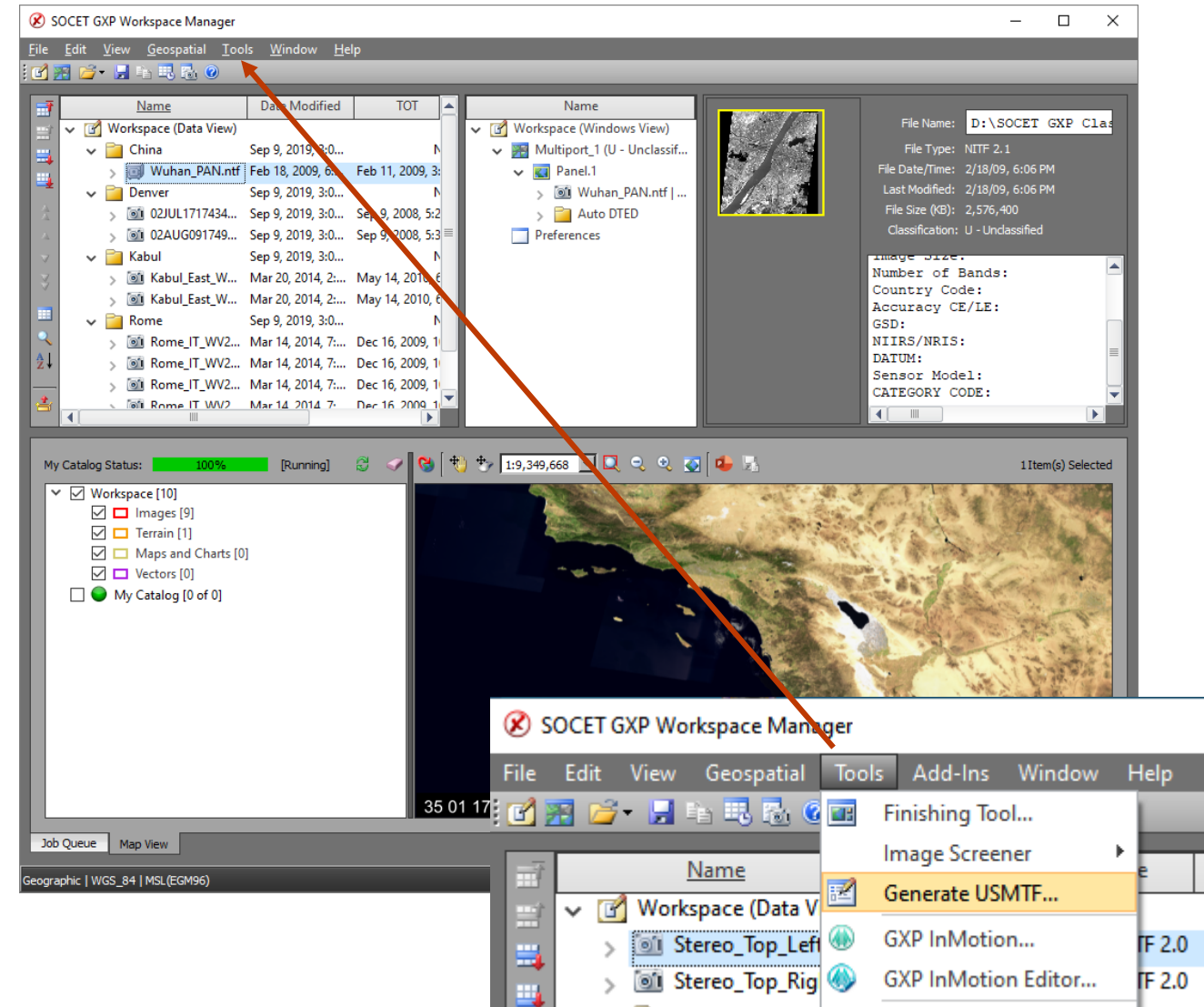
United States Message Text Format – USMTF Generation …2

- Create USMTF from a right-click of a point using information from the point and imagery to begin filling out the USMTF message structure.

- Add support for C281 new report type.

- Coordinates, CE, LE, and TLE values are set automatically for USMTF.

- Allow analyst to edit point/target name for the message.

- Include default templates for each message type.

- Make TST / TGTD mandatory entries.
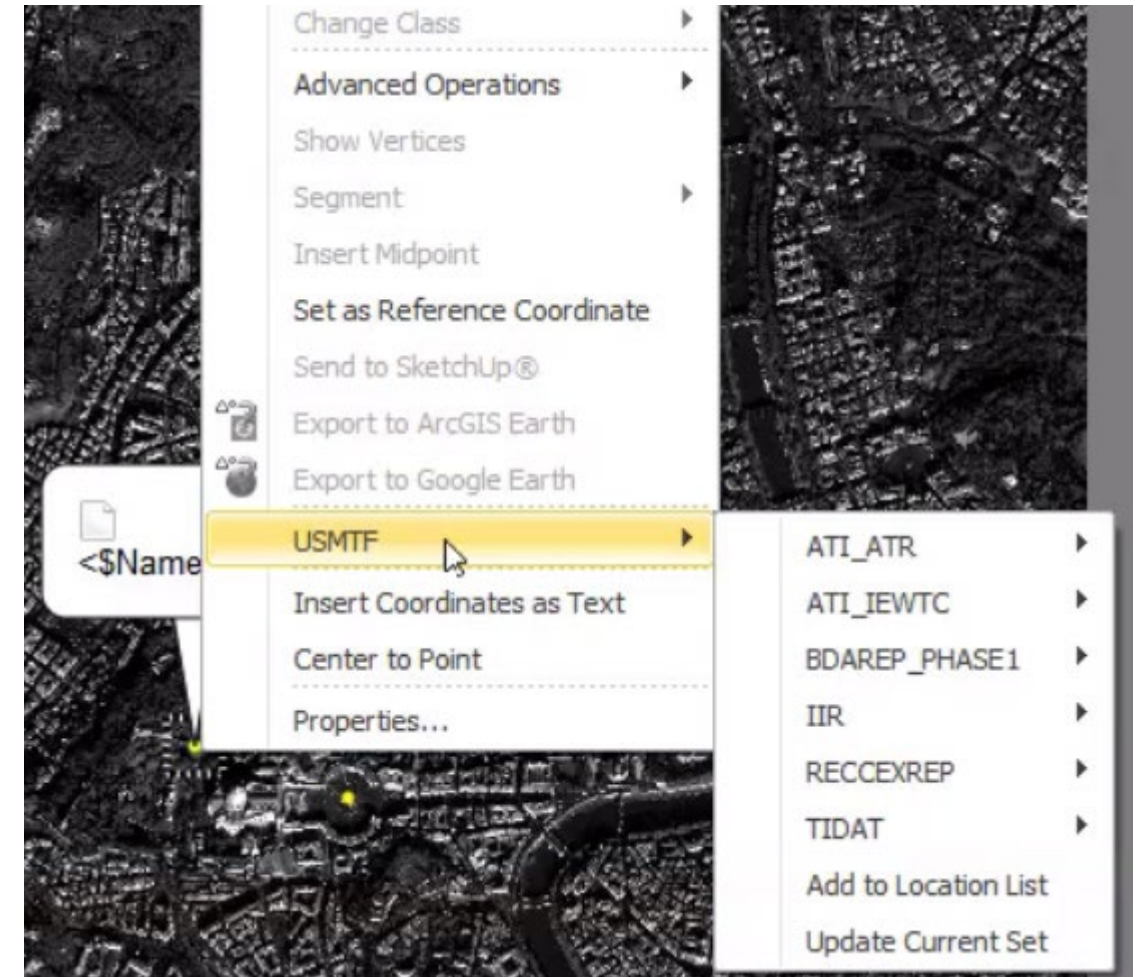
Image © 2022 Maxar Technologies.

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# Modernized Intelligence Database (MIDB) Integration

- GXP Xplorer Platform Integration.

  - Data model updates including MIL-STD 2525B symbols.

  - New SOCET GXP Ribbon connection for MIDB.

- Updated layer manager to include content filters based on attribution.

- Switch between MIL-STD 2525B symbols and customer, or simple symbols.
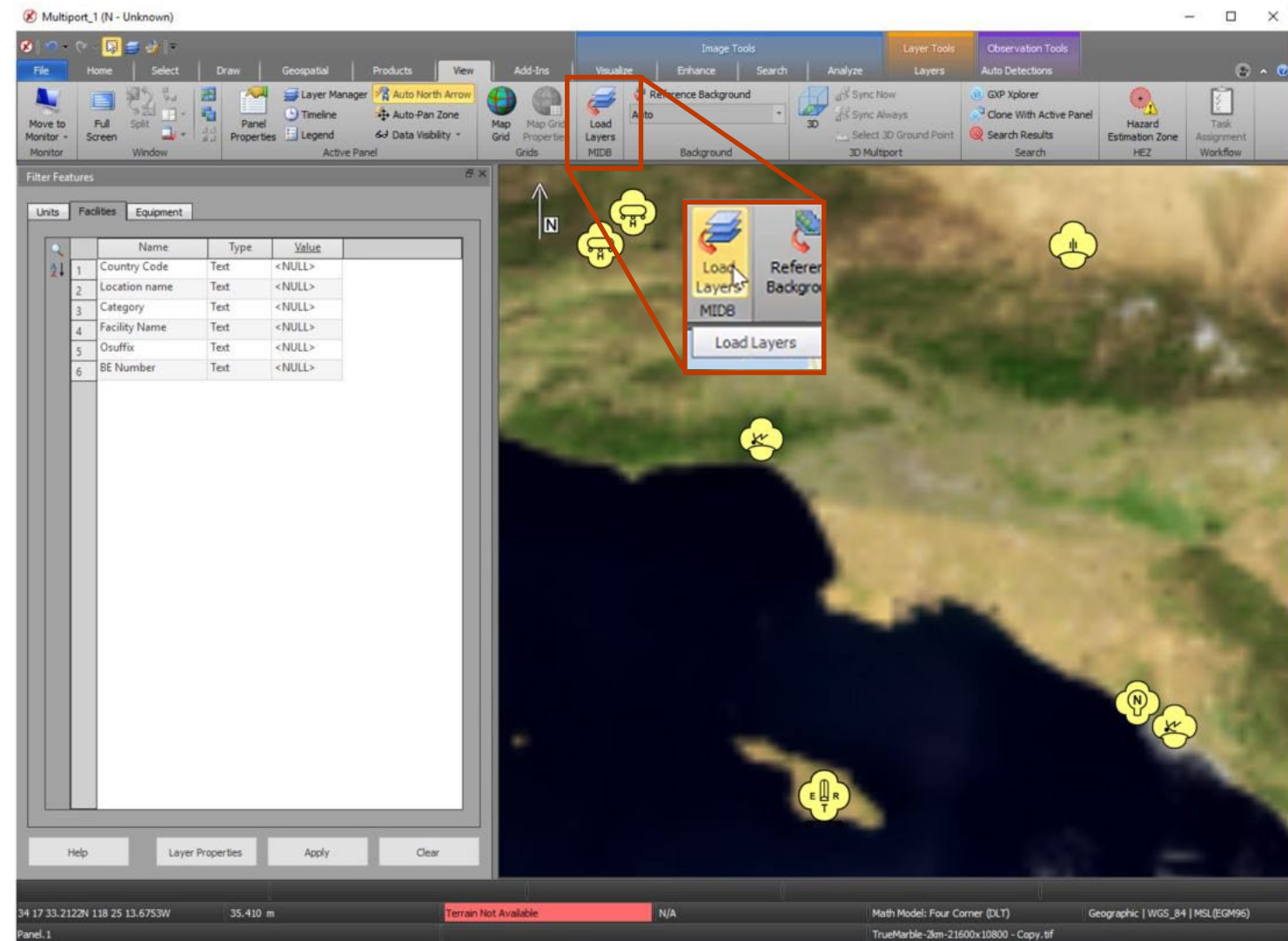
GXP Automated Tools for Object Recognition (GATOR)

Updated in v4.5.0.5

- Software developed under a research and development (R&D) program.

- Productized as a SOCET GXP Job service.

- Identifies objects over a Region of Interest (ROI) based on the selection of a 3-D model.

- Interaction with models allows for translation and rotation of 3D models in 2D Multiports.

- Toggle the display between 2D and 3D models in the 2D Multiport.

- Orientation of the 3D model is an additional attribute for 3D observations.

- SOCET GXP now supports loading GATOR results that were run in the GXP Xplorer Platform.

