ERDAS APOLLO 2009

How to manage/catalog/share Raster & vector data
Here we are; Again...

Leica Geosystems Geospatial Imaging is now ERDAS, Inc.

- **ERDAS, Inc. Created**: 1978
- **Leica Geosystems acquires ERDAS, Inc.**: 2001
- **Hexagon purchases Leica Geosystems and maintains Leica name**: 2005
- **Acquired ERMapper**: April 2007
- **Acquired Acquis, Inc.**: May 2007
- **Acquired IONIC**: April 2008
- **ERDAS is Back...**
Our changing value proposition

ERDAS’ Geospatial Business System

Author
Manage
Connect
Deliver

Capture Source Content

OGC, ISO & IT Interoperability

Powering the Geospatial Information Value Chain

Geospatial Data
Produce and Sell Data

Value Chain

Information
Buy & Consume Information

Satellites, RC30, ADS40
ALS50, HDS, Mobile

ERDAS IMAGINE
ER MAPPER Pro LPS

Apollo
Red Spider Suite
Image Web Server ADE

ERDAS TITAN GeoHub

ERDAS Market Place

OGC, ISO & IT Interoperability

Geospatial Business Platform

Decision Support Business Systems

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The Bounding Box problem!

A User should be able to draw a **bounding box** on a map, declare a slice of time, and be able to discover and access all the **available, relevant & authorized information within that area.**

**Sensor Data**
EO, Spectral, Radar, LiDAR, Infrared, FMV, in situ, GPS, etc.

**Geospatial Data**
Maps, Imagery, Features, Terrain, Place Names, Buildings, Infrastructure, Roads, Political Boundaries, Hydrographic, Geodetic, etc.

**Location References in Structured Data**
Relational Databases, Travel Itineraries, Financial Transactions, Corporate Data, Personnel Records, Statistical Data, etc.

**Location References in Unstructured Data**
News Reports, Publications, Manifests, Internet, World Wide Web, Audio, Video, etc.

**Access from Any Device**
Desktop, Laptop, PDA, Wireless, Smartphone
Interest of an interoperable solution

Cartography

Whatever the source and the format of the geospatial information, ERDAS APOLLO will allow the integration of these data in a unique map.
If we were in the pizza business...

Flour Service
Cheese Service
Tomato Service
Pizza Service

we could provide pizza as a service!
But we are in the geospatial business
Ionic RedSpider Core Products

Develop your Portal OGC/ISO Applications
- Discovery
- Mapping
- Explore
- Analyze

Expose your contents through OGC/ISO Web Services
- WMS – WFS – WCS
- SLD
- Gazetteer – Annotation Routing

Publish and Discover your OGC/ISO WebServices using a Catalog
- CS-W - ebRIM - ebXML
- Resource-harvesting

BIND

FIND

OGC/ISO Interoperable Bus

PUBLISH
Network centric Vision...

...through interoperable Service Oriented Architecture
From desktop to distributed architecture

HTTP or Enterprise bus

- Model
- Data
- Server 2
- Server 3
- Server 4
- Server 5
- Client 2
- Client 3
- Client 4
- Client 5
From desktop to interoperable distributed architecture

HTTP or Enterprise bus

Map internal Data Model to interop Data Model

Expose interop Data Model to consumers & application developers

Data Conversion / Migration
(proprietary to proprietary)
.shp, .dwg, .dxf, .mil.mif

Data

model

Standard interface

Client 1
Client 2
Client 3
Client 4
Client 5

Server 1
Server 2
Server 3
Server 4
Server 5
Online Geo-services

Distributed Mapping or geo-enabled services to present and analyze information from "Geo-Servers" using different vendors technology and rendering methods.

