The GXP® Ecosystem

Enabling an unrivaled capacity for discovery, visualization, and exploitation of mission-critical geospatial and temporal data

GXP Xplorer® • GXP Fusion® • SOCET GXP®
GXP InMotion™ • GXP WebView® • GXP OpsView®

BAE SYSTEMS

Providing the foundation for development of the most advanced geospatial intelligence, the GXP® Ecosystem delivers an unrivaled capacity for discovery, exploitation, and dissemination of mission-critical geospatial and temporal data.

From key military, safety, and security operations, to a wide variety of commercial development and research initiatives, GXP software provides a comprehensive suite of solutions enabling timely and effective decision-making.

Reduce costly data search efforts

Statistics show that analysts spend up to 50 percent of their time locating imagery and data across disparate systems, networks, and geographic locations.

GXP solutions streamline process workflows, increase productivity, and enable a more effective final product, saving both time and money for your organization!

50%

Total project time spent searching for data

Extensible and adaptable

The GXP Ecosystem provides application developers and system integrators with a configurable solution that can be expanded upon and easily integrated into enterprise deliverables.

Meeting the needs of today's mobile, collaborative, cloud-based work force, GXP software enables development of custom solutions for customers with unique workflows and requirements.

Software solutions within the GXP Ecosystem have received the SAFETY Act designation from the Department of Homeland Security as a qualified anti-terrorism technology. This special designation was awarded based on extensive operational testing, performance achievement, quality assurance, security assessments, audit and accountability, and a variety of other key metrics.

GXP Xplorer®

Centralized data access

- Catalog in place
- Federated data discovery
- Search result visualization
- Extensive customizable data model
- Browser-based interface
- Geospatial workflow management

A revolutionary data management application that makes it easy to rapidly locate, retrieve, and share geospatial data files while paving the way for advanced geospatial exploitation.

Data management

Minimizing the time spent searching for critical data, GXP Xplorer software provides a convenient way to manage and access all of your geospatial content including:

- Imagery
- Terrain and LiDAR
- Features
- Maps and charts
- Raster-derived products
- Vector-derived products
- Shapefiles
- Videos
- Documents
- Reports
- Presentations
- Spreadsheets
- Custom types
- Microsoft® Office products
- GeoPDF®

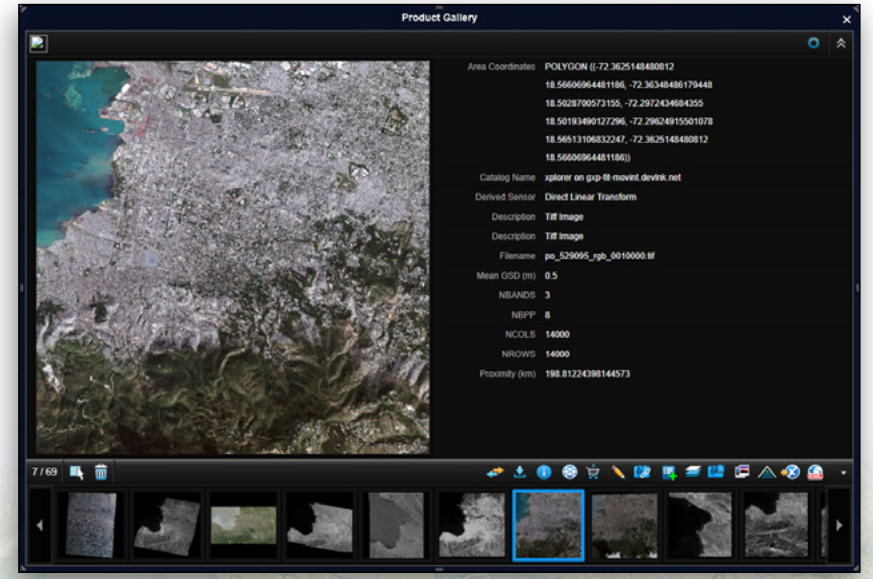
Shared online catalog

Utilizing dynamic discovery techniques, GXP Xplorer software crawls your enterprise network searching for relevant files in existing data systems, on shared network drives, and in an analyst's local shoebox. It identifies files without moving them, creates an online catalog for rapid retrieval, and even alerts users to new content.