- Users can submit jobs to the server from the desktop and receive notifications when completed.

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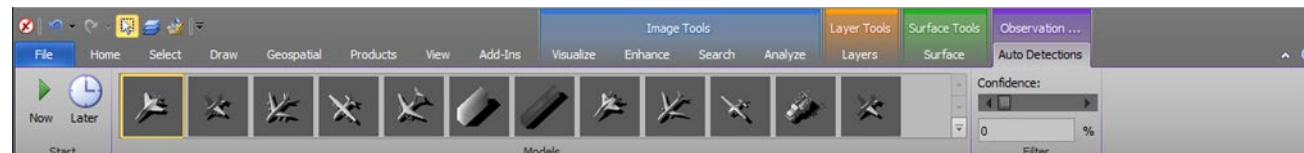
Other significant enhancements

- Include the ability to set default values for attributes in a GATR file.

- Enhanced Control Image Base (eCIB) production.
  - Code "M" and "X" used for 1m, 5m, 10m products.
  - Modify default eCIB configuration files for Control Handling in the case of unclassified products.
  - Removed the defaults for Control Handling in the $SOCETGXPDIR/Config/internal_dbs/CIB/ECIB_default_comp.mdt file.

- Add a check box column for the GXP Xplorer Servers Status window indicating the primary server.

- Update SIPS to the latest version.

- Updates for Multi-File STANAG 4676B.
  - When loading data, use the Product ID instead of the file system name allowing the name to be consistent across all data for the same collection (for same source).

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Other significant enhancements …2

- New "best" terrain tracking preference.
  - Prefer cataloged terrain over terrain loaded with imagery.

- Change orientation for ICEYE GeoTIFF with look-side=right.

- Improved metadata support for GeoPDF®.

- Fixed support of CosmoSkymed HDF5 data.

- Support for connecting to a PostgreSQL database over Secure Sockets Layer (SSL).

- Combined recording preferences to Preferences > Multiport > Video Recording.

- Improved support for Ground Moving Target Indicator (GMTI) metadata.
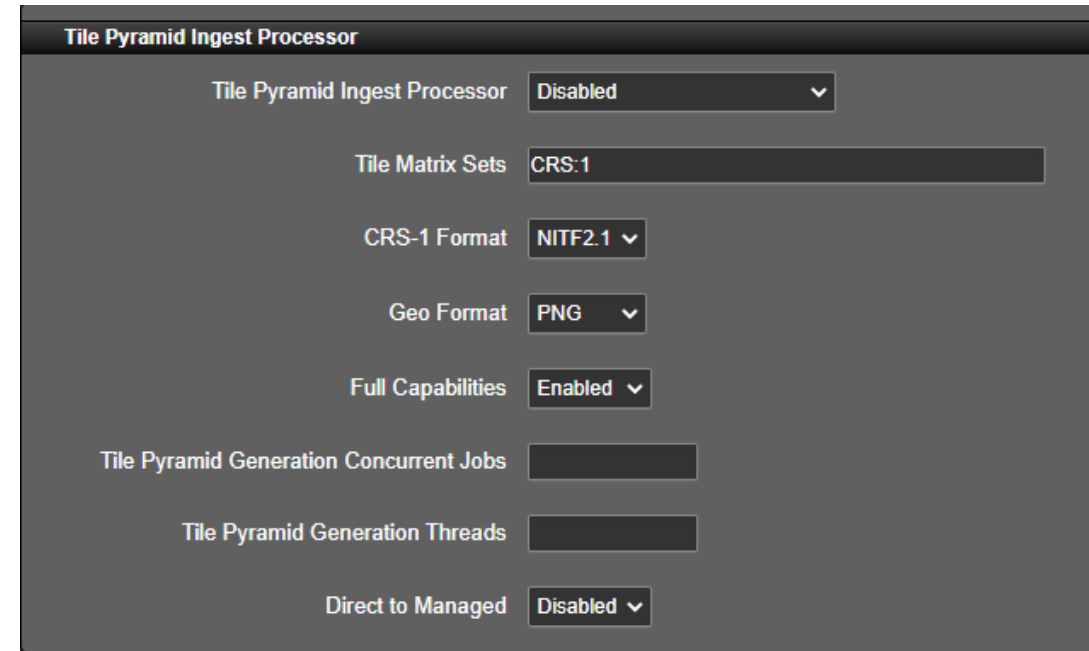
- Increase to supported WMTS scales.

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New Pixel Streaming option

- GXP Xplorer can now stream pixels to SOCET GXP using an OGC® Web Map Tile Services (WMTS) protocol with detailed metadata as opposed to the GXP Tile Streamer.
  - Benefits include:
    - SOCET GXP can continue to exploit scenes where communication is interrupted or restarted on the backend.
    - Allows for site caching of imagery tiles for multiple users.
    - Allows for pre-generated tile content with tile pyramid functionality.
      - Allows for streaming to be performed without a running pixel service as tiles are created at ingest as opposed to on user demand.
    - Decreased bandwidth requirements with JPEG 2000 Numerically Lossless compression for WMTS.
  - This can be set in Administration Settings … GXP Xplorer Application Settings … Discovery Agent … Detailed Metadata Processor.
    - This setting only applies to SOCET GXP v4.5.0.1 or later.
    - GXP WebView® will still exclusively use the GXP Tile Streamer.

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New Pixel Streaming option …2

- A new set of options has been added to the Administration Settings to allow for pre-generating tiles to be used for the new WMTS protocol.
  - If this data is generated, no active pixel streaming needs to occur at demand time.
  - Administration Settings … GXP Xplorer Application Settings … Discovery Agent … Tile Pyramid Ingest Processor
  - Requires On File Discovery RSet mode.
  - Open in SOCET GXP requires CRS-1 (image space) coordinate system.

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GXP InMotion™ v4.5.0.5 release enhancements

Chris Mazur
GXP™ Product Development

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GXP InMotion v4.5.0 release enhancements

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  - Released September 30, 2022*.

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    - Upgrade an existing GXP InMotion installation by installing this patch, or

    - For brand new installations, install this patch for a full installation that includes both the patch and the v4.5.0.0.272 base installation.

* Items in Teal Indicate new features included in the v4.5.0.5 patch update

BAE SYSTEMS

Live Rewind in one panel

- When Live Rewind was introduced, it was developed with a specific customer in mind; The initial implementation focused on that customers CONOP of having a real time instance of the video next to a forensic instance of the same mission.

- In v4.4.1.2 we've expanded Live Rewind's flexibility to allow for side by side panels of 'Live' and 'Rewind'.

- In **v4.5.0.0**, Live Rewind is able to function all within one panel of one GXP InMotion instance.
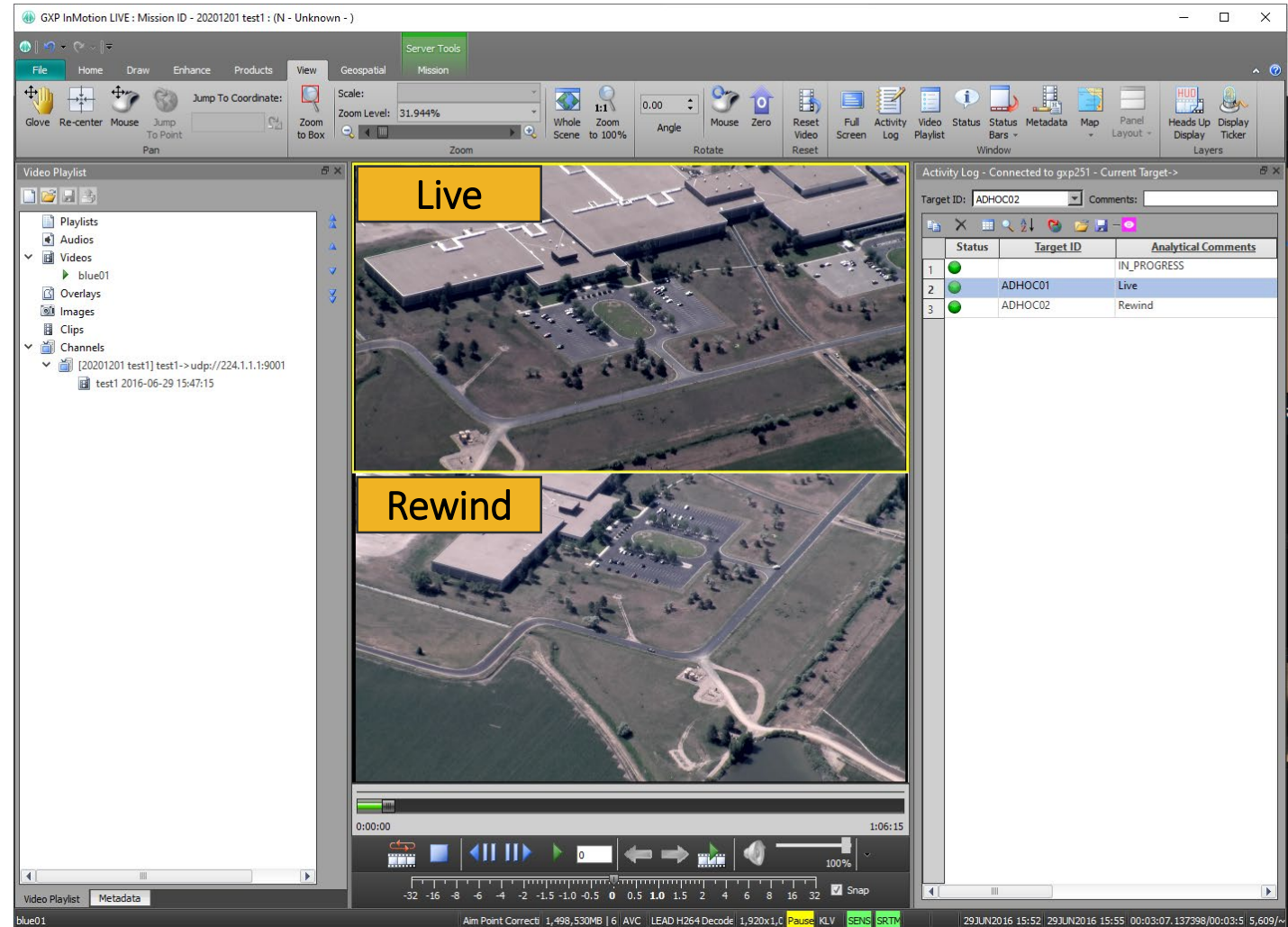
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

Esri AGS Map/Imagery/Feature Support

- Added the ability to display any layer of an Esri MapServer, ImageryServer, and FeatureServer in the GXP InMotion Map Window.

- Added the ability to display multiple OGC layers in Map Window.

  - For example, the image to the right is displaying a MapServer layer as the base image, and on top of the imagery are two feature server layers (Overlays).

