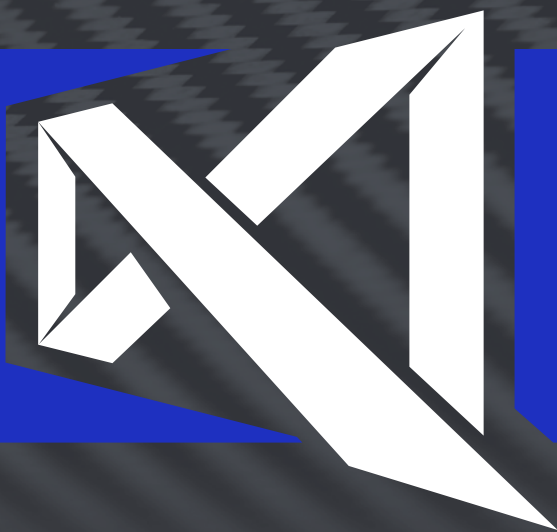# GXP Platform™ v2.3.1
Release Enhancements

BAE SYSTEMS
INSPIRED WORK

An unrivaled capacity for discovery, visualization, and exploitation of mission-critical data

The release of the GXP Platform v2.3.1 delivers exciting new geospatial capabilities including significant advances in GXP WebView™ and GXP Xplorer®, enhanced Application Program Interface (API) and system administration, and the integration of Movement Intelligence (MOVINT) throughout our platform applications. Current release enhancements include:

» New multi-view capabilities in GXP WebView enabling simultaneous visualization, image manipulation, and product generation

» Introduction of GXP WebView with Targeting supporting a variety of Common Geopositioning Services (CGS) targeting workflows

» Integration of MOVINT solutions throughout the GXP Platform including tracking analytics and a MOVINT database

» Improved interoperability between GXP software applications

» Advanced system administration and software configuration providing browser-based configuration management to customize GXP Xplorer, GXP WebView, GXP InMotion™, and GXP mobile solutions

Based on customer requests, these enhancements, along with the recent addition of the Layer Manager, ensure an optimal user experience while expanding synergies between all of the GXP Platform solutions.

System administration and configuration

System administration and software configuration enhancements provide browser-based configuration management to customize GXP Xplorer, GXP WebView, and GXP InMotion.

Browser-based system administration enables management of:

» User accounts, user groups, and associated roles

» Authentication settings and configure Sign-in settings

» Network settings, licensing, client services, and hosted Web services

» GXP Xplorer settings including cataloging, discovery, access controls, services, federation, and plug-ins

» GXP InMotion Missions

» Global settings which customize the GXP Xplorer, GXP WebView and GXP InMotion applications

Note: Restarting the server is no longer required for many configuration changes.

GXP Xplorer Application Settings

Catalog Setup
- Data Security
- Catalog Control Panel
- Discovery Agent

Application Services
- Standing Orders
- Cache Manager
- CSD
- GIAS
- DIB
- TASS

Catalog Plugins
- DigitalGlobe

Catalog Setup settings are used to configure the GXP Xplorer catalog and the file discovery agent used to populate it, as well as define parameters to control access to files, and the frequency of directory monitoring scans: Data Security, Catalog Control Panel, Discovery Agent.

- Data Security settings enable/disable File Validation, Discretionary Access Control, or XML Schema Validation.
- Catalog Control Panel configuration determines how files are searched and cataloged.

GXP WebView Global Settings

Webview
- Display Settings
- Streaming Options

The GXP WebView Global Settings provide access to configuration settings specific to GXP WebView: Coordinate Options and Classification Options.

- Coordinate Options enable the functionality to drop a marker after Jump to Point, and enable the Circular Error (CE) and Linear Error (LE) display on the status display bar and any annotation text in the marker.
- Classification Options enable the functionality to display the

Authentication

Sign In
- General
- LDAP Settings
- LDAP Import
- PKI Settings
- Passport Settings
- Terms of Use

The Sign In settings provides access to different authentication methods to configure user access and enforce sign-in policies: General options, LDAP Settings, LDAP Import, PKI Settings, Passport Settings, and Terms of Use.