Web Geo-Services

RDBMS / GIS / ‘non-GIS’ = Features Servers ➔ Objects ➔ GML/XML ➔ Rendering

Topo = Map Server

Imagery = Map Server

BaseMap = Map Server

Network = MapServer
ERDAS in Standards

ISO:
Editor / Contributor / Project Leader of ISO-19000 specifications (TC211) (19128, 19139, 19134, ...)
Head of Belgium delegation at ISO TC211 (Vincent Dessard, Ionic Software)
Liaison officer between ISO TC211 and United Nations (Vincent Dessard, Ionic Software)

Open Geospatial Consortium - OGC:
Technical Member of the OGC since 1999
Co-author of multiple OGC specifications (WMS, WFS, WCS, Catalog, Context, GML, ...)
OGC Planning Committee seat since 2002 (Vincent Dessard, Ionic Software)
Chair OGC Europe Group since 2003 (Vincent Dessard, Ionic Software)
OGC Board Of Directors member since 2005 (Chris Tucker, Ionic Enterprise)
OGC Board Of Architecture since 2006 (Bernard Snyers, Ionic Software)
ERDAS APOLLO
Connecting Earth to Business

Oil & Gas  Environmental Monitoring  Transportation  Defense

Agriculture  Utilities  Emergency Management  Forestry  Real Estate

Connecting Earth based data and information throughout an organization
A Geospatial Business System that Unites People to an Organization’s Geographic Data and Information

ERDAS APOLLO

www

ESRI

ORACLE

ERDAS
ERDAS APOLLO is a Geospatial Business System for managing and serving geographic information.
ERDAS Geospatial Enterprise Platform
Find, Describe, Catalog & Deliver Geospatial Data, Web Services & Geo-Processing
What is ERDAS APOLLO 2009?

• A new suite of enterprise products
• A Geospatial Business System for managing and serving geographic information, which includes vectors, imagery, terrain and maps

• ERDAS APOLLO 2009 consists of the following products (to be released in October 2008):
  
• ERDAS APOLLO Server
• ERDAS APOLLO Image Manager
• ERDAS APOLLO Solution Toolkit
Who is APOLLO for?

Organizations that have:

• Large amounts of GIS, remote sensing and photogrammetry data
• Data distributed across multiple departments, offices and regions
• Redundant data located everywhere
• Problems finding the data they need, when they need it
• Multiple GIS, CAD, remote sensing, photogrammetry systems

Organizations that need to:

• Deliver data over the internet for others to find, view and use
• Integrate their GIS data with business data and business processes
• Build a web portal so others can view their geospatial data
• Collect and update their GIS vector data over the internet
What does ERDAS APOLLO Do?

ERDAS APOLLO allows you to:

• Deliver your geospatial data over the internet

• Manage and serve your vector data, image data, terrain data and map data to any desktop GIS, CAD and web application

• Build a web map portal so people can find your data, view your data and use your data

• Build custom geo-web applications
ERDAS APOLLO 2009

The Solution to Geo-enable your Enterprise

• A Geospatial Business System enabling enterprises to manage and distribute geospatial data to a large audience

• Allows enriching and abstracting the complexity of geospatial data, revealing its value and transforming it into useful business information for the enterprise

• Open, interoperable, customizable and extensible: a comprehensive IT system to geo-enable your business
Benefits
Interoperability and Compatibility

- Supporting numerous geospatial data formats, ERDAS APOLLO 2009 seamlessly integrates with most existing GIS environments.

- Compliant with OGC and ISO standards, ERDAS APOLLO 2009 also interacts perfectly with external systems and applications.

- Proven technological standards such as JavaEE also ease ERDAS APOLLO 2009’s integration into IT environments, including security-wise.
Benefits
Performance and Scalability

• ERDAS APOLLO 2009 is designed to fulfill the requirements of the most demanding enterprises

• Supported by the appropriate hardware, ERDAS APOLLO 2009 can deliver terabytes of vector and image data to hundreds of concurrent users

• Fully scalable, ERDAS APOLLO 2009 smoothly supports the extension of your Geospatial Business System with improved performance
Benefits

Business Solution Approach

• Dedicated to understanding your business needs, our Services teams and ERDAS partners can leverage ERDAS’ expertise to create the customized solution meeting your business case

• Versatile and robust, ERDAS APOLLO 2009 is designed to support your business approach
ERDAS APOLLO 2009 - Apr 09

One Geospatial Business System

**ERDAS APOLLO Solution Toolkit 2009 (EAST)**
Advanced toolkit for building sophisticated web clients/portals and geospatial applications
(includes iGLT client)