- https://services.arcgisonline.com/arcgis/rest/services/World_Imagery/MapServer

- https://sampleserver6.arcgisonline.com/arcgis/rest/services/Military/FeatureServer

BAE SYSTEMS
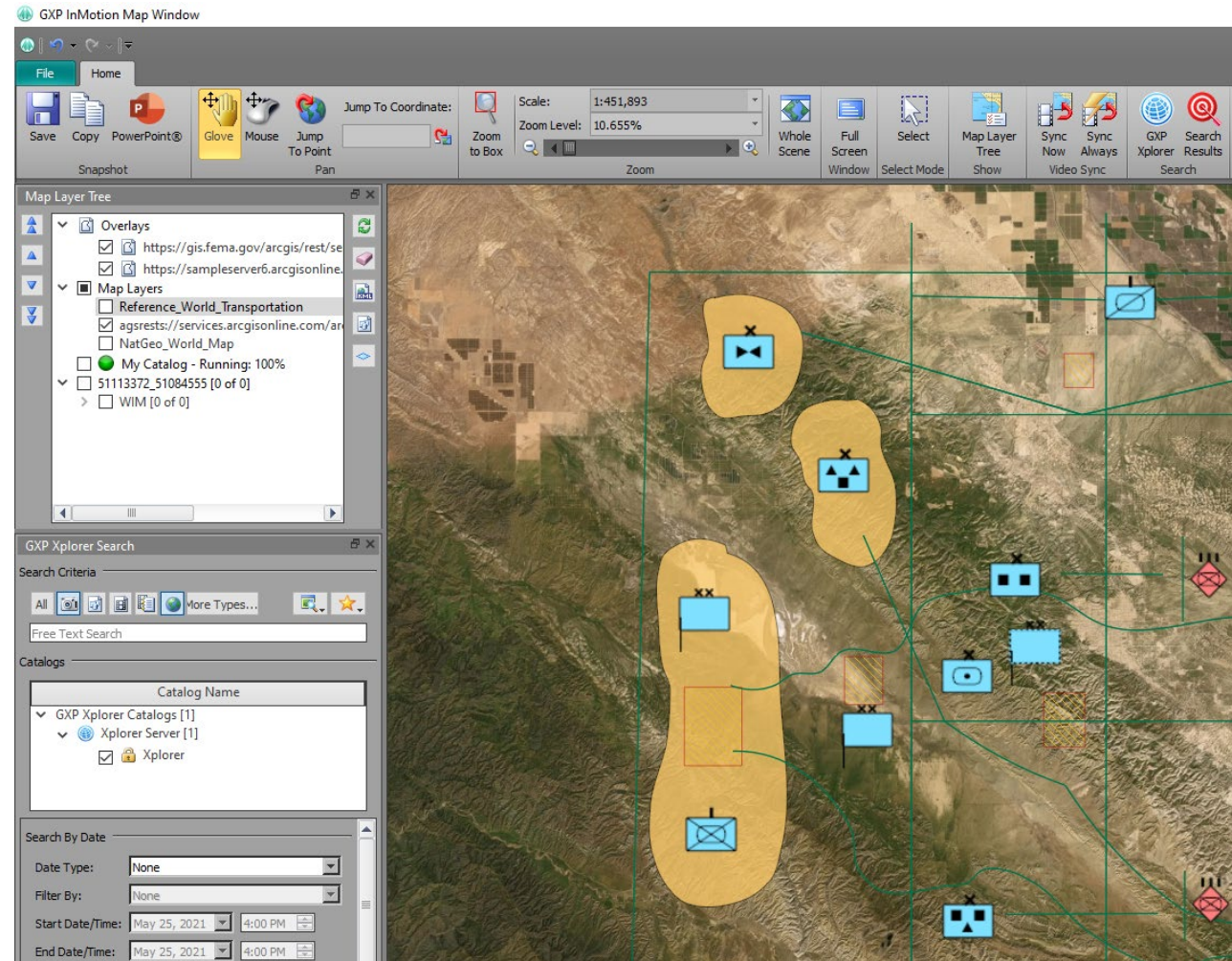
# New Heads Up Display (HUD) editing capabilities

- Ability to reposition and edit HUD elements while video is playing.

- Ability to edit the HUD across all six multi-panels.
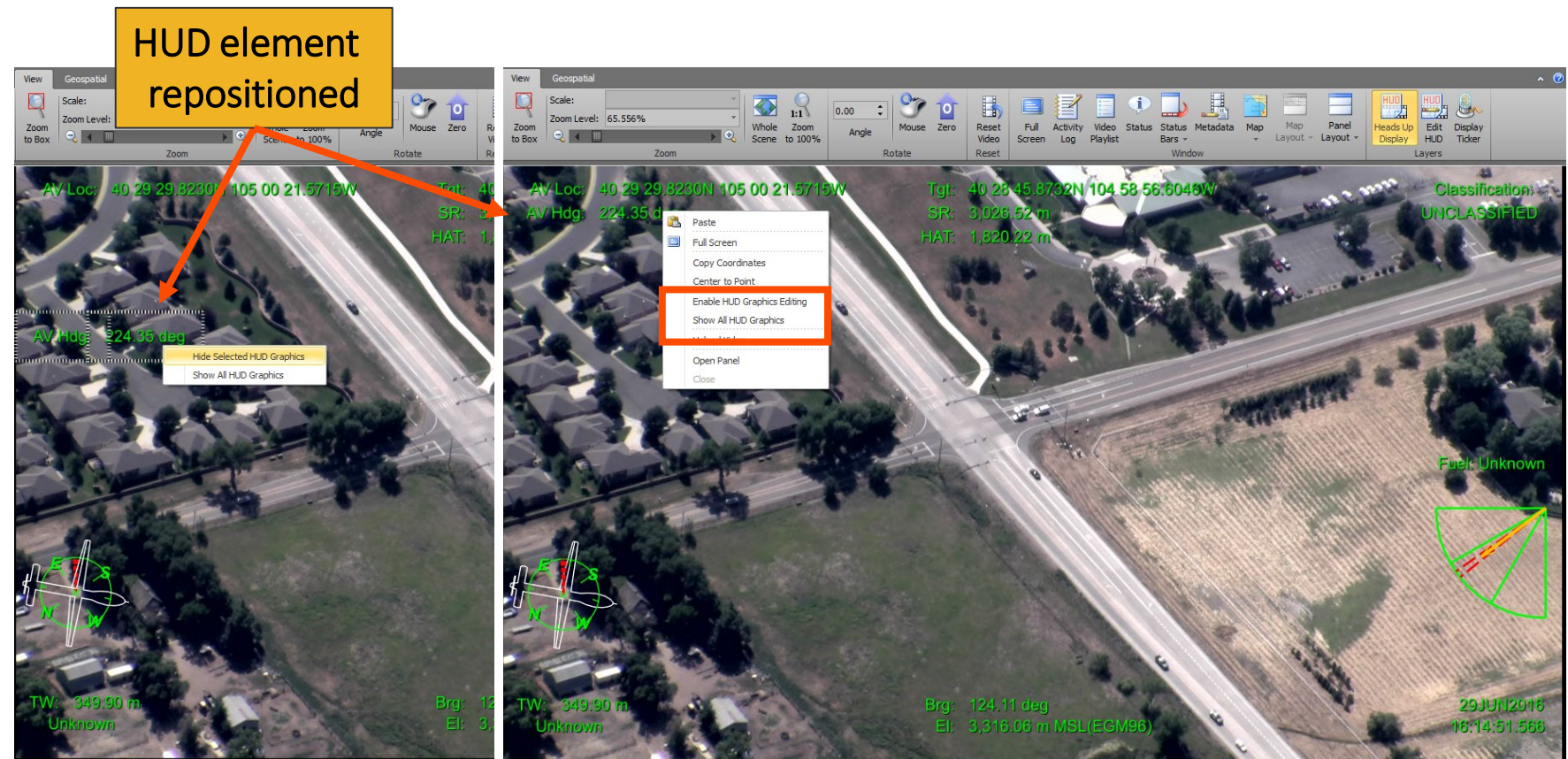
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

Integration of GXP InMotion with Esri ArcGIS Earth

- Interface with ArcGIS Earth using a simple button interface from the GXP InMotion Home tab.

  - Center Map in ArcGIS Earth.

  - Draw Footprint in ArcGIS Earth.

  - Draw Air Vehicle in ArcGIS Earth.
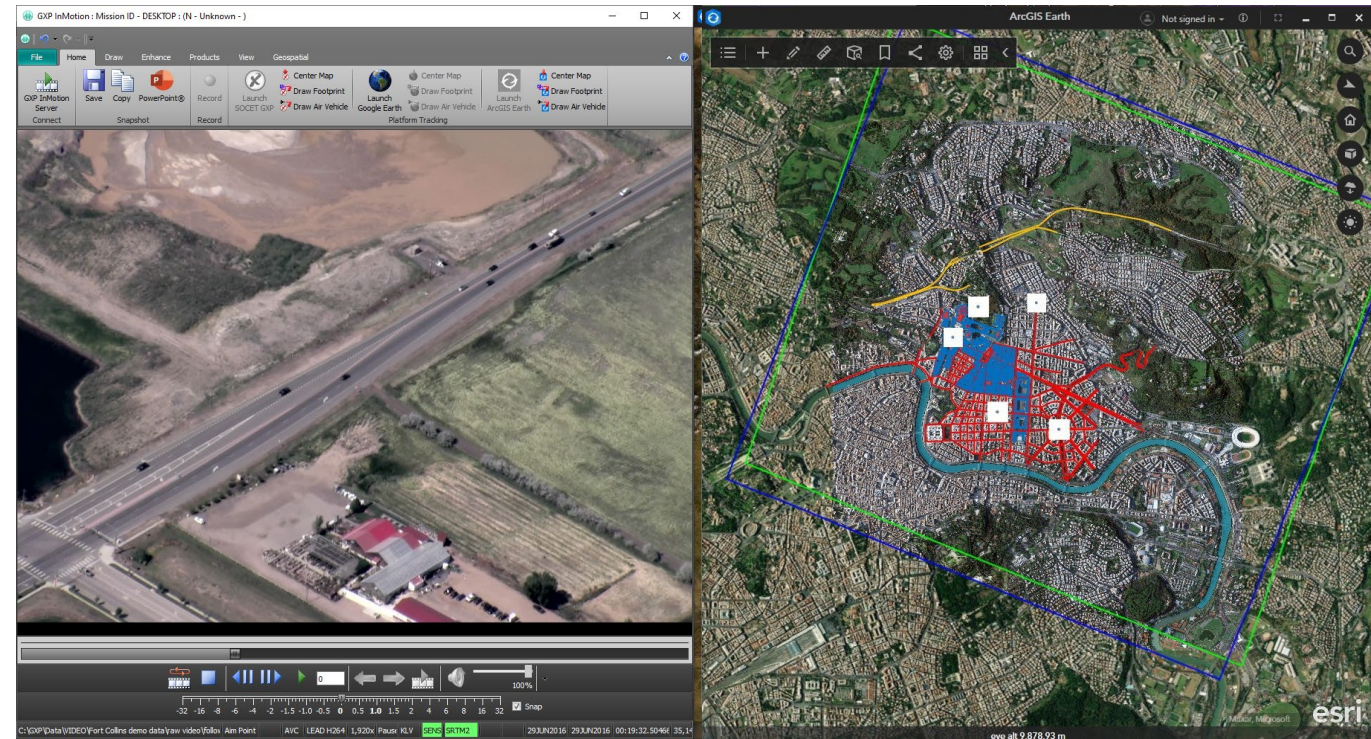
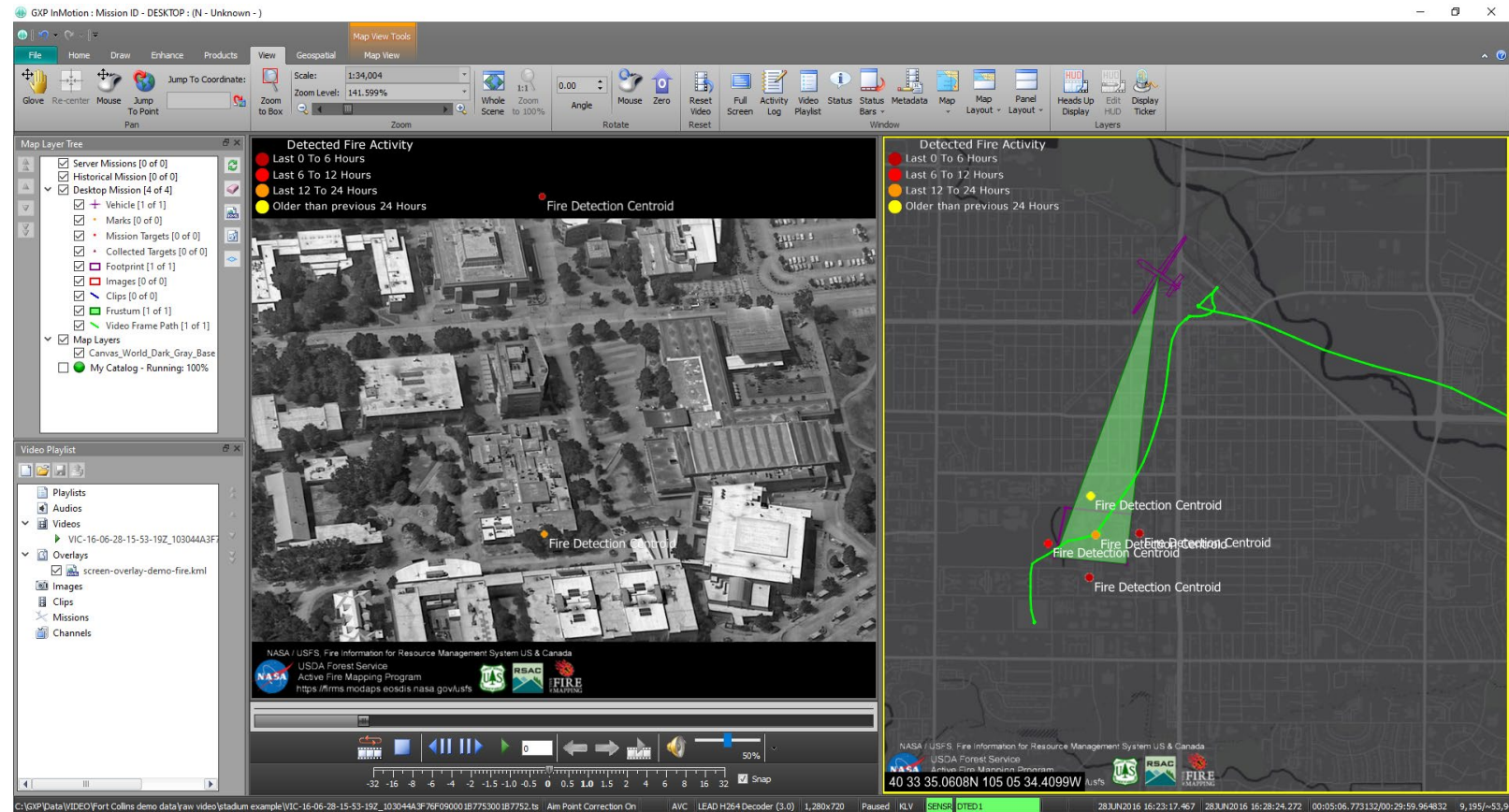Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

Image © 2022 Maxar Technologies.