- General options provide configuration of the attributes used for sign-in, such as removing anonymous access, and optional settings for Auto Registration.
- LDAP Settings provides configuration of the Directory Server

Configuration Settings

Network and Internet
- Server Protocol
- Proxy Settings
- Licensing

Personalization
- My Clients

Client Services
- Email
- Data Synchronization
- Gazetteer
- Location Tracking

Hosted Web Services
- Pixel Server
- JPIP
- GeoServer

The Network and Internet settings are used to configure the communication of the GXP Platform with other systems: Server Protocol, Proxy Settings, and Licensing.

- Server Protocol provides options for configuring the server protocol, URL Context, and Hostname of the GXP Platform.
- Proxy Settings define the server to recieve requests from clients requiring resources from other servers.
- Licensing requires the installation of the GXP License Manager v8.4.

No pending changes   Save

GXP Xplorer v2.3.1

Updates to GXP Xplorer include spatial query options, visualization of video files, enhanced data management, and cloud services.

Foundational support

- » Supporting Operating Systems Windows 10 64-bit along with Windows 7 64-bit, Windows Server 2008 R2, 2012 R2, and 2016
- » Mensuration Services Program (MSP) updated to version 1.5.1
- » Data Reformattting Service (DRS) 5.4.01.R22
- » Apache® Web Server 2.4.20
- » Hypertext Preprocessor PHP 5.6.21
- » JavaScript runtime environment NodeJS 4.1.2
- » GeoServer® 2.8.2
- » LEADTOOLS® 19.0
- » Supporting SOCET GXP® CoreSDK v4.2.0
- » FFMpeg 2.8.5
- » TerraGo® Software Developer's Kit 6.8.2.208
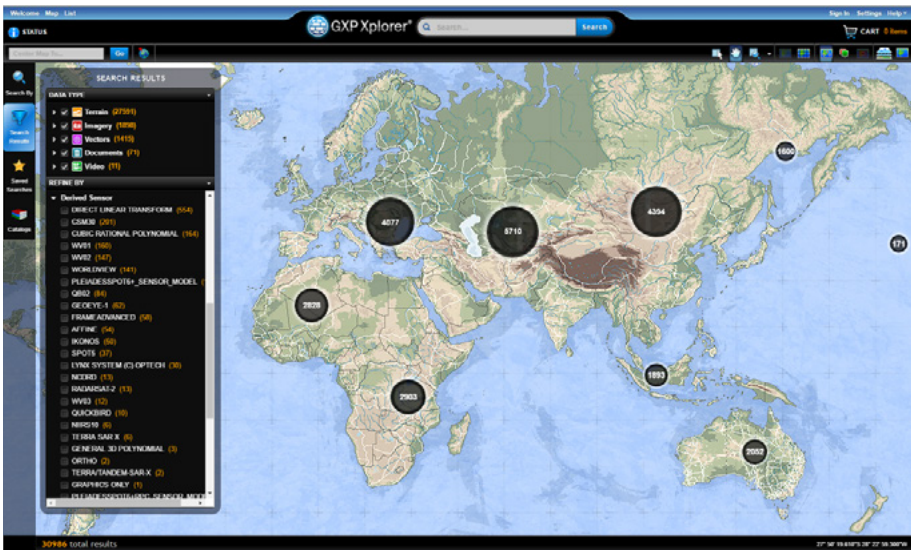
Key enhancements

» Spatial query options
- – Select by footprint
- – Select by icon

» Thumbnail generation
- – MBTiles (Mapbox Tiles)

» New Full Motion Video (FMV) and Wide Area Motion Imagery (WAMI) capabilities
- – Preview
- – Derived sensors
- – Thumbnails
- – Stream to GXP InMotion client

