GXP InMotion
VIDEO ANALYSIS SUITE

BAE SYSTEMS
INSPIRED WORK

SUPPORTED VIDEO AND MOTION IMAGERY FORMATS

– H.264 (MPEG-2)
– Microsoft Windows® (.wmv, .asf)
– Apple® QuickTime®
– 104.5, 601.1 metadata
– User datagram protocol (UDP) streaming video via URL
– Video from a video capture device (USB, PCI)
– Standard still image formats with sequential naming

DESKTOP

The GXP InMotion Video Desktop application combines a sleek, streamlined user experience with a powerful set of tools designed for every level of the video analysts' needs – from simple viewing and screen capturing to full video editing.

Specifically designed to support real-time missions that demand a focused, robust environment (e.g., mission oversight, confirmation of illicit activities, monitoring of ports and borders, surveillance), and delivers the extensive exploitation capabilities required for forensic analysis. A powerful, built-in sensor model establishes accurate geopositioning for real-time situational awareness, historical data analysis, and intelligence reporting.

The intuitive user interface includes a video viewing area with standard video playback controls. Analysts can view live video feeds, file-based video, video from motion capture cards and motion imagery stills, as well as record video for further analysis or playback. Advanced controls allow for slow-motion or frame-by-frame metadata search and review. The metadata window displays details such as location, speed, and direction. The video playlist creates a queue of multiple files for convenient access, and bookmarks offer a quick jump back to the most recently used data.

A map viewing area provides geographical context and connects to the included Visual Coverage Tool (VCT) to catalog and display local data holdings. Analysts can zoom in to a specific area for a closer view, review the sensor tracks recorded for a specific mission, overlay the current video footprint and sensor location while the video is playing, and view event log entries plotted on the map.

ANALYZE RECORDED VIDEO

TRACK EVENTS DURING A LIVE MISSION

COLLABORATE WITH OTHER ANALYSTS

PERFORM HIGHLY-ACCURATE EXPLOITATION

EXPORT GEOREFERENCED STILL FRAMES TO CREATE CUSTOMIZED PRODUCTS

SERVER

The GXP InMotion Video Server manages video exploitation tasks in an enterprise environment, allowing organizations to scale based on the number of video missions and analysts required to support real-time and forensic operations.

Video recorded from any airborne platform or other feed is streamed to the server with a delay of only a millisecond. The server supports ingest and streaming of real-time video feeds, DVR-like video recording, automated video registration, distributed mission management, and enhanced collaboration amongst mission workgroups.

Live feeds are streamed to the server and then multicast to every analyst in a mission workgroup for review and analysis. Individuals can connect to pre-planned video missions that in-turn connect them to other analysts working on the same mission. Workgroup members can view a list of other analysts working on the mission and perform actions within the shared context of the group, e.g., an annotation added to a "point of interest" or feature in the video becomes instantly visible to the other collaborators.

The GXP InMotion Video Server enables seamless integration between GXP Xplorer® – the robust cataloging and dissemination application, SOCET GXP® – with industry-leading image exploitation capabilities, and the GXP InMotion Video Desktop application. The server is also able to connect to other, third-party data servers and mobile apps.

ANALYSIS AND EXPLOITATION

Execute real-time missions and perform forensic analysis to the highest degree of accuracy with GXP InMotion's robust, collaborative environment.

Track activities

Select and track objects to assess progress or detect change over a period of time. Determine coordinates and establish speed and heading in real-time with embedded video metadata.

Rotate video to match the identical view point of the aircraft capturing the video. Mark an event or points of interest directly on the video. Overlay video metadata and sensor telemetry directly onto the map and view events from the Mission Event Log in geographical context to achieve greater situational awareness.

Perform video registration

Perform automatic registration to ensure video coordinates correspond directly with real geographic ground coordinates for maximum accuracy. When speed is essential, frame-to-frame registration compares pixels to another video frame at a user-defined tolerance. When accuracy is paramount, frame-to-reference registers pixels to outside geographical reference data, accurately linking the video pixels to the ground.

Registered video placed on the server is streamed to every analyst in the mission workgroup. Individual frames can be exported as NITF with a true, geographic sensor model.

Enhance and annotate

Apply image enhancements on-the-fly for brightness, contrast, saturation, hue, sharpness, smoothing, and edge detection.