BAE SYSTEMS

New supported vector format features

- New feature and graphics performance constraints were added to GXP InMotion to better manage feature rendering during video exploitation.

- The GXP InMotion video scene now supports the following vector formats:

  - MIE4NITF embedded Shapefiles.

  - GeoJSON files.

  - 4676B (XML) files.

- Added support for live (or network or dynamic) KML overlays.

- Added support for displaying the embedded icons in a KML/KMZ.

BAE SYSTEMS

Live KML support for all geometries

- GXP InMotion now supports all geometries contained within KML vector files.

- Typical geometries includes points, polylines, and polygons.

- GXP InMotion now is able to present graphics that are display oriented; for example, embedded map legends.
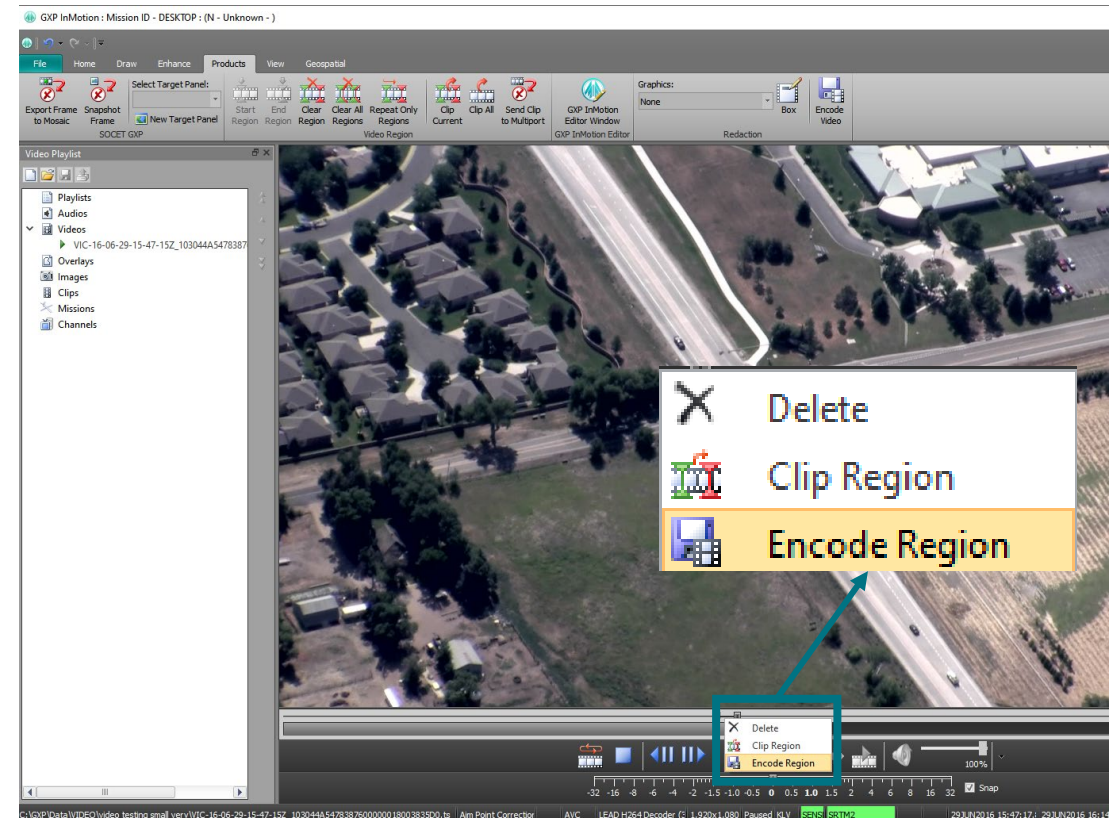

Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

New supported encoding features

- *"Video encoding converts a given video input into a digital format that is compatible with most types of Web players and mobile devices. In the most basic sense of the term, video encoding is compressing video files so that they are not saved as individual images but as fluid video."*

- GXP InMotion supports converting H264 (TS) video data with metadata out to MP4, WMV, and AVI files. Previously this process only converted the original video and did not include any graphics overlays a user might have overlain during exploitation. GXP InMotion v4.5.0.0 added support for embedding (or burning in) both KML and Shapefile vector formats into the resultant video product.

BAE SYSTEMS

# GXP InMotion v4.5.0.1 – Video Encoder Performance update

- In GXP InMotion v4.5.0.0, support was added to embed vector graphics into encoded videos.

- Vector graphic files are rather small in nature, but the graphical display and encoding of these files require the right amount of efficient resources.

- In GXP InMotion v4.5.0.1, the performance of the Video Encoder was improved to help support this new feature.

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

BAE SYSTEMS

Embed Video into PowerPoint® from GXP InMotion

- Currently, after video clips are created, a user can send clips:
    - to a new GXP InMotion instance,
    - the GXP InMotion Editor,
    - or upload to GXP Xplorer.

- Users now have the ability to send a video clip from the Video Playlist directly to a PowerPoint slide.
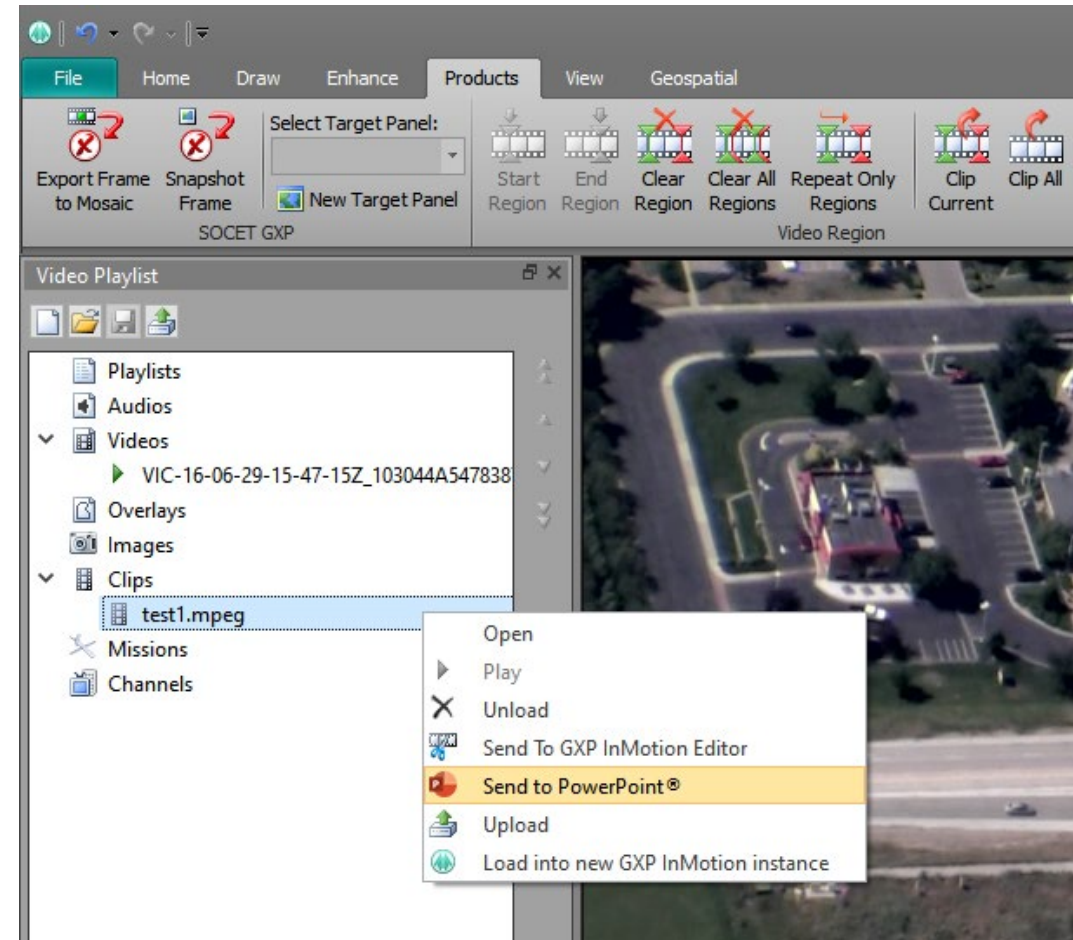
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

Allow vectors to be loaded onto Map Window or another Panel

- Vector data support has been updated to allow a user to 'push' a previously loaded vector file on the video scene into either another video panel or into the Map Window.

- This enhancement eliminates multiple steps to reload common vector data into multiple locations.

- Vectors supported includes Shapefiles, KML/KMZ, and GXP Graphics files.
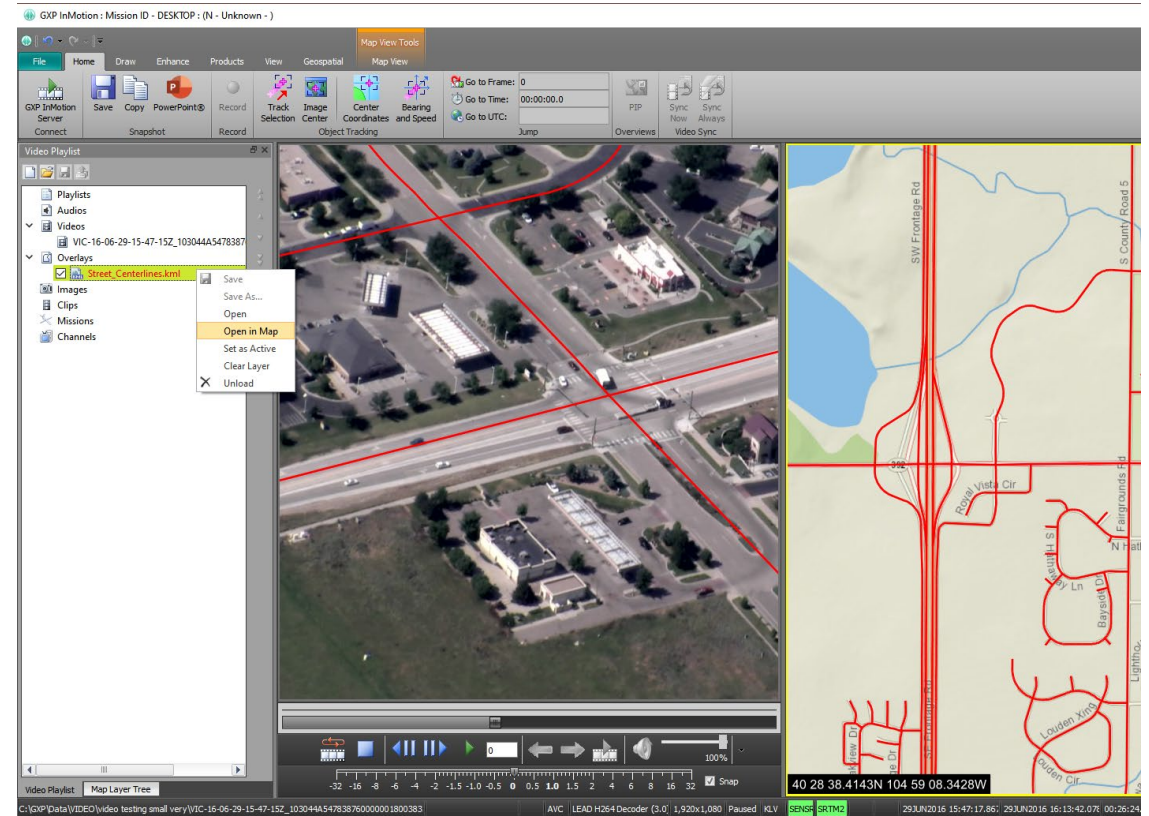
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

Performance improvements for the Map Window

- The ability to display any layer of an Esri MapServer, ImageryServer, and FeatureServer in the GXP InMotion Map Window was added in version 4.5.0.0.