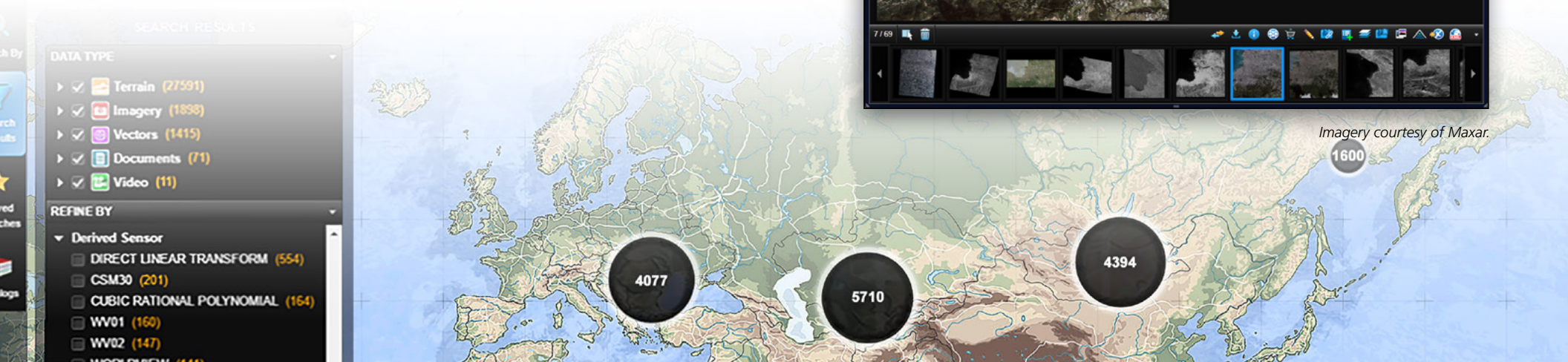
Centralized exploitation

Enabling rapid access to critical data, GXP Xplorer software ensures that you are maximizing the value of all of your geospatial resources. Relevant data and imagery can be visualized, downloaded, processed, or opened directly into other applications for additional analysis and exploitation.

Combined with our GXP WebView and GXP InMotion solutions, GXP Xplorer software provides an effective platform for not only accessing mission-critical content, but for exploiting both still imagery and video feeds, and creating intelligent analysis and reporting to ensure optimum strategy moving forward.



Imagery courtesy of Maxar.



GXP Fusion®

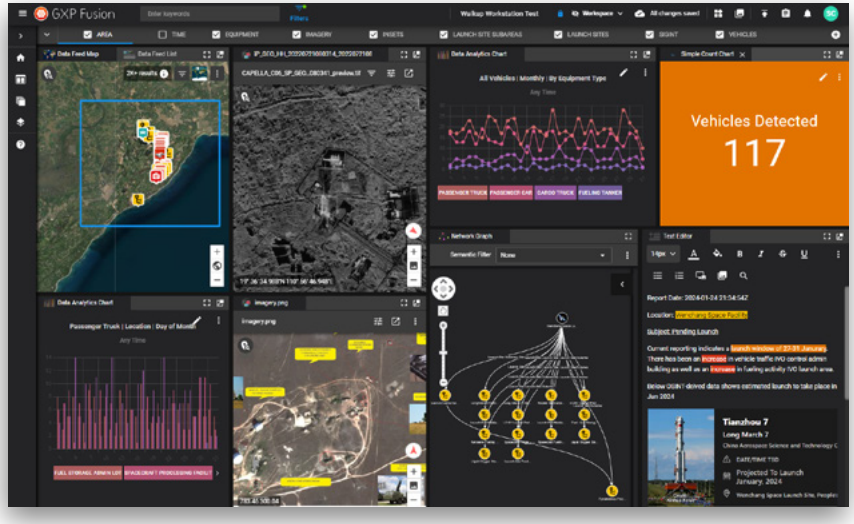
Integrate information from multiple, complex sources

- Single dashboard view
- Automated workflows
- Activity-based alerts
- Third-party system connections
- Integration with Structured Observation Management (SOM) workflows

Integrating information from disparate data sources to answer complex intelligence questions.

Enabling development of a multi-INT Common Intelligence Picture (CIP), GXP Fusion software is designed to meet the complex data challenges confronting the modern all-source analyst. Faced with a significantly increasing volume of information, GXP Fusion software enables analysts to fuse disparate data sources into a multi-perspective view, allowing for delivery of insightful intelligence and enhanced situational awareness to key decision-makers.