Create annotations directly on the video for export into multiple formats including KML, shapefile, and GXP's feature database (FDB).
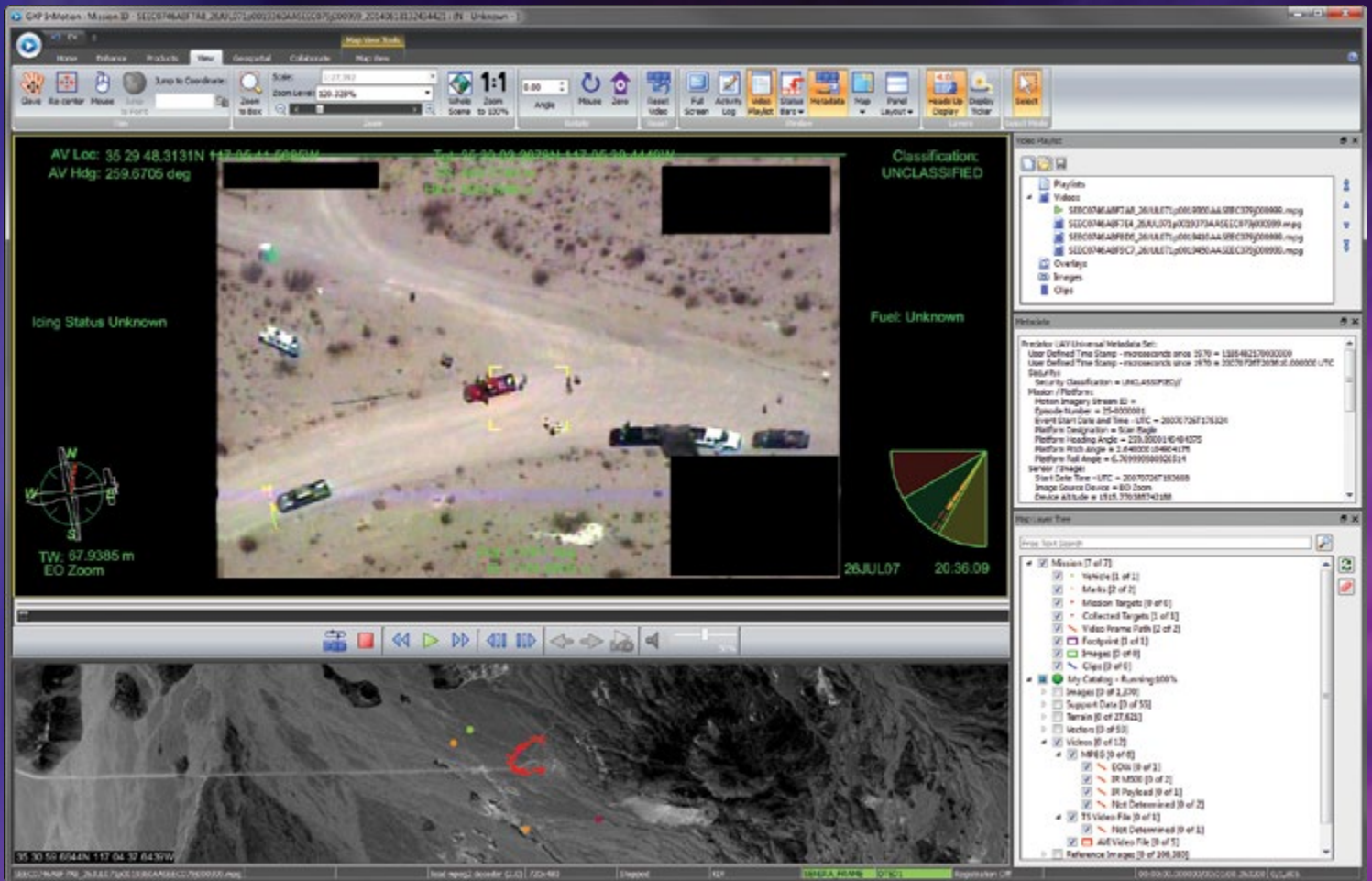
PRODUCT CREATION

Create and disseminate customized, georeferenced products with GXP InMotion's full range of video editing and product creation tools.

Edit video

Use the built-in video editor to intuitively join or trim clips, cut segments, and fine-tune video footage for final output.

Insert images into the video timeline as transitions, title slides, or still frames that display for a user-determined duration.

Remove unwanted details from the video metadata with redaction tools.

Export to standard video formats.

Create customized products

Quickly create a polished video product with a template from the template gallery, or create a custom template with SOCET GXP.

Superimpose video metadata on the final product (e.g., AV heading and position, sensor type, bearing, elevation, date/time, and more) with the heads-up display (HUD).

Publish

Produce a wide range of products from simple screen captures to georectified NITFs, to rich video products that combine still images with multiple video clips.

Output Event Log entries for further analysis and forensic evaluation.

Export to SOCET GXP and create extended products including full-frame NITFs, mosaics, and video/sensor frame features.

A POWERFUL, SEAMLESS, COMPLETE VIDEO ANALYSIS WORKFLOW

The GXP InMotion Video Suite integrates seamlessly with the other applications in the GXP product line, leveraging the power of GXP Xplorer's search and discovery, and SOCET GXP's unparalleled accuracy, sensor modeling, and image exploitation capabilities.

Locate video assets across an enterprise, no matter where the data is stored or geographically located, with GXP Xplorer. Perform video analysis tasks with GXP InMotion and export the finished products to SOCET GXP for even more advanced analysis, annotation, product creation, and delivery.