- In GXP InMotion 4.5.0.1, performance improvements were realized for the Map Window that focused on the efficient handling of graphics vector data from both KMLs and shapefiles.
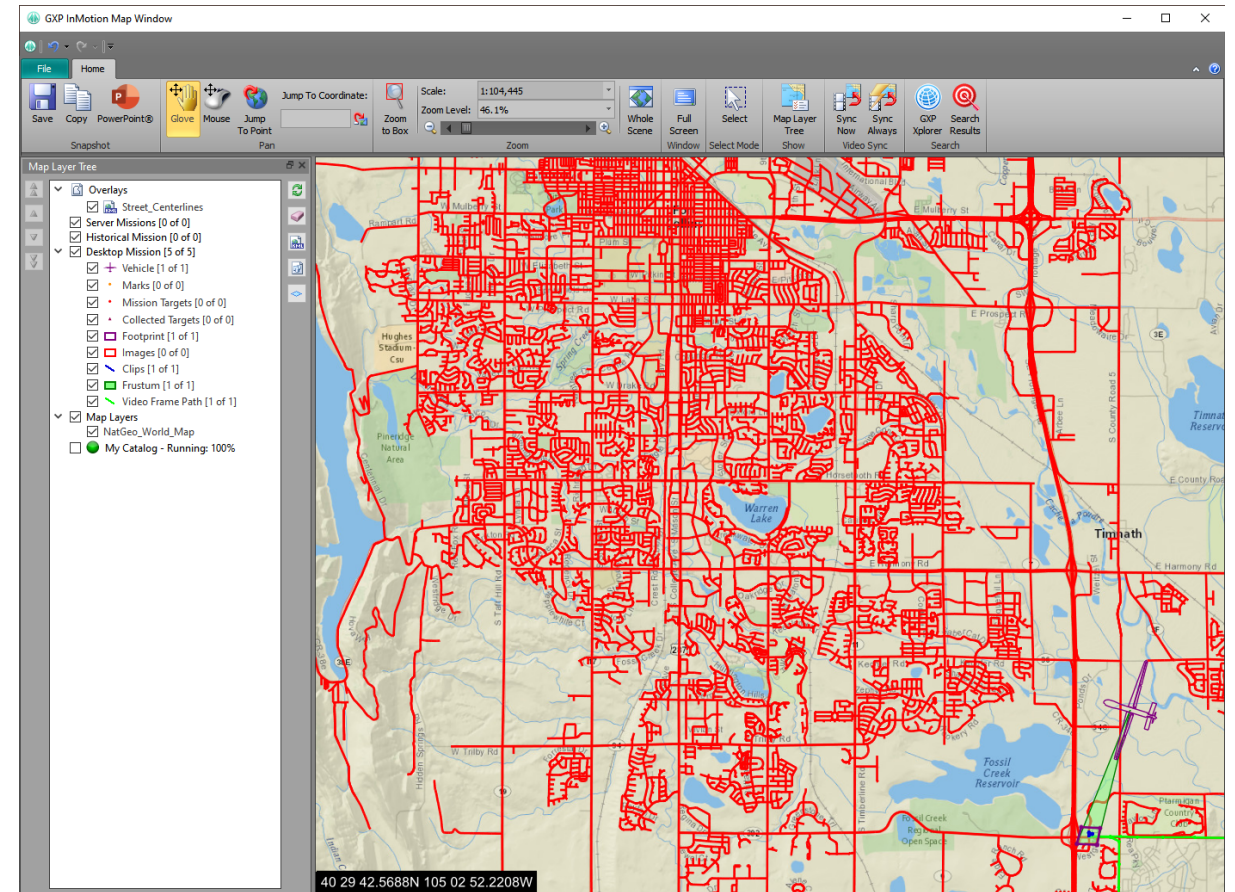
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

Added the GXP Xplorer Terrain Service to GXP InMotion

- The Autoload preference define the directories used to access the DTED (Digital Terrain elevation Data) used within the video application.

- The advantage of enabling terrain elevation in the background of the video scene is that it provides enhanced sensor model support.

- Use the new GXP Xplorer Terrain Service in GXP InMotion preferences to stream terrain from the GXP Xplorer Platform ecosystem into GXP InMotion.
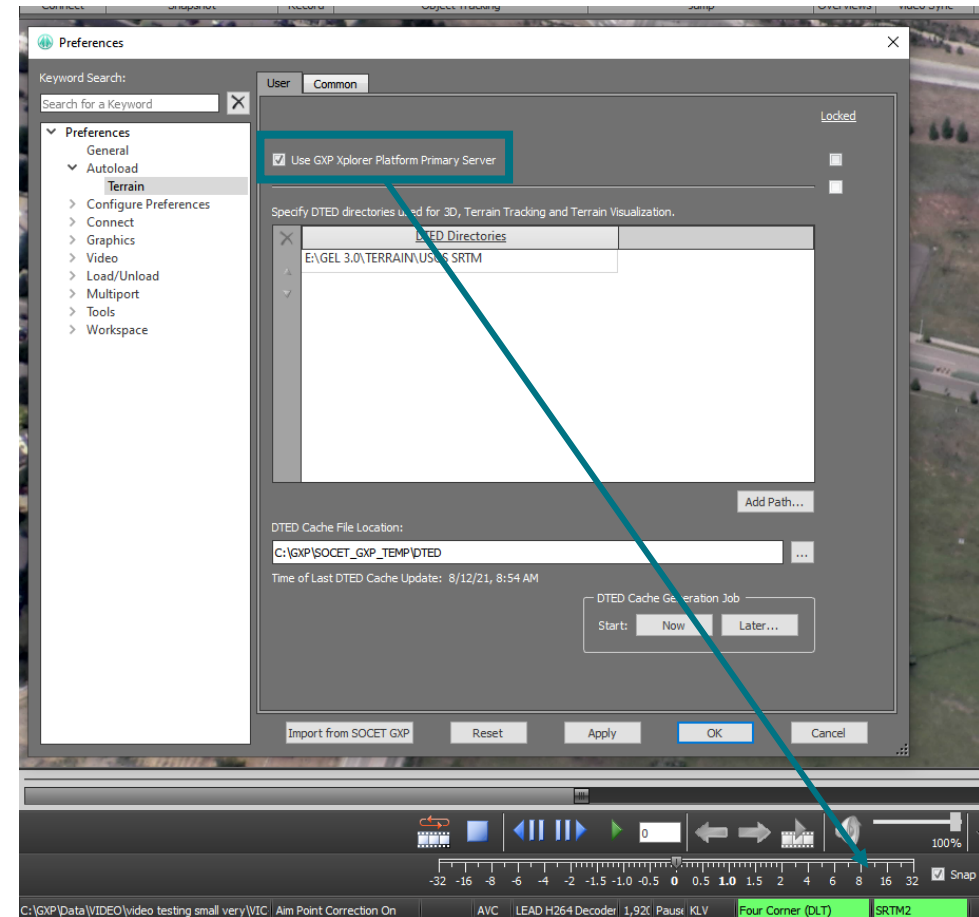
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

Added 'Jump to' Capabilities to GXP InMotion

- Use the new Jump to Point or Jump to Coordinate in GXP InMotion to navigate to a specific coordinate in the video scene. This functionality moves the cursor to an exact coordinate for a georeferenced video. The panel moves the cursor to the point of interest on the video (or off the video), and re-centers the video to display the coordinates not visible on the panel. Jump to Point will also place a Marker at the location and display the coordinates using GXP's innovative Auto Labels capabilities.
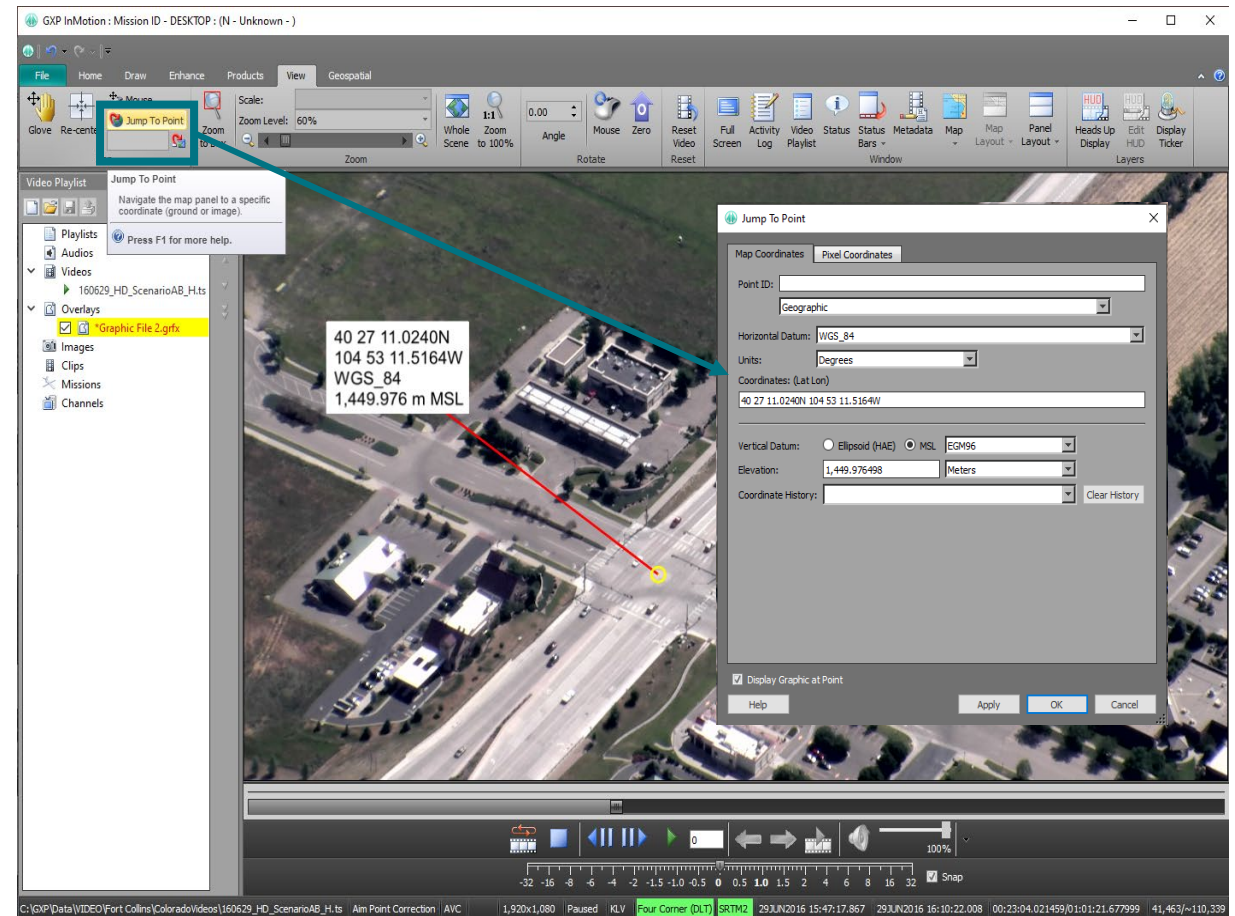
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

Customize Ribbon

- Streamline access to commonly used tools by adding up to three user Ribbons that contain the functionality from other Ribbons relevant to your workflows.

- Simplify the GXP InMotion user interface by hiding groups of buttons or entire tabs of rarely used functionality.

- Create custom tabs with mix and match functionality from other tabs.