» Data management
- – Automatically purge data based on configurable rules
- – Logical and physical data partitioning (binning) for Discretionary Access Controls (DAC)

» DAC improvements include geospatial constraints

» DAC based on cataloged metadata

» Cloud services*
- – Amazon Simple Storage Service (S3) data staging and use by GXP Platform Services

GXP Professional Services are required for full Cloud implementation
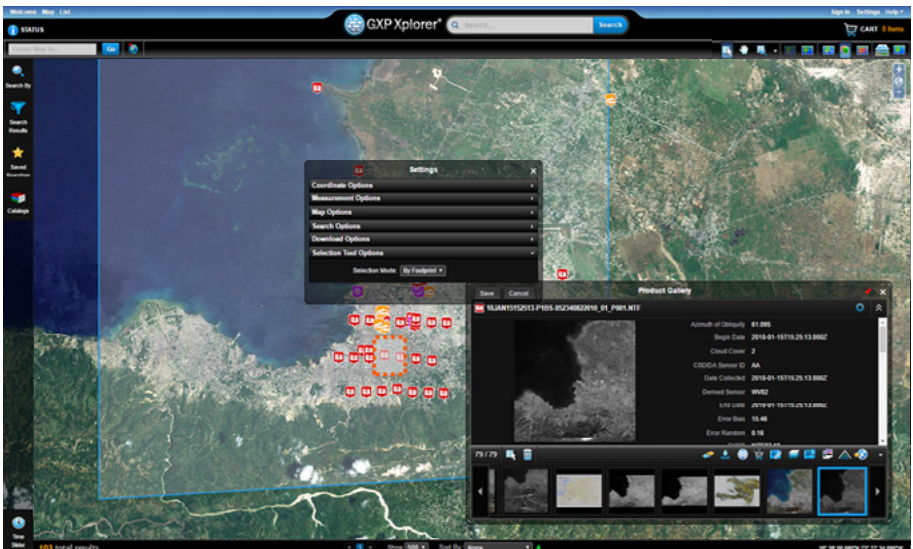
GXP WebView v2.3.1

Updates to GXP WebView include multi-view capability, image manipulation, and a web-based targeting solution.

Multi-view capability

» Rigorous photogrammetric models for imagery
   – Exploit imagery from disparate sensors simultaneously including over 50 different commercial sensors using SOCET GXP's sensor model library and National Technical Means (NTM) using Mensuration Services Program (MSP)
   – Display imagery from streaming services for over 25 different raster formats using SOCET GXP's image library including JPIP for JPEG2000 imagery

» Display of OGC® web services

» Multiple layers of geospatial data can be exploited simultaneously in each view

» Product generation for imagery analysis reporting
   – 2-D GeoPDF®, JPEG, PNG, Microsoft PowerPoint®, and GoogleEarth® output

» Image manipulation with linked panels controlling simultaneous viewing at the same rotation and scale

» Accesses the best terrain as a service for accurate mensuration across all views

» Overviews in each opened view

» View independent graphics
   – Points
   – Icons
   – Lines
   – Text
   – Pictures
   – Magnifying glass
   – Point markers
   – Bracket lengths
   – Range and bearing

