



PTFS Knowvation Technical Brochure

Knowvation: Geospatial Content Management System



geospatial intelligence



"The combination of full-text and geospatial queries sets Knowvation GS apart from many other geospatial content management systems. The geospatial search and discovery capability has made the system a trusted all-source tool relied upon by Government agencies with large GIS and satellite imagery archives."

— Rob Lundahl, VP, Automated Systems Division, ATR Corporation

Knowvation GS™, a geospatial content management system (GeoCMS), provides discovery, exploitation and dissemination advantages, enhancing efficiency. The system improves productivity by giving users more time to analyze information, make better decisions and create high quality intelligence products. The combination of powerful search and geospatial tools allows Geospatial Analysts to explore connections between maps, layers and their corresponding datasets.



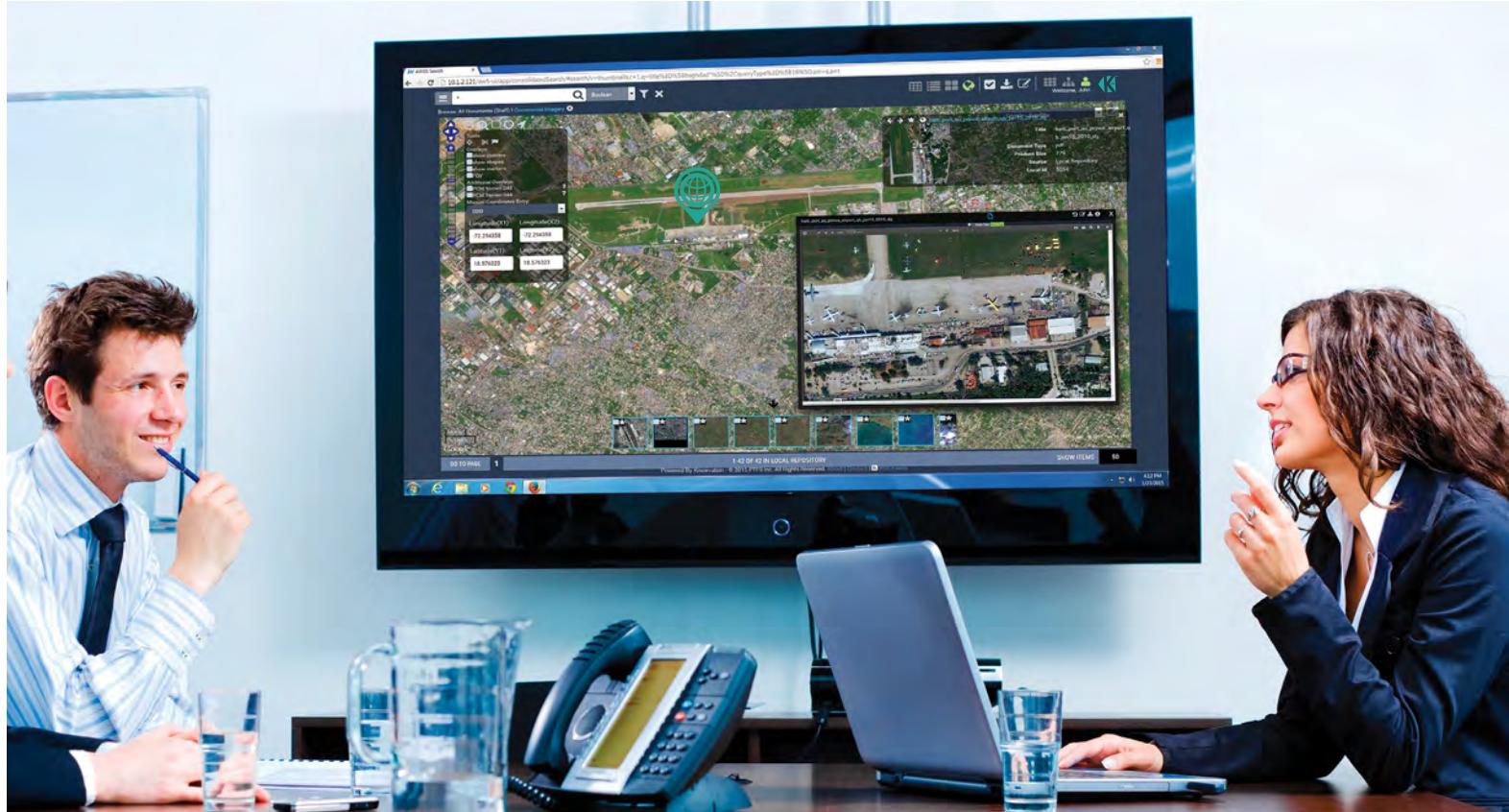
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KnowvationTM