BAE SYSTEMS
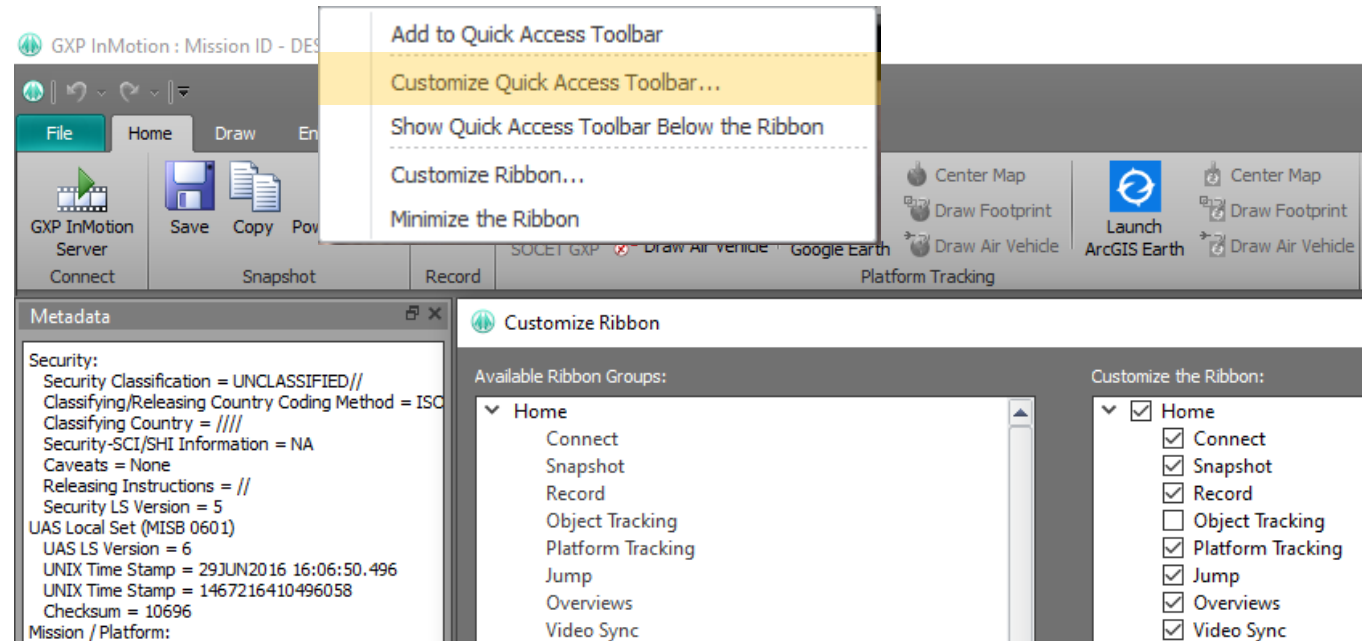
Pre-GXP InMotion v4.5.0.3 – MIE4NITF updates

- Available in v4.4.1.3.
  - Integrate MSP sensor models for MIE4NITF imagery.
  - MIE4NITF metadata to Snapshot/chip NITF Output Files.

- Available in v4.5.0.1.
  - Add support for MIE4NITF Derived Shapefile Overlays and 4676/XML.
  - Display MIE4NITF footprint in the Map Window.
  - Jump To Point/Coordinate available for MIE4NITF.

- Available in v4.5.0.2.
  - MIE4NITF derived shapefile overlays in video scene.
  - WYSIWYG (What You See Is What You Get) clipping/encoding of MIE4NITF out to standard video formats.
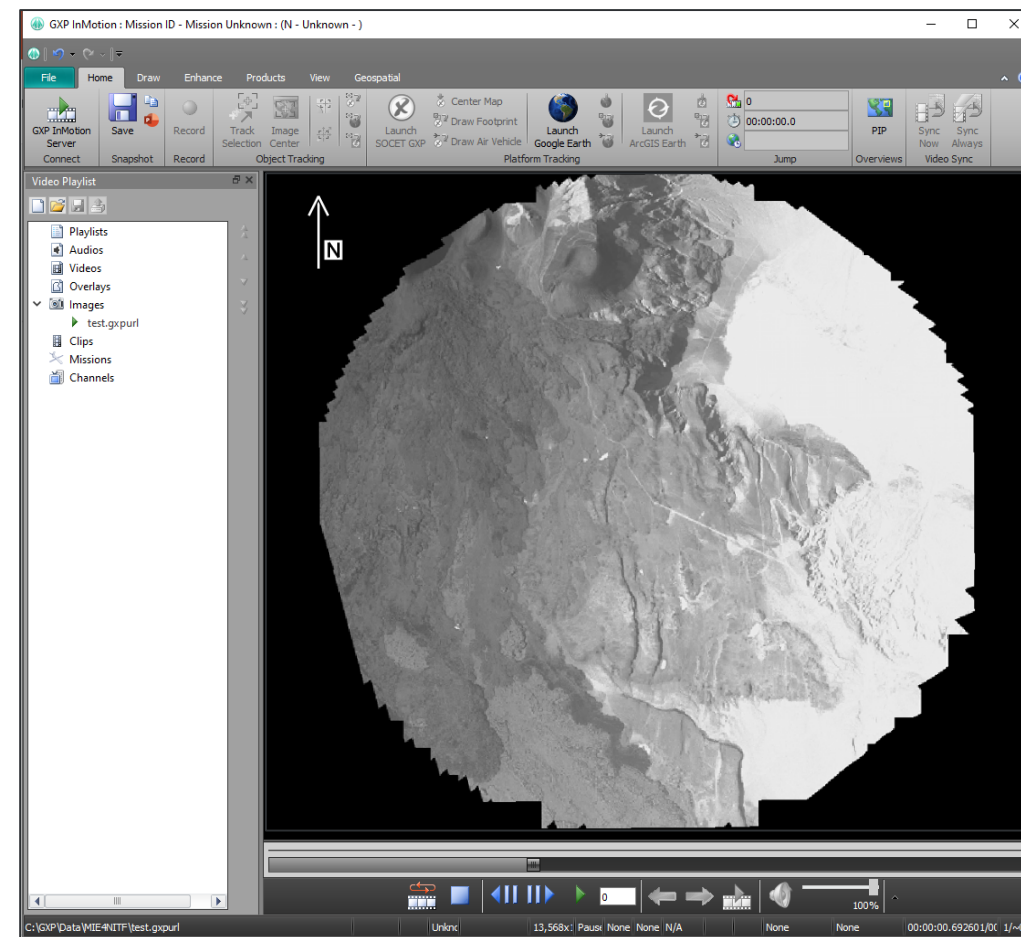
Imagery provided by the MISB (Motion Imagery Standards Board).

BAE SYSTEMS

GXP InMotion v4.5.0.3 – MIE4NITF updates

- Available in v4.5.0.3
  - Open OGC (Open Geospatial Consortium) based MIE4NITF data streams.
    - this feature will allow the desktop to utilize an OGC/WAMI server to retrieve a full WAMI collection (of images) and play it back like local WAMI files.
    - Retrieve basic "video" metadata including time bounds, geo-spatial bounds and number of frames.
    - Load each image with sensor model.
    - Provide pan, zoom, and rotate on dataset.
    - Play at the native frame rate.

Imagery provided by the MISB (Motion Imagery Standards Board).

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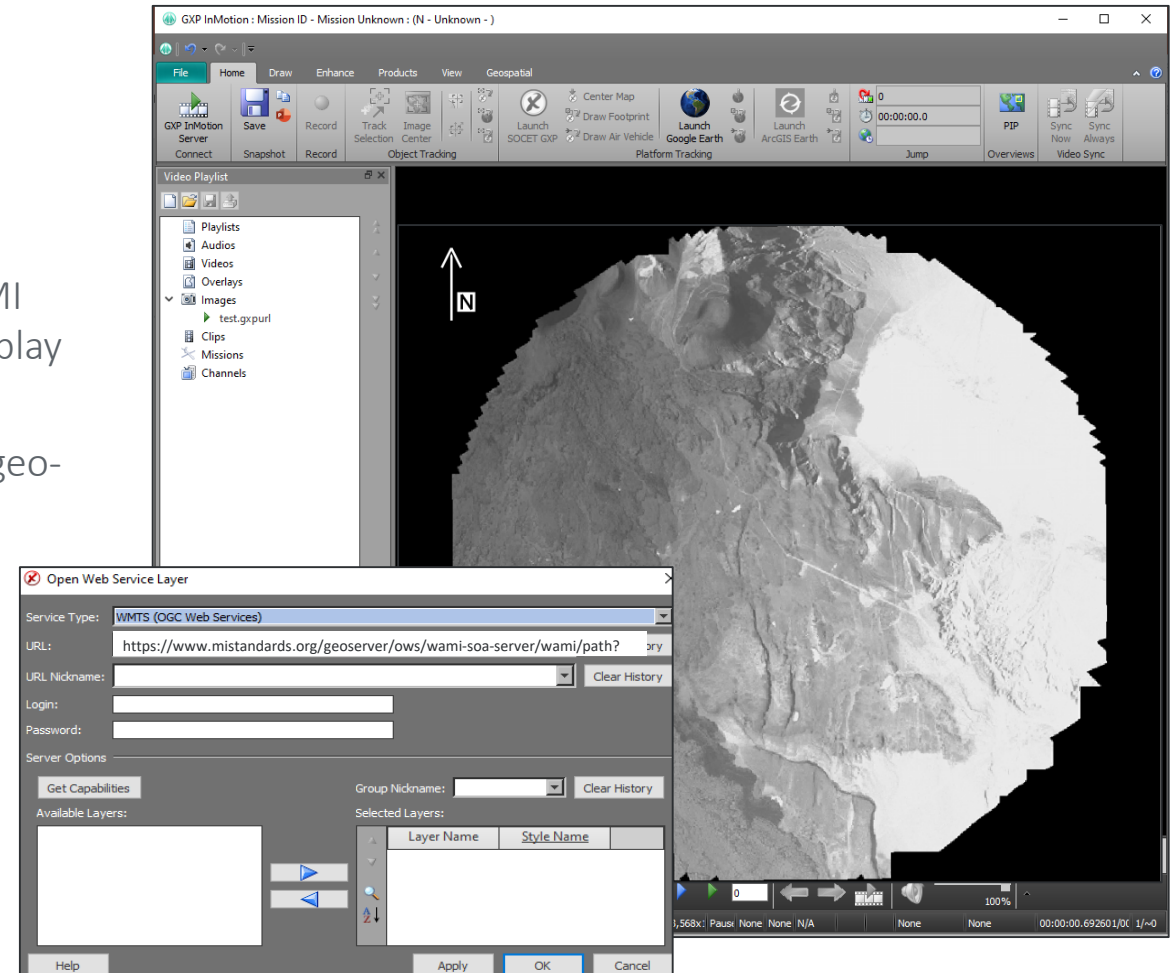
GXP InMotion v4.5.0.4 – Mensuration
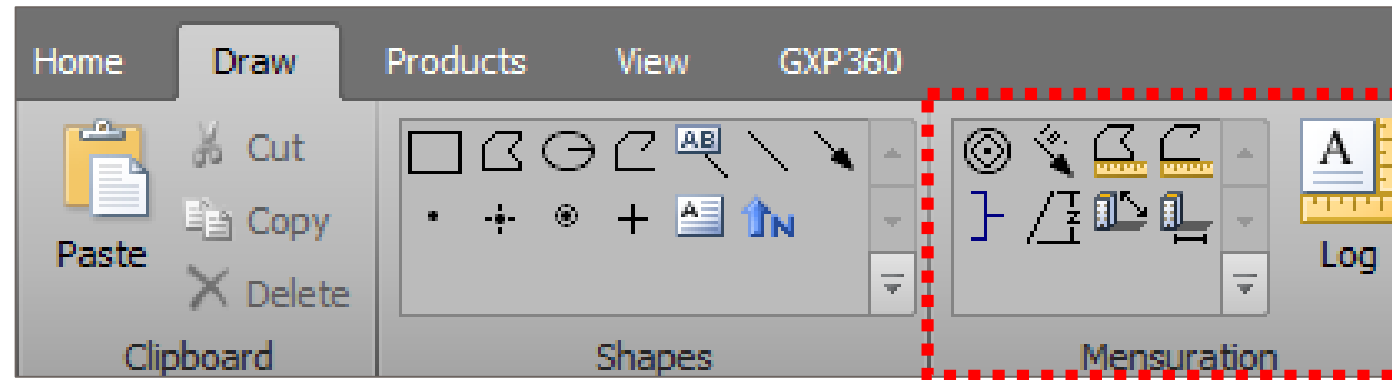
- Now available in v4.5.0.4 is the ability to perform mensuration capabilities directly over video, a capability normally reserved for imagery only. Mensuration can be performed over live feeds or forensic video files.

- The GXP InMotion video player can be paused and users can measure length with the bracket tool, range and bearings calculations, polygon and polyline mensuration, use the Marker tool to denote Circular Estimations (CE) / Linear Estimations (LE) measurements, and height measurements (including via shadow tips to a feature object's base or top).