- Multi-window web framework with Alerts
- Filters for Time, Area, Data
- 3-D globe, Network Graph, and Data Feed List
- Data Analytics Charts and Data Timeline Charts
- Integrated Workflow Engine, Image View, Observation Collect, and Alert



Customize views of information in the GXP Fusion user interface.

Find hidden patterns and relationships in multi-source data

GXP Fusion software is designed for Department of Defense, Intelligence Community, and Law Enforcement personnel with big data challenges who want to gain insights via identification of hidden relationships and patterns in large volumes of data. GXP Fusion capabilities empower the analyst to make smarter decisions by tailoring their workflows and leveraging third-party Artificial Intelligence (AI) / Machine Learning (ML) technology while enjoying a seamless user experience:

- Identify hidden patterns using interactive Data Analytics Charts
- Find time-phased activities using the Data Timeline Chart
- View geotagged and non-geotagged data using the 3-D Globe and Data Feed List
- Analyze additional observations collected from SOCET GXP and GXP WebView applications
- Visualize complex relationships and patterns using the Network Graph

Unlock knowledge by fusing data based on location, time, and data attributes

The GXP Fusion DVR-like controls can isolate time range and provide a playback mode for forensic analysis, while intelligent filters can further isolate additional information as required. In addition, linked panels communicate in real time, and an extensible Widgets Gallery enables third-party customization.

SOCET GXP®

Advanced geospatial exploitation

- Image and video analysis
- Customized product creation
- Streamlined user interface
- Rigorous sensor modeling
- Enterprise system integration
- Comprehensive API

Advanced geospatial exploitation and customized product creation combined into one comprehensive solution.

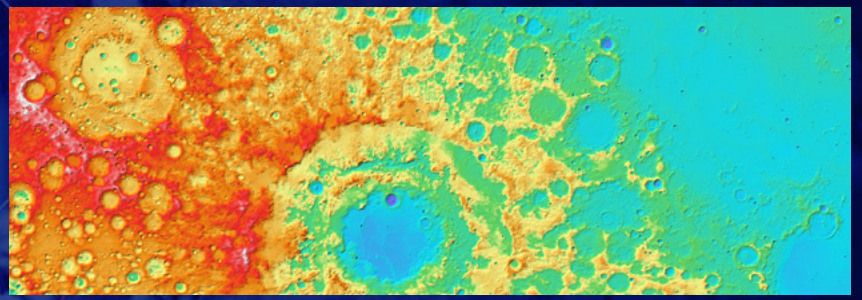
As the primary desktop application of the GXP Ecosystem, SOCET GXP ingests imagery from satellite and aerial sources enabling users to identify, analyze, and extract ground features while supporting rapid product creation. Image analysis, advanced photogrammetric techniques, remote sensing, and feature collection workflows are seamlessly combined into a single, effective solution that delivers the most advanced exploitation of geospatial data.

Leveraging SOCET GXP software along with other solutions in the GXP product ecosystem, such as GXP Xplorer, users can discover and stream data (including full metadata) directly to a Multiport™ for more rigorous analysis. Users can then publish final products back to the GXP Xplorer catalog, allowing for subsequent discovery by the entire federated user base.

Foundational capabilities of SOCET GXP include:

- Image analysis and intelligence production
- Precise mensuration
- Remote sensing
- LiDAR visualization and exploitation
- Terrain extraction and editing
- Video exploitation
- Streaming enabled client
- Multi-sensor triangulation and orthorectification

Analysis of video surveillance on a construction site; Imagery courtesy of L-3 Communications, EO/IR Inc.



Simple connection to Open Geospatial Consortium (OGC®) reference imagery, such as lunar topography; Imagery courtesy of United States Geological Survey (USGS).

Automatic identification of aircraft at a major airport; Imagery courtesy of Video Inform.

GXP InMotion™

Geospatial video analysis

- Geospatially-based video processing
- Video capture and re-stream
- Automatic track generation
- Segmentation and merge
- Seamless integration with GXP Xplorer software

A streamlined user experience with a powerful set of tools designed for every level of the video analysts' needs – from simple viewing and screen capture to full video editing.