geospatial intelligence



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Knowvation GS at a Glance

Overview

Knowvation GS is built on top of the Knowvation enterprise Content Services Platform (CSP). Knowvation GS combines geospatial data management with a browser-based search interface. The system is user friendly and intuitive, making it easy to find GIS datasets, images, maps, shapefiles, and all-source documents (i.e., Word, video, PDF) stored on a desktop, servers or across the Web using a text-based or graphical geospatial query. Knowvation GS is integrated with leading basemap technologies which provides a graphic method for displaying the search results. Geospatial Analysts utilizing Knowvation GS for discovery and retrieval of geospatial data and products increase their productivity by reducing the time spent searching and gathering information.

How Knowvation GS Works

Knowvation GS is a Web-based solution that can be accessed through any Web browser. It is simple to install and easy to configure, making set up very straightforward in existing complex IT environments. Knowvation GS has GUIs to make loading data onto the system quick and easy. The system supports ingesting files or indexing files in place. A digital object catalog (Federated/Index) is built irrespective of where data is stored. Users can search with the following methods: Pattern (fuzzy logic), Concept (natural language), and Boolean (standard search) geospatial search. All search methods can be used on full-text in digital documents, in key metadata fields or a combination of both.

Knowvation GS

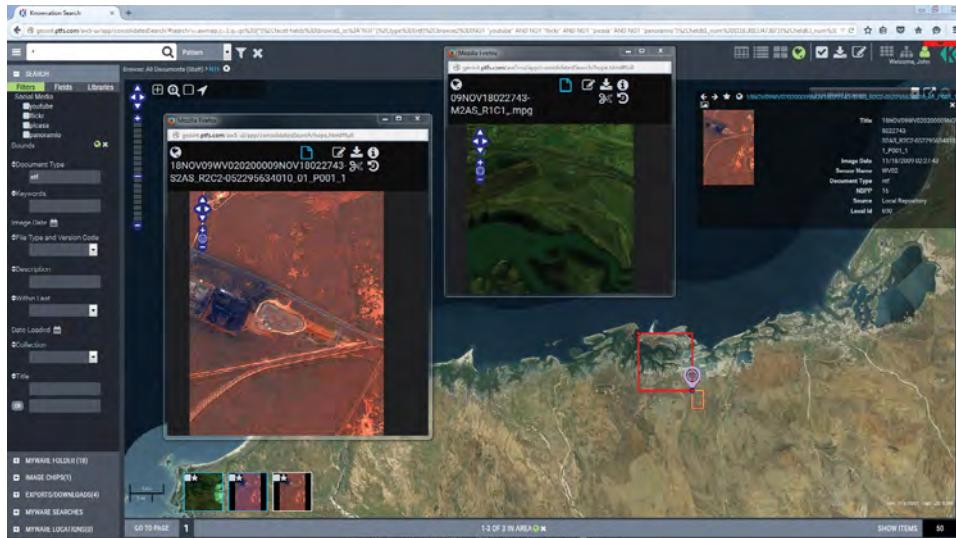
Tools and Functionality

Unique features and benefits of Knowvation GS include:

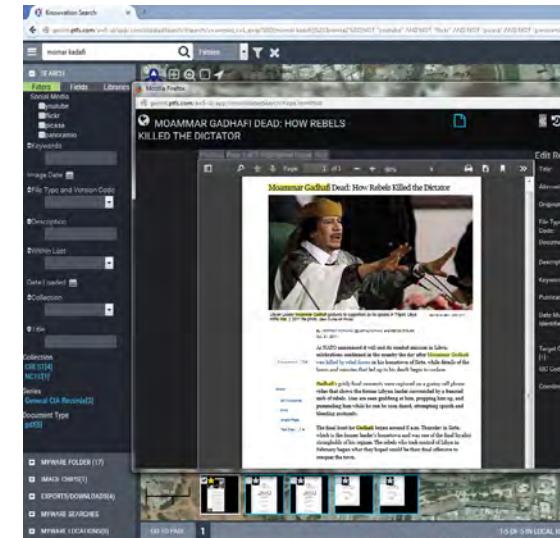
Easy to use display

- Toolbar provides quick access to tools and functions, like chipping, bounding box search, zoom/rotation, etc.
- Display image extents for search results that meet specified criteria
- Select from a choice of alternative base maps with access to software specific display manipulation tools