GXP InMotion also integrates with Google Earth™ to track moving objects or vehicles and provides sensor position, field of view, and enhanced situational awareness.
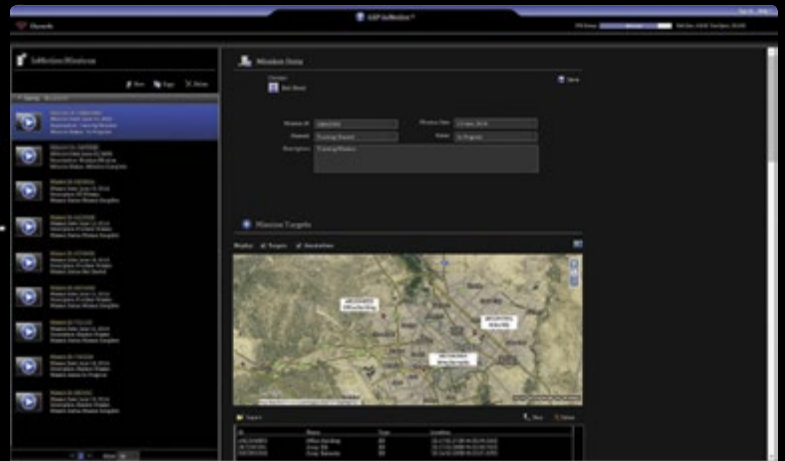
INGEST AND SERVE

Video feeds are ingested by the GXP InMotion Video Server.

Administrator-specified downlinked video feeds are automatically monitored for new video footage. The video is ingested, analyzed for accuracy, and, if necessary, fed through a registration process where the data is triangulated. It is then simulatenously stored and re-streamed to analysts working on the GXP InMotion Video Desktop application.
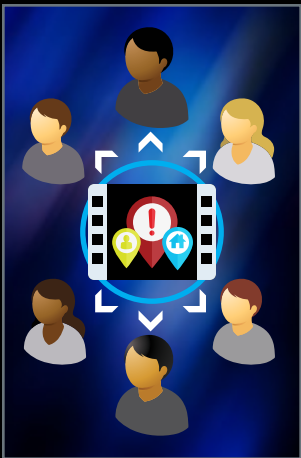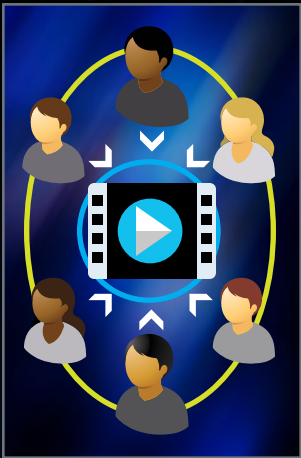
CATALOG AND SHARE

The GXP Xplorer discovery engine catalogs video files in place and creates rich database entries.

Marks made via the desktop application are stored on the server and accessible to all analysts in the organization. Individuals can search across all related data marks made by others also working on the video, including points of interest, on/off target points, and other significant events.

ANALYZE AND COLLABORATE

Video is analyzed with GXP InMotion Desktop in a collaborative environment.

The Mission Manager configures details such as product save locations, keywords to search, and targets to be shared by all members of the mission workgroup. Individuals are connected to other analysts on the same mission and perform analysis collaboratively within the context of the workgroup.

EXPLOIT AND PUBLISH

Publish custom products directly from GXP InMotion, or export to SOCET GXP for advanced exploitation and publishing.

SOCET GXP's geopositioning allows the fusion of video data with other images and geospatial data types, such as terrain and features. Data can be viewed and exploited in a 2-D/3-D viewer; all functionality available for image analysis can be applied to video still frames.

Thousands of hours of video are processed and exploited every day by video analysts around the world who face the challenge of reporting information accurately, in real-time, while executing live video missions.

Powerful video processing units ingest, clean, enhance, and serve the video to multiple analysts across various sites, who urgently await its arrival to track the mission and deliver actionable intelligence products.

Together with the GXP suite of products, the GXP InMotion Video Suite creates an optimized video analysis workflow that allows analysts to collaborate and achieve maximum accuracy in the minimum amount of time.

ADD TEXT
AND GRAPHICS

LOREM IPSUM   LOREM IPSUM   LOREM IPSUM

ADD LOGO

PPT   JPEG   PDF

About BAE Systems

BAE Systems is a global provider of software for image analysis, geospatial production, mapping, 3-D visualization, video analysis, and photogrammetry servicing the defense and intelligence communities, and commercial markets. BAE Systems has experience in developing GIS tools delivering a full range of products and services for air, land, and naval forces, as well as advanced electronics, security, information technology solutions, and support services.

For more than 40 years, BAE Systems has been a trusted supplier of imagery and geospatial products with experience and depth in managing, implementing, and developing products with a wide variety of industry-standard applications that support geospatial and related tradecrafts.

Geospatial eXploitation Products (GXP®)

The BAE Systems GXP business develops powerful software tools used to deliver highly accurate geospatial and intelligence data. Based in San Diego, Calif., GXP markets, sells, and supports licensed, commercial off-the-shelf software capabilities, and customized geospatial technologies including research and development. GXP provides direct worldwide sales and technical support along with free training at regional centers around the globe.

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