» Linked cursors on/off

» Numerous view layout options

» Layer management across views

» Choice of streaming format options

» Active view framed in yellow

GXP WebView v2.3.1 (cont.)
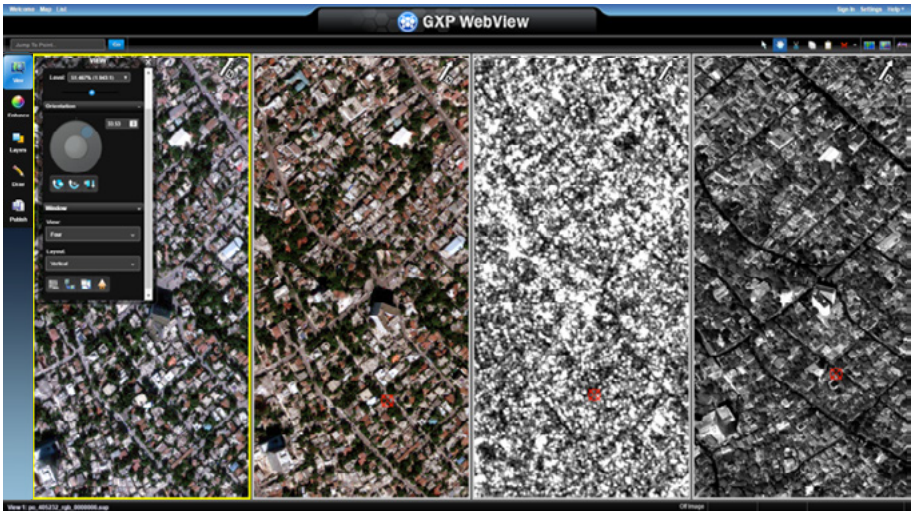
Image Manipulation

» Ortho On-the-Fly®

» Synchronized pan, scale, and rotation

    — Preset rotations: objects up, shadows down, north up
    — Manual rotation dial
    — Preset RSet (Reduced Resolution) zoom levels
    — Fit to canvas
    — Manual zoom slider
    — Glove pan

» Image enhancements

    — Auto Adjust
    — Auto Dynamic Range Adjust
    — Contrast
    — Brightness
    — Gamma
    — Sharpness

Targeting add-on

- » A web-based targeting capability
- » Utilizes GXP Xplorer as the image catalog
  - − Source Selection integrated with GXP Xplorer Catalog
- » Targeting workflows are built into GXP WebView
- » Common Geopositioning Services (CGS) backend for derivation of coordinates and error estimates
- » Supports the following CGS targeting workflows:
  - − SIG: Provides single image point measurements
  - − MIG 2-4: Provides two to four image triangulation
  - − Registration: Provides image registration with up to three control images
    - Supports use of Digital Point Positioning Data Base (DPPDB), NTM, or commercial control images
  - − Resection: Provides Image Resection capability with up to three control images
    - Supports use of DPPDB, NTM, or commercial control images
- » Uses the CGS 2.6.3 as the calculation engine
- » Height adjustments for points
- » Vertical control points
- » Microsoft PowerPoint report generation
- » Settings and preferences capabilities

Integration of Movement Intelligence (MOVINT) Solutions into the GXP Platform

Create and exploit track data from Ground Moving Target Indicator (GMTI) sensors
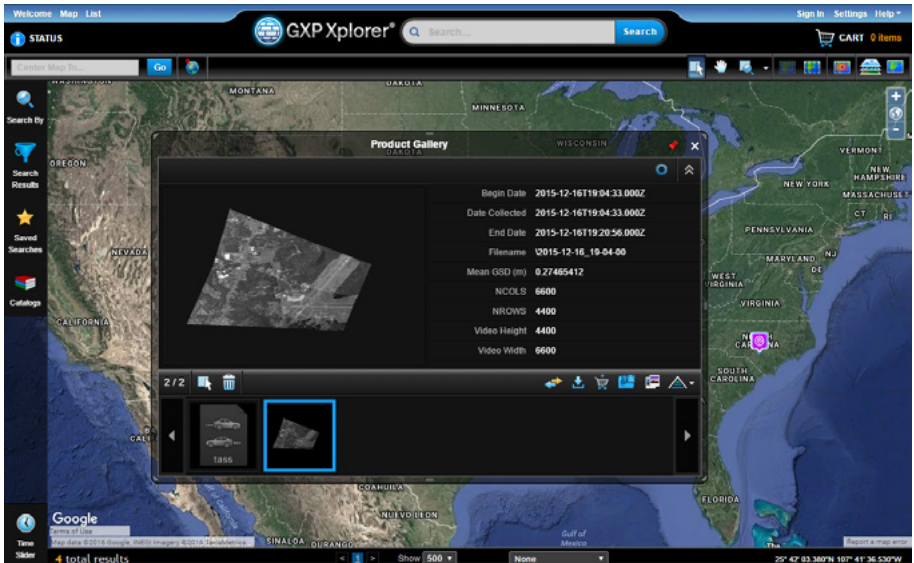

