Jagwire
A complete geospatial content management solution

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Jagwire is an end-to-end software solution allowing you and your entire organization to use geographically contextual data from satellite, airborne or ground assets to solve real-world problems.
Tenets

• Place your cloud nodes as close to the sensor and data sources as possible.

• **Leave** the data where it was collected.

• Move the data only **when** it is required.

• Move the data only to **where** it is needed.

• Move only the **amount** of data necessary.

• When possible **exploit** the data and only disseminate the intelligence products.

*Everything and everyone within the Enterprise can be a sensor and a consumer*
Why?

**Single Source**
- There is a need in the community from first responders to warfighters and analysts to access multiple sources and modalities from a single source.

**Easy Access**
- The users require quick and efficient data discovery from any place in the world, even in austere environments.

**Rapid Access**
- Users cannot afford to wait days or even hours to receive the data…especially when lives are dependent on it
Why?

**Interoperability enabling Data Integration**
- The integration of the data to provide the complete picture enhancing situational awareness.

**Efficient Workflows**
- Gain efficiencies by supporting all aspects of a mission in a seamless workflow: planning, exploitation, extracting actionable information, reporting

**Decision Making**
- Ability to make confident, intelligent data-driven decisions rapidly to solve real-world problems
How?

HOW?
Single Source

There is a need in the community from first responders to warfighters and analysts to access multiple sources and modalities from a single source.

Jagwire ingests multi-source, multi-modal data and serves this data to first responders, to warfighters and analysts from a single source, whether that be from an enterprise, ground or tactical system.
Easy Access

The users require **quick** and **efficient** data discovery from any place in the world, even in austere environments.

- **Search and Discovery**
  - A simple map view to run queries with additional filters to fine tune search results)
- **Rapid Dissemination**
- **Scalable**
- **Mission Ready**
- **Federated Architecture**
- **Open Standards**
- **Analytics**

Web-enabled user interface provides rapid access to mission critical information when and where it’s needed.
Easy Access

Jagwire™
The End-To-End Solution

- Search and Discovery
- Dissemination
- Scalable
- Mission Ready
- Federated Architecture
  - Jagwire's Federation extends the reach of a user by providing access to geospatial data from disparate sources anywhere in the world.
- Open Standards
- Analytics

Federated architecture improves efficiency and lowers cost by minimizing data transfer.
Rapid Access

Jagwire
The End-To-End Solution

- Search and Discovery
- Dissemination
  - Jagwire enables rapid discovery and sharing of critical intelligence – even in austere environments.
- Scalable
- Mission Ready
- Federated Architecture
- Open Standards
- Analytics

Users cannot afford to wait days or even hours to receive the data…especially when lives are dependent on it.

Use the most efficient way to move data with JPIP (JPEG 2000 Interactive Protocol) and on-the-fly video encoding.
Interoperability enabling Data Integration

The integration of the data to provide the complete picture enhancing situational awareness.

- Search and Discovery
- Dissemination
- Scalable
- Mission Ready
- Federated Architecture
- Open Standards
  - Jagwire is not only interoperable but also easily integrated into existing capabilities.
- Analytics

Built on open standards allowing for seamless interaction with other systems and applications
Efficient Workflows & Decision Making

Supporting all aspects of a mission in a seamless workflow to make confident, intelligent data-driven decisions to rapidly solve real-world problems.

- Search and Discovery
- Dissemination
- Scalable
- Mission Ready
- Federated Architecture
- Open Standards
- Analytics
  - Beyond situational awareness, Jagwire’s capabilities can be extended by providing server-side analytics through ENVI Services Engine.
From military to commercial applications, Jagwire is optimized to deliver on all networks and devices, from data centers to mobile devices.

- Search and Discovery
- Dissemination
- Scalable
- Mission Ready
  - Jagwire is ready now. It’s a proven technology currently operational in theater and all over the world.
- Federated Architecture
- Open Standards
- Analytics
Questions?

Stop over for more information.
Benefits of Jagwire

- For the End User: Access to information previously unavailable
  - Instant access to new collections.
  - Provides fast access to data that would otherwise not be available to the low bandwidth forward-deployed user.
  - Does not compromise Image Quality or reduce access to big data collections.
  - Client software is via an automatic download, using JAVA Web-Start.
  - Access to multiple modalities and collections of data from a single interface.
  - Ability to cross-cue from one data modality to another for better situational awareness.

- For the IT Manager: Lowest Total Cost of Ownership
  - Commercial software allows for lower costs and rapid deployment.
  - Open interfaces enable quick integration into existing systems to help complement or augment operational capabilities, reducing costs associated with migrations, training and deployments.
  - Multiple data modalities and federation eliminates reliance on several disparate systems, improving efficiency and lowering costs.
  - Provides the ability to support and serve more users with existing infrastructure.
Jagwire™ Overview

• Jagwire is an EAR software capability for content management and dissemination of geospatial data supporting both real-time and archived data assets.