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GXP InMotion v4.5.0.4 – Range and Bearing Mensuration

Mensuration Log

Range and Bearing 'Tool'

Range and Bearing 'Graphic'

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

BAE SYSTEMS

GXP InMotion v4.5.0.4 – Bracket Mensuration

Mensuration Log

Bracket 'Tool'

Bracket 'Graphic'

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

GXP InMotion v4.5.0.4 – Height Mensuration

Mensuration Log

Height 'Tool'

Height 'Graphic'

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

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GXP InMotion v4.5.0.4 – Height from Shadows Mensuration

Height from Shadows 'Tool'

Height from Shadows 'Graphic'

Step 1: Click at top of feature
Step 2: Move to shadow

Step 3: draw out to position

Step 4: Click to Finish

35.124 ft

34.479 ft

35.1 ft

Height Measurement: Object Top to Shadow Tip

Compute the height of an object by measuring its shadow from the top of the object to the tip of the shadow.

Height Measurement: Object Base to Shadow Tip

Compute the height of an object by measuring its shadow from the base of the object to the tip of the shadow.

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

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GXP InMotion v4.5.0.4 – Polygon/Polyline Mensuration

Polygon/Polyline Measurement 'Tool'

Polygon/Polyline Measurement 'Graphic'

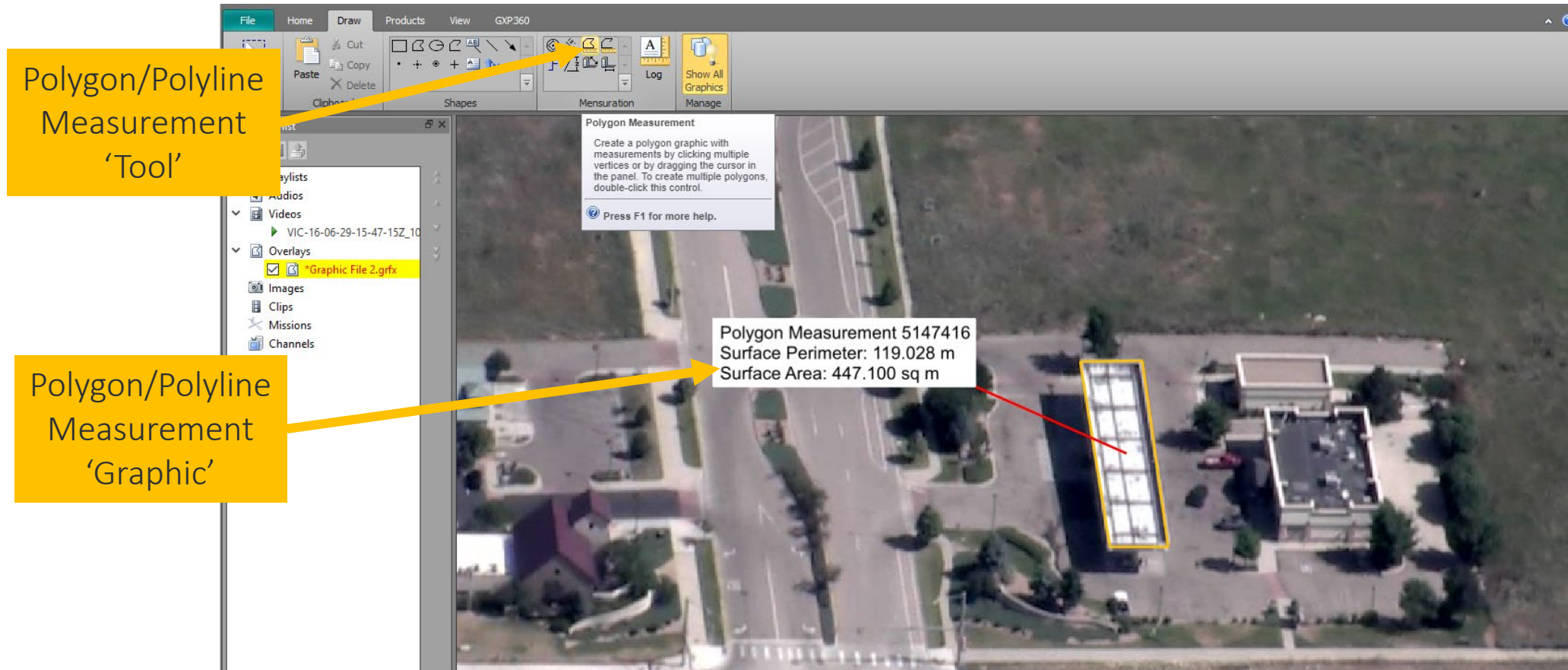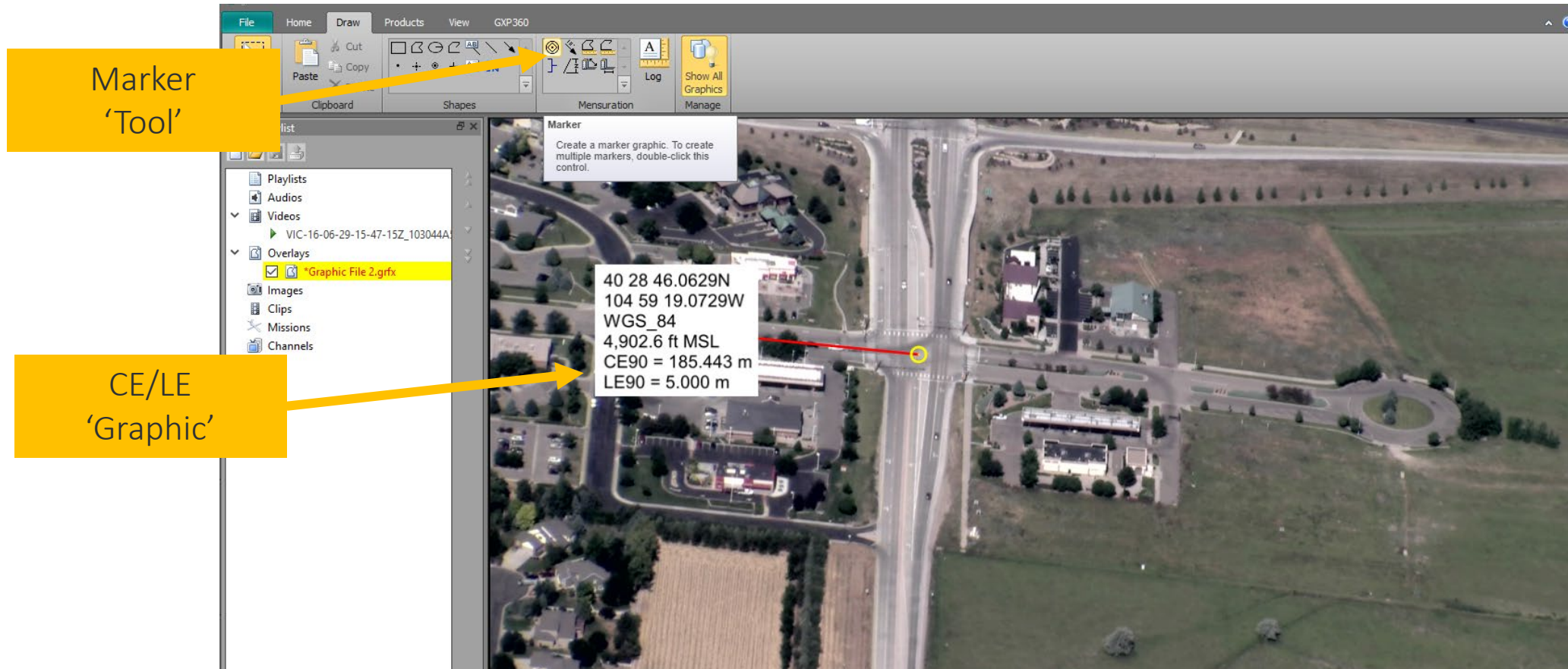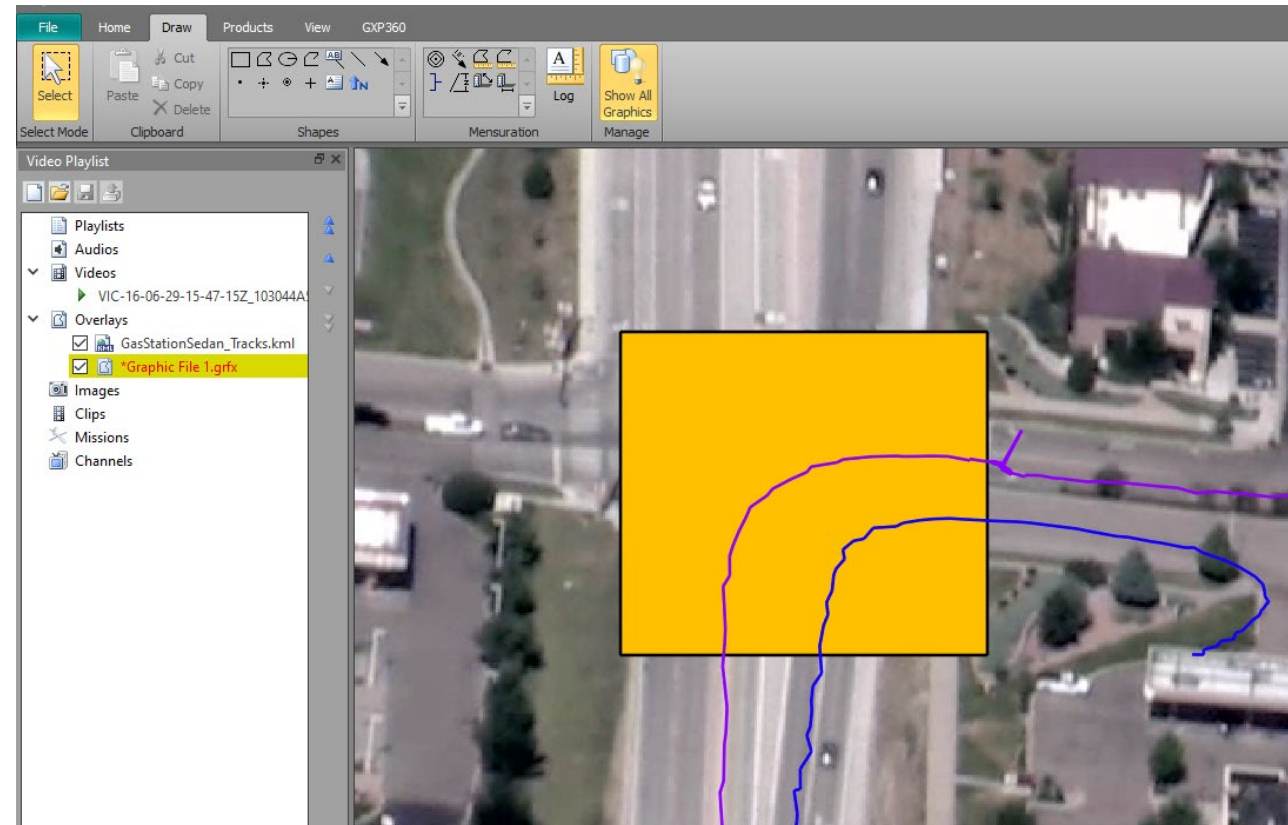Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

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GXP InMotion v4.5.0.4 – CE/LE Notation

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

BAE SYSTEMS

GXP InMotion v4.5.0.4 – Drawing Order for Graphics in Video View
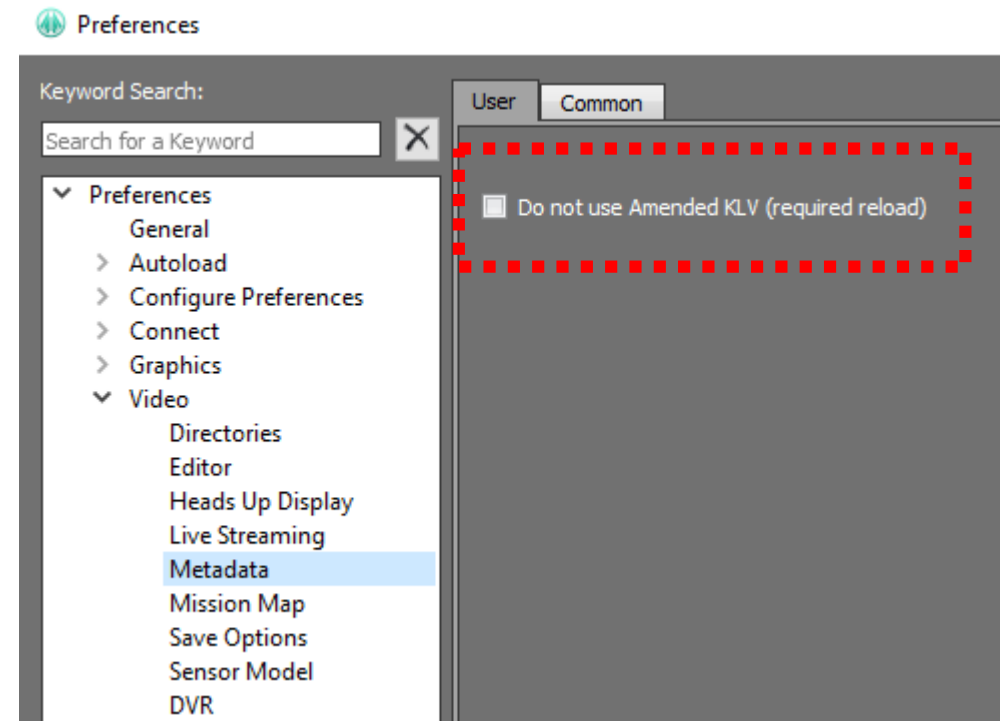
- The playlist now supports 'drawing order' for graphics

- Drawing order allows for moving vector graphics up and down in the video player for better layer management.