New capabilities in GXP Xplorer

- » Catalog WAMI
- » Submit WAMI, FMV, and GMTI to SIG Tracking Analytics Software Suite (TASS) for track generation
- » Catalog track data from TASS / MOVINT database
- » Stream video directly to the GXP InMotion Desktop

New capabilities in SOCET GXP / GXP Xplorer Search

- » Refine search time window down to the minute
- » Discover track sets
  - Display track footprints in SOCET GXP Multiport
  - Load in Multiport as WFS
- » Initiate track generation for WAMI, FMV, and GMTI data which do not already have tracks
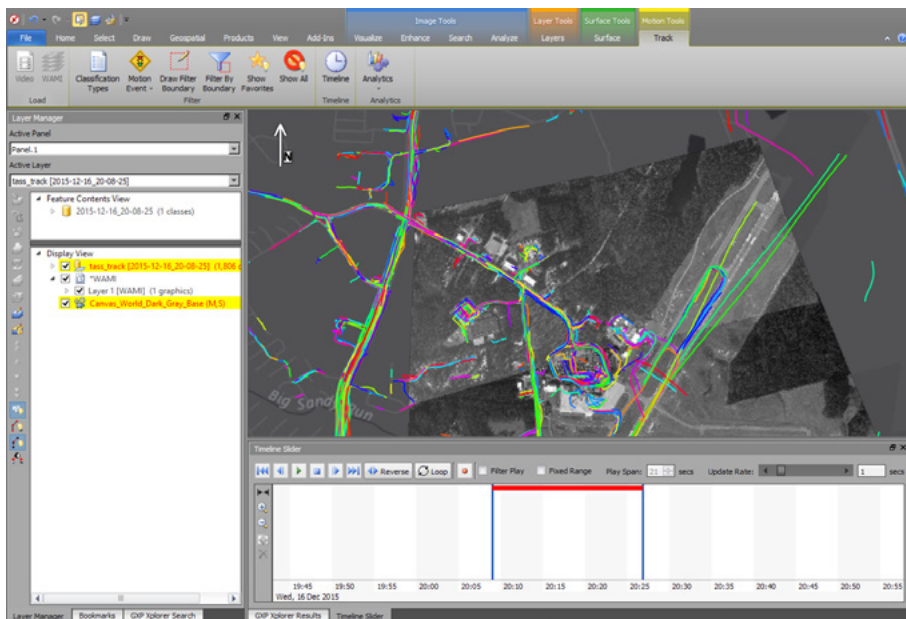
Exploitation capabilities in SOCET GXP

» Geospatially constrain track sets by area of interest

» Temporally constrain track sets using timeline tools

» Filter tracks by classification (truck, car, person)

» Filter by track classification confidence (0—100%)

» Filter by motion events (stop, start, turn, u-turn, etc.)

» Display WMS heat maps for tracks and sensor dwell

» Animate the entire track set with a filter applied

  – Record animation as a video product

» Animate an individual track

  – FMV tracks will play a video chip of the track inside the feature metadata bubble

» Load corresponding FMV in GXP InMotion

» Identify a track as a "Favorite" for rapid recall

  – Export "Favorites" to Keyhole Markup Language (KML)

Enhanced interoperability between GXP products

» Publish from SOCET GXP to the GXP Platform catalog
- – JPEG products contain geospatial metadata (Exif tags)

» Single button to open data in SOCET GXP
- – Stream imagery to SOCET GXP when data files are not directly accessible
- – Direct file open (DFO) in SOCET GXP v4.2.0.1 or later for data located on network drives
- – JPEG2000 Interactive Protocol (JPIP) streaming with metadata into SOCET GXP