Live video exploitation

The GXP InMotion Video Suite lets you manage video exploitation in an enterprise environment, allowing organizations to efficiently scale based on the number of video missions and analysts required. GXP InMotion software provides:

- Live video re-streaming
- Forensic video file streaming
- DVR capabilities
- Channel source setup and configuration
- Mission collaboration
- Web or desktop clients

Rapid video delivery

With the GXP InMotion Video Server, video recorded from any airborne platform or other feed is streamed to the server with only a millisecond delay. These feeds can then be multicast to facilitate collaborative analysis, exploitation, and review among disparate mission workgroups.

Tracking Analytics Software Suite (TASS)

As a key part of the GXP InMotion Suite, TASS represents a revolutionary toolset for automatic track generation from Movement Intelligence (MOVINT) that, when combined with other GXP solutions including the MOVINT Database, Spatial Network Activity Analytics for Relating Entities (SNAARE), and Hydra, creates the industry's most advanced system for the management and analysis of intelligence data.

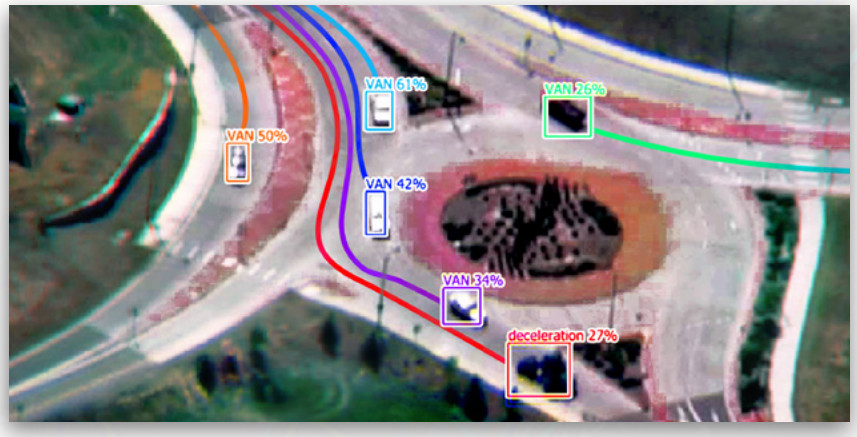
Background: Tracking visualization. CorvusEye imagery courtesy of Harris.

TASS enables interpretation of movement data from a variety of sources:

- Full Motion Video (FMV)
- Wide Area Motion Imagery (WAMI)
- Ground Moving Target Indicator (GMTI)
- Electronic Warfare (EW)
- Automated Identification System (AIS)

Automatically generated tracks include information regarding turns, stops, and acceleration, as well as object recognition, time-stamping, and georeferencing designed to deliver unmatched intelligence insight into targeted activities.

TASS can store both automatically generated tracks and user generated track data (STANAG 4676, CSV, and MISB 0903.4) directly into the MOVINT database for retention and exploitation. Users can then interpret motion events and apply advanced analytics for network analysis and track correlation using Hydra and SNAARE plug-ins. Track data can be exported in industry standard formats including MISB 0903.4 and STANAG 4676.



TASS tracks displayed in GXP InMotion software. Imagery courtesy of L-3 Communications.

GXP WebView®

Web-based imagery exploitation

- Rapid pixel streaming
- Efficient data analysis
- Photogrammetric-based rigor and accuracy
- Actionable geospatial reporting
- Seamless integration with GXP Xplorer software

A web browser-based Electronic Light Table (ELT) enabling image exploitation, aggregation and overlay of supplemental data layers, and robust product generation coupled seamlessly with GXP Xplorer data discovery and management capabilities.

Stream, exploit, and publish

Built for both the all-source and image analyst, GXP WebView software supports simple, accurate data visualization and analysis, as well as the development of effective and actionable geospatial reports.

Taking full advantage of comprehensive pixel streaming technology, GXP WebView software enables imagery to be streamed at full resolution and with complete metadata to support rigorous sensor model initialization. Analysts can take advantage of this best-in-class accuracy with tools for height mensuration, shadow measurement, and more, while elevation data can be automatically loaded to ensure accuracy in all three dimensions.

GXP WebView product generation can be customized using templates to provide contextual information, and a variety of output formats are available including Microsoft PowerPoint®, PNG, JPG, and more. Products can be shared out via GXP Xplorer software for rapid intelligence distribution to key stakeholders.