- Shows thumbnail and key metadata fields
- Shows shapefile with overlay
- Single click to display metadata fields for each object, plus more tools for image display
- Utilize the keyword search box to further refine search (searches full text of documents, textual annotations on imagery and metadata)



Geospatial View



Metadata Editor



Additional Knowvation GS features include:

Powerful Search Options

- Powerful and effective search tools are provided for words, concepts and phrases
- Four search mode options: pattern (fuzzy text), concept, Boolean, and exact match
- Efficient method to limit full text search using metadata
- Integrated search/browse or browse/search bidirectional filter
- Web-based modules are Section 508-compliant

OCR on Ingest

- Images are OCRed upon ingest
- Scanned PDFs are indexed, allowing text inside files to be queried
- Works with scanned images and photos captured with a mobile device

Audits and Reports

- Standard and customizable audit reports provide detailed information on numerous metrics
- Reports can be created or modified to provide additional information as needed

Technical Requirements

- Application Servers—JBoss
- Browsers—Internet Explorer 11 and later, Mozilla Firefox 50.0 and later, Google Chrome 48 and later
- Databases -- MS SQL Server 2012 R2, MS SQL Server Express 2012 R2, MS SQL Server 2016 R2, MS SQL Server Express 2008 R2 (packaged w/installation)

Metadata Editing

- Metadata records associated with each document can be enhanced by adding further detail and applicable information via a user-friendly GUI

Records Management

- Built in version control capability
- Stores versions of both digital objects and metadata when modifications are performed

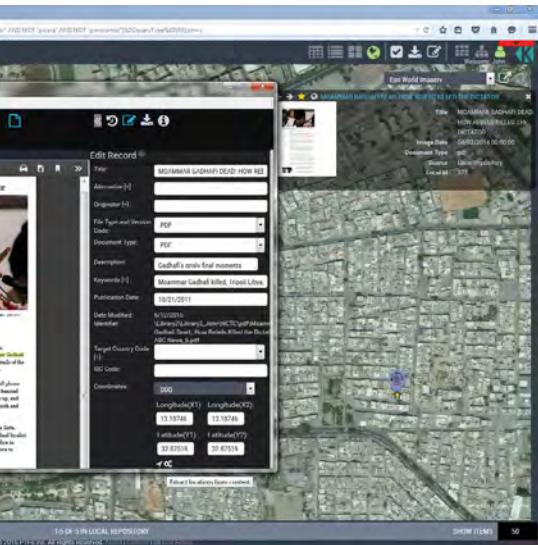
Foreign Language Support

- Supports multiple foreign languages
- Supports cross lingual search (the ability to search in one language while retrieving the results in another)