- Supported vector formats include:

  - Shapefiles,

  - KML/KMZ files,

  - GXP native Graphics files.

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

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GXP InMotion v4.5.0.4 – Amended KLV data support

- 'Amended' KLV data could be KLV data that has been manipulated from the original data, for example, during georegistration.

- The KLV metadata can be augmented to simultaneously preserve the original metadata while providing updated information.

- Adjusting the user preferences can force GXP InMotion to ignore the augmented or amended KLV metadata and only employ the original KLV metadata.

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GXP InMotion v4.5.0.5 – Export multipanel video as a single clip

New for
v4.5.0.5

- Users can now record multiple video panels at once and export as a single clip.
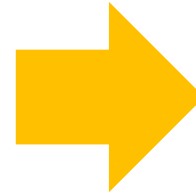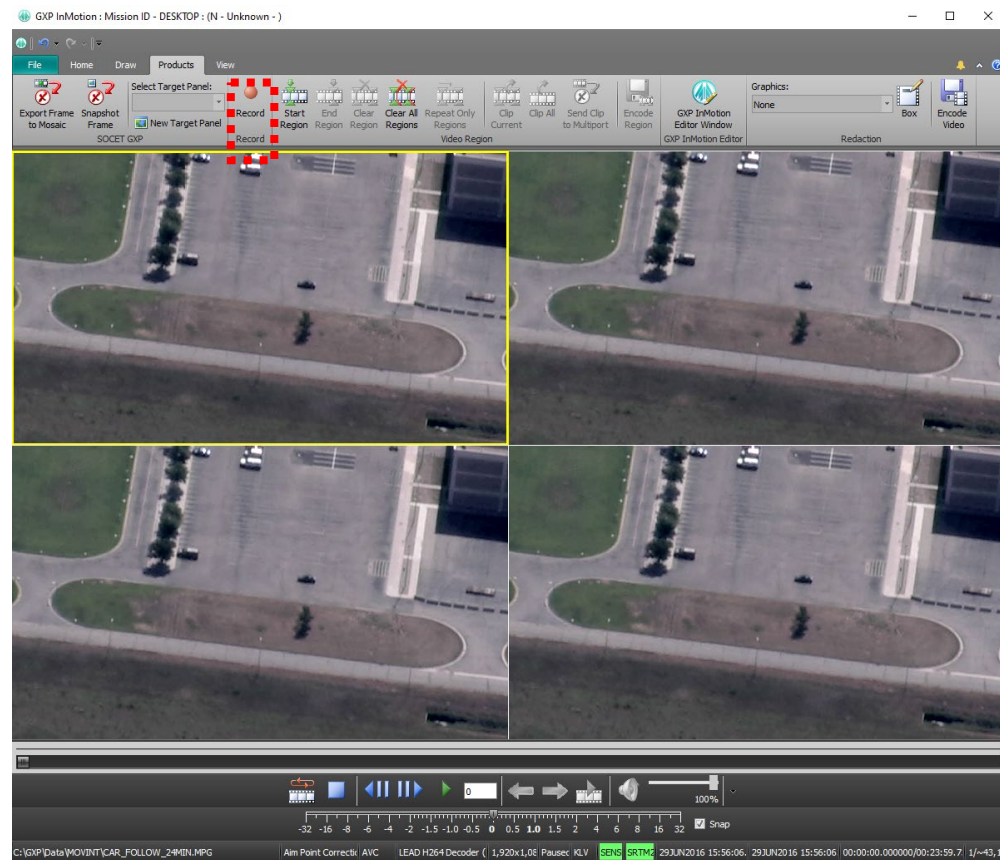
Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

BAE SYSTEMS

New for v4.5.0.5

# GXP InMotion v4.5.0.5 – Activity Collection Date/Time by analyst

- The Activity Log by default records a number of attributes during a mission. For example, Analytical Comments, Coordinates, Platform information, etc.

- The attribute 'Video time' records when a user makes an observation in relation to the original video's time collection.

- The attribute 'Collection Time' was added for activities to record the time an analyst makes the remark, independent of the video time. This aids quality control for forensic videos.

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

BAE SYSTEMS
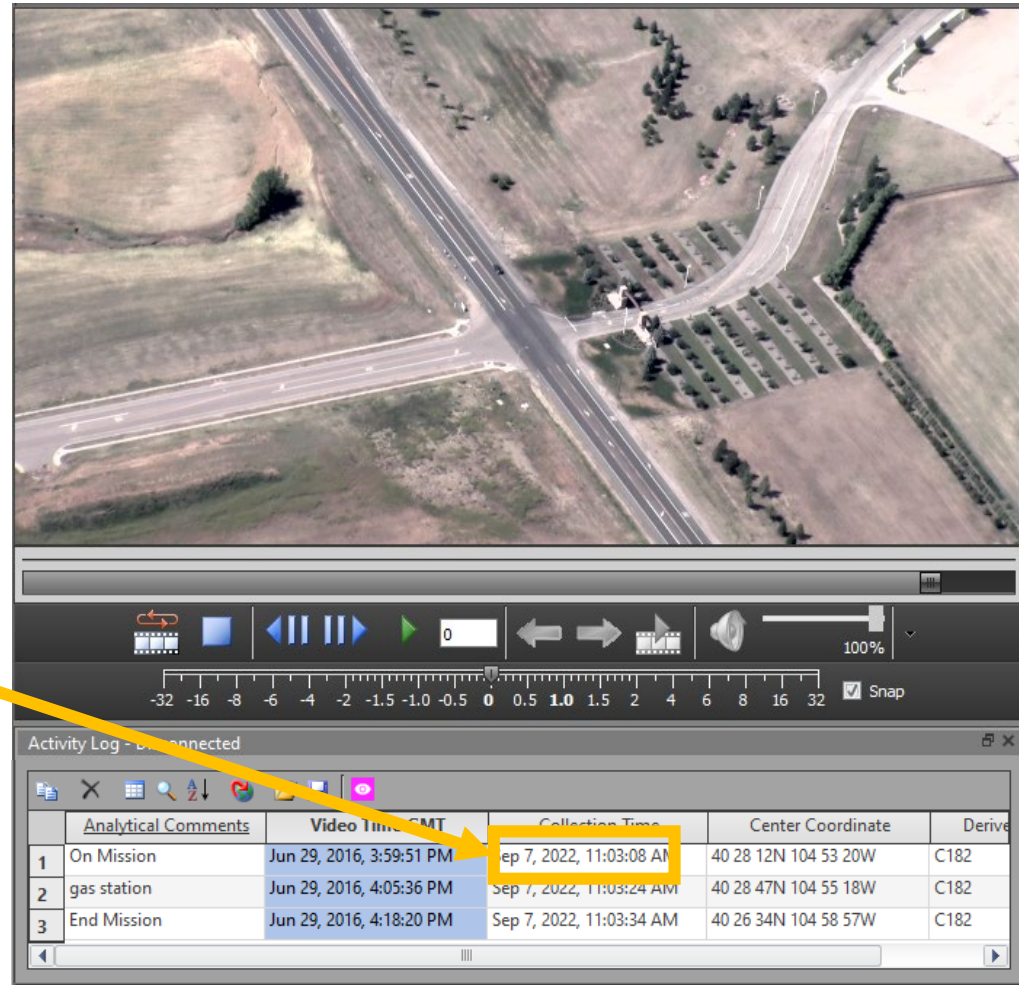
GXP InMotion v4.5.0.5 – Preferences Added

New for v4.5.0.5

- Added the following Preferences:
  - Bracket Measurement Preferences.
  - Measurement Graphic Preferences for Polygon and Polyline.

BAE SYSTEMS
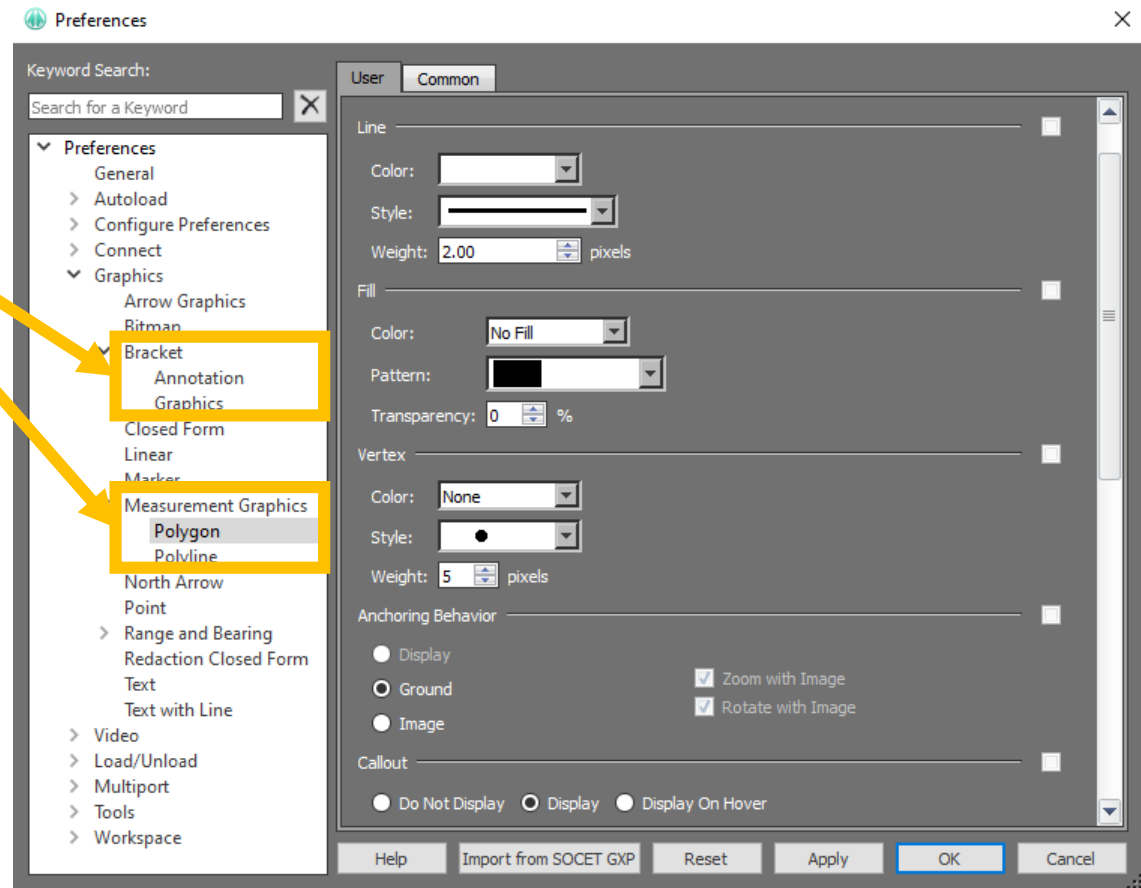
Other significant enhancements

- Added support for:
  - CSM (Community Sensor Model) to GXP InMotion.
  - Amended FMV/KLV Metadata for Registered Products.

- API support:
  - Python wrapper for video API.
  - load a Standard ID for Every Loaded Video.

- Integrate FFmpeg 4.4.1 Desktop.

- Snapshot All Panels Into a Single Output Image File.

- Use a fallback sensor model to deal with areas where SENSRB is not valid.

BAE SYSTEMS

Thank you

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