**ERDAS APOLLO Image Manager 2009 (EAIM)**
Offers the ability to discover, browse and access large volumes of imagery
(includes AIM client)

**ERDAS APOLLO Server (EAS)**
Supports an intuitive workflow to find, describe, catalog and deliver/edit features (WFS/WFS-T), maps (WMS), images (WCS); includes SOAP/WSDL.
(includes APOLLO web client)
## ERDAS APOLLO Suite - Functionality Matrix

<table>
<thead>
<tr>
<th>ERDAS APOLLO Solution Toolkit (EAST)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OS</strong> : Windows, Solaris, Linux</td>
</tr>
<tr>
<td><strong>Application Server</strong> : JBoss, Tomcat, Oracle Application Server, WebLogic, Resin</td>
</tr>
<tr>
<td><strong>Java APIs</strong> : Remote JAVA APIs to consume OGC web services, connector APIs to build custom data and metadata connectors</td>
</tr>
<tr>
<td><strong>Web toolkit widgets</strong> : OGC/ECWP services discovery/consuming, layer management, geometry edition (WFS-T), vector data filtering/export (WFS), dynamic and temporal WMS support, catalog search, upload/save Shape/GML/image files</td>
</tr>
<tr>
<td><strong>Documentation</strong> : Developer guide, javadoc, javascript doc, samples, skeletons</td>
</tr>
<tr>
<td><strong>iGLT Web client</strong> : Imagery discovery/search/consuming, navigation, electronic light table</td>
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<tr>
<th>ERDAS APOLLO Image Manager (EAIM)</th>
</tr>
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<tr>
<td><strong>OS</strong> : Windows</td>
</tr>
<tr>
<td><strong>Application Server</strong> : JBoss</td>
</tr>
<tr>
<td><strong>DB</strong> : Oracle, PostgreSQL</td>
</tr>
<tr>
<td><strong>Imagery</strong> : GIO Decoders, GDAL 1.5, Oracle Georaster</td>
</tr>
<tr>
<td><strong>Services</strong> : WMS, WCS, Imagery Catalog (CS-W ebRIM), ECWP/JPIP streaming service</td>
</tr>
<tr>
<td><strong>UIs</strong> : Data Manager (remotely manage/secure imagery, crawlers)</td>
</tr>
<tr>
<td><strong>AIM Web client</strong> : Imagery discovery/search/consuming, navigation, clip/zip/ship</td>
</tr>
<tr>
<td><strong>OGC/ISO</strong> : WMS 1.3, WCS 1.0, SLD 1.0, WMC 1.0, ISO 19139 1.0, SOAP/WSDL</td>
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<td><strong>DB</strong> : Oracle, PostgreSQL</td>
</tr>
<tr>
<td><strong>Imagery</strong> : GIO Decoders (Windows only), GDAL 1.5, Oracle Georaster, ArcSDE Raster</td>
</tr>
<tr>
<td><strong>Vector</strong> : Shapefiles, GML, MID/MIF, Oracle Spatial, PostGIS, ArcSDE</td>
</tr>
<tr>
<td><strong>Services</strong> : WMS, WCS, WFS, WFS-T (HTTP, SOAP/WSDL), Service Catalog (HTTP)</td>
</tr>
<tr>
<td><strong>UIs</strong> : Style Editor (data styling), Administration console (remotely manage WCS, WFS, WMS services), Catalog console (remotely manage Catalog)</td>
</tr>
<tr>
<td><strong>APOLLO Web client</strong> : OGC/ECWP services discovery/search/consuming, navigation, vector data selection/info/edition/filtering/export</td>
</tr>
<tr>
<td><strong>OGC/ISO</strong> : WMS 1.3, WCS 1.0, WFS(-T) 1.1, SLD 1.1, WMC 1.1, KML 2.1.0, ISO 19139 1.0, GML 3.1.1, GeoRSS 1.0.0, Filter 1.1</td>
</tr>
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• ERDAS APOLO 2009
• ERDAS APOLO Server
• ERDAS APOLO Image Manager
• ERDAS APOLO Solution Toolkit
ERDAS APOLO Server

A new product

- ERDAS APOLO Server integrates RedSpider Web components with new technologies to provide enhanced Spatial Data Infrastructure (SDI