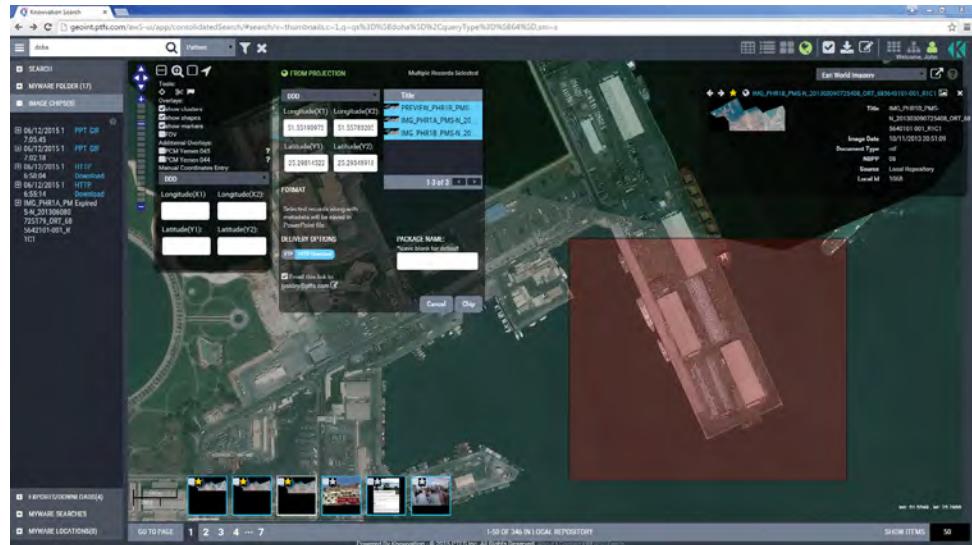
Security

- Integrated with Active Directory to create groups with different levels of access
- Index Level Security: access control to full index of data supports multilevel network security
- Document Level Security: record level security supporting the “need-to-know” down to an individual digital object

- Server Operating Systems -- Windows Server 2012 Standard, Windows Server 2012 R2 Enterprise Edition, Windows Server 2016 Standard, Window Server 2016 R2 Enterprise Edition



Metadata Editor



Chipping View



Knowvation GS Capabilities

By supporting the full complement of product types and formats, Knowvation GS can give organizations the control they need over their diverse repository of GEOINT. Knowvation GS handles a range of data and media including: exploited imagery, unexploited imagery, commercial imagery, ISR video clips, geospatial products, AGP products, handheld pictures, and unstructured data. Below are several of the various product types and data formats that Knowvation GS supports:

Product Types and Data Formats

- National Imagery Transmission Format (NITF) 2.0, 2.1
- Keyhole Make-up Language (KML)
- Extensible Mark-up Language (XML)
- HRTe Level 3 GeoTIFF
- Shapefiles
- ADRG, CADRG
- Opaque (files of unknown type with metadata separate)
- NATO Secondary Imagery Format (NSIF) 1.0
- JPEG File Interchange Format (JFIF) & JPEG 2000
- Esri™ Personal and File Geodatabase
- Vector Product File (VPF)
- MPEG-2 & H.264
- GeoPDF
- AAF
- DTED 1 & 2
- DNC
- VMap 0, 1, 2
- TIFF and GeoTIFF
- All JPEG formats

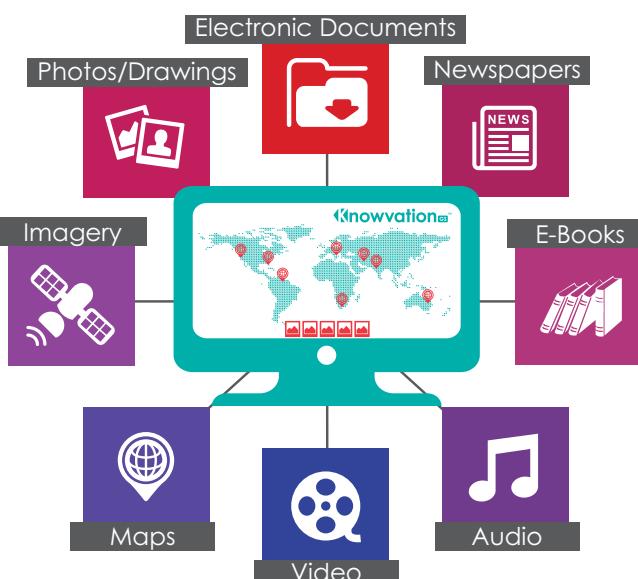
Summary of application capabilities

- Commercial off-the-shelf (COTS) software
- Supports hundreds of formats
- Highly tuned Solr search engine
- Supports multiple foreign languages
- Access and privilege secured
- Standard and customizable report functions
- Industry standards based architecture
- Scalable and flexible platform
- Advanced metadata authoring tools
- Section 508 compliant

About PTFS

With over twenty years of experience, PTFS offers customized and proven content management solutions. Our core products include Knowvation® and Bibliovation™. To help organizations focus on their missions, PTFS offers highly technical teams that streamline the process to implement and maintain custom solutions that best meet their needs.

Get the Power.



Connect with us



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