• Jagwire is a software system for the ingest, normalization, compression, storage, cataloging, search & discovery, federation, exploitation, and dissemination of geospatial data and value added geospatial data products.

• Jagwire enables the management and rapid movement of Still Imagery, Full Motion Video (FMV), Wide Area Motion Imagery (WAMI), and LiDAR point clouds to a broad spectrum of users including users in low-bandwidth, high latency environments.
Jagwire Community of Users

- Jagwire provides enterprise level data management and time critical ISR data dissemination to soldiers, airmen, marines, sailors, first responders and public safety officials worldwide.

- Army PM-UAS Program
- HAF/A2I/480th ISRW
- USAF EUCOM/USAFE
- NGA Expeditionary Architecture (NEA)
- AFSOC (2nd and 3rd SOS)
- AGC (Army Geospatial Center)
- US Army INSCOM and SOF
- Task Force ODIN
- JWAC: Gorgon Stare / Blue Devil
- Commercial Data Providers
- Commercial UAV Providers
Interoperability enabling Data Integration

- **ENVI Services Engine (ESE)**, providing high-end image analytics and image exploitation exposed as Web Services in the Enterprise.
- **MotionDSP- Ikena**, providing real-time, GPU-accelerated image processing and image enhancement software for Full Motion Video.
- **ESRI – Arc GIS**, Jagwire can federate with ArcGIS servers so that ArcGIS can be configured as another Federated Node in the Enterprise.
- **ISS – Individual Soldier System**, Jagwire paired with Exelis Night Vision Goggles and tactical radios to provide situational awareness to the soldiers on the battlefield.
- **Google Earth**, Enables Google Earth to act as a COP (common operation picture) providing increased situation awareness and direct access to live and achieved videos.

The Jagwire software is built on OGC standards, which allows Jagwire to interact seamlessly with many other Systems, Applications and Web Services.
Jagwire Summary

• Delivers an integrated experience for the ingest, processing, discovery, dissemination and exploitation of GEOINT data through standard web services
• Enables higher confidence decisions
• Extends the reach of critical GEOINT data
• Provides unparalleled access to FMV data
• Facilitates information sharing
• Scales across multiple platforms
• Deploys quickly and affordably into existing infrastructure
• Trusted and proven in theater
Integrated Soldier System (ISS)

• The **Integrated Soldier System** provides the critical capabilities of voice, video and data integrated into the i-Aware TM NVG.

• ISS enables commanders to view what soldiers are seeing in their NVG’s, do Blue Force tracking, and send instructions like texts, alerts or images to the soldier that are all delivered directly to the goggle’s display in a light and sound secure way.

• Leverages Harris capabilities across the i-Aware TM-NVG, SpearNet-VE, & Jagwire platforms to provide a comprehensive soldier solution to meet the needs of today’s war-fighter and Command and Control (C2) systems and to fully enable this new critical capability.

• This solution provides an integrated smart phone interface to provide access to key Apps that can provide valuable tactical information to the soldier through the light secure i-Aware OLED display.
The diagram below shows an overview of a tactical implementation of how the Integrated Soldier System would be deployed.
Data Modalities

• Still Imagery
  NTM, Commercial, OBC, PeARL, Buckeye, SYERS, and other sources from satellites, airborne and ground systems, including detected SAR, MSI and HSI data.

• WAMI (Wide Area Motion Imagery)
  Airborne systems including Gorgon Stare and CorvusEye™.

• FMV (Full Motion Video)
  Many sources from either manned or unmanned systems including Predator, Shadow, Hunter, and Gray Eagle platforms.

• LiDAR Derived Products and LiDAR Point Clouds
  DTM’s, DSM’s, and intensity images created by the Army Geospatial Center (AGC) and NGA, as well as LiDAR Point Clouds.
Search & Discover

• The ingested data is cataloged and managed
• Real-time, full enterprise visualization
• A simple map view to run queries, with additional filters to fine tune search results.
• Filters allow the user to dial in to their search and discover data based on specific criteria
  • Temporal
  • Keywords
  • Tags
  • Platform
  • Asset type
  • Nodes within the federation
• From one single user interface, users can access data from across the globe ensuring mission success.
• Support all aspects of a mission in a seamless workflow: planning, exploitation to extract actionable information, reporting.
Unparalleled access to Full Motion Video

- Auto-detection prevents system availability issues from misconfiguration or source changes—only input source and output destination need to be defined
- Near real-time delivery for live collections
- Timeline displays a view of the entire mission to quickly jump to other sections, cut out sections into a new player, or create clips on the fly to be downloaded
- Compare past and present by tiling and playing archived content of an area of interest alongside a live feed
- Add context and enhance understanding with annotations and the associated chat text
- Native support for adopted standards including Motion Imagery Standards Board (MISB), NATO (STANAG) and commercial standards