Observation of facility construction over time: Imagery courtesy of Pleiades © CNES 2013 & 2016 Airbus DS Geo GmbH (1&3) and Maxar WorldView-1 and WorldView-3 2014 & 2017 (2&4)

Key capabilities

- Imagery layout options including viewing up to four linked panels, virtual mosaics, and image lists that allow animation between layers
- Annotation tools (points, lines, polygons, text boxes, etc.)
- Precise coordinates including elevation derived from rigorous sensor models
- Support for a variety of coordinate systems including geographic, Universal Transverse Mercator (UTM), and Military Grid Reference System (MGRS)
- Range / bearing and bracket mensuration tools
- Object and shadow height measurement
- Save / restore workspaces
- Geospatial layer management including graphics, images, and Open Geospatial Consortium (OGC®) layers
- Customized templates for efficient product creation
- Product publishing to a variety of output formats and destinations including the GXP Xplorer catalog, PowerPoint, and KML

Integrated with the GXP Xplorer search capability, GXP WebView software provides the functionality to analyze and exploit imagery for detailed reporting and publication of finished GEOINT products.

Imagery courtesy of National Oceanic and Atmospheric Administration (NOAA).

GXP OpsView®

Critical planning and real-time command

- Proven operational planning capabilities
- Strategic command and control
- Field situational awareness
- Enhanced communication
- Global, cloud-based collaboration

Ensuring safety and security through a Common Operating Picture (COP) for operational planning and incident response.

Whether for security operations, crisis response, or advance planning for an emergency situation, the GXP OpsView suite, including its companion mobile application, GXP OnScene, provides situational awareness through strategic planning tools, simplified communications, and a COP.

Enabling mission command to effectively coordinate field operators in real time throughout an operation, event, or crisis situation, GXP OpsView and GXP OnScene software applications provide:

- Mobile, Web, and Cloud operation or emergency action plan via smart maps and Collaborative Response Graphics® (CRG®)
- Real-time location sharing layered on top of the CRG, data overlays, and map
- Field data uploads including photos and videos
- Shareable mobile markers with turn-by-turn directions
- Enhanced coordination and collaboration tools
- Rapid assignment, tasking, and deployment of field personnel
- Mass-notification and operational broadcast

From an efficient dashboard view enabling strategic management of multiple operations, to a focused incident view supporting asset deployment and real-time communications, GXP OpsView software brings an unrivaled degree of command and control to operational planning and tactical response.

GXP OpsView tools provide critical planning with real-time command and control for:

- Global military and security operations
- Multi-national allied collaborations
- Active assailants, terrorist attacks, and hostage situations
- Emergency management and disaster relief
- Wildland firefighting and prevention
- Search and rescue operations
- Drug interdiction and high-risk warrants
- Private security for corporate offices, industrial facilities, and events

Imagery courtesy of Esri® World Imagery.

BAE Systems, Inc.

BAE Systems, Inc. is the U.S. subsidiary of BAE Systems plc, an international defense, aerospace and security company which delivers a full range of products and services for air, land and naval forces, as well as advanced electronics, security, information technology solutions and customer support services.

BAE Systems, Inc. provides support and service solutions for current and future defense, intelligence, and civilian systems; designs, develops and manufactures a wide range of electronic systems and subsystems for both military and commercial applications; produces specialized security and protection products; and designs, develops, produces, and provides service support of armored combat vehicles, artillery systems, and munitions.

GXP software solutions

Supporting development of the most advanced geospatial intelligence, BAE Systems GXP software enables rapid discovery, exploitation, and dissemination of mission-critical geospatial and temporal data. From key military, security, and incident response operations, to a variety of commercial development and research initiatives, GXP provides a comprehensive suite of solutions to inform effective decision-making and ensure a safer world.

GXP software solutions support image, video, and all-source analysts at defense and intelligence agencies, as well as commercial organizations, around the world including:

- Defense forces, intelligence agencies, and homeland security (including all major branches of the military)
- Private security and first responder personnel
- Photogrammetry, mapping, and surveying agencies
- Systems integrators
- State, local, and regional governments
- Transportation departments
- Natural resource management consultants
- Universities and research organizations

More information on BAE Systems and GXP products:

Americas
Toll free: 800 316 9643
gxpsales@baesystems.us

Asia
gxpsales.asia@baesystems.com

Australia and New Zealand
gxpsales.apac@baesystems.com

Europe, Middle East, and Africa
gxpsales.emea@baesystems.com