» View image thumbnail and open data in SOCET GXP from an RSS notification

» The GXP pixel streamer and JPIP streamer provide image pixel streaming with full metadata for imagery to accommodate all SOCET GXP workflows as if the imagery were opened directly from within SOCET GXP
- – Auto-map, band selection (even for Hyperspectral Imagery (HSI)), spectral processing algorithms, triangulation, automatic terrain generation, stereo imagery exploitation, ortho-rectification, etc.
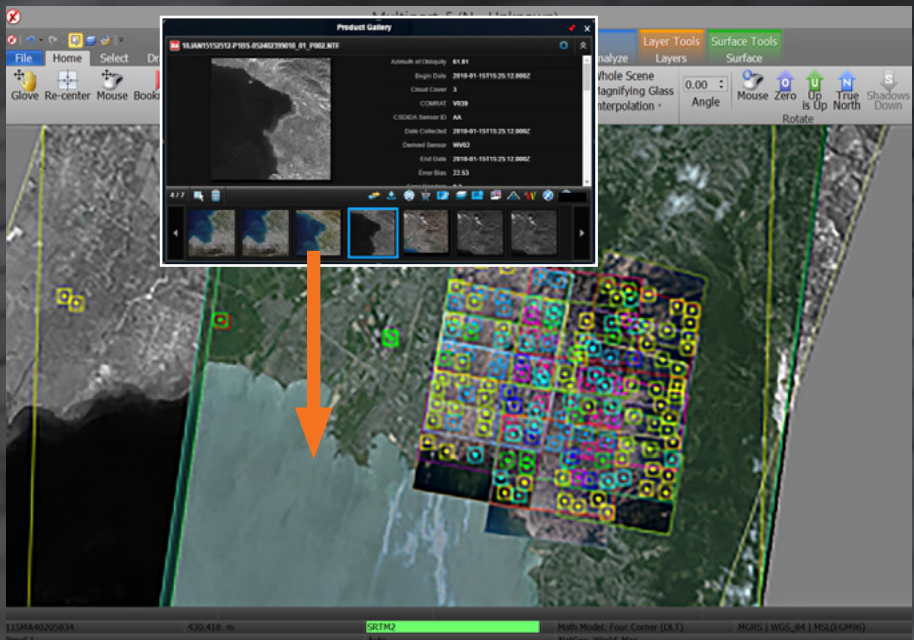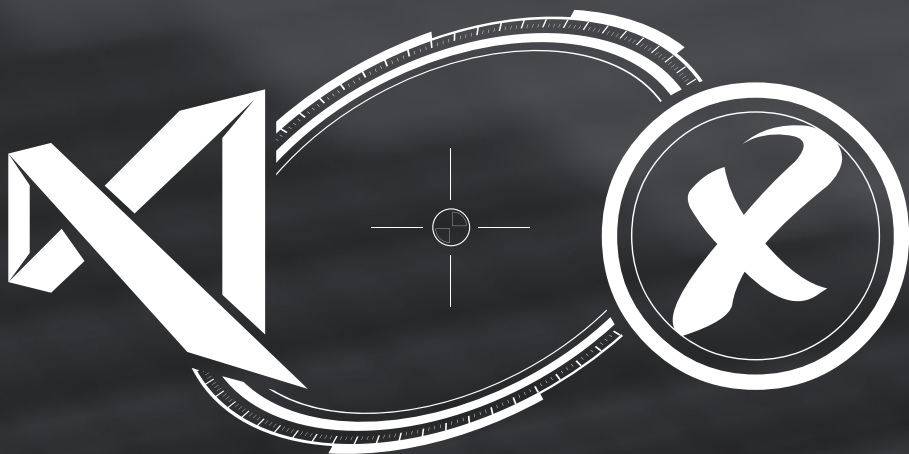
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Licensing

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For additional support and contact information, please visit our website:

www.baesystems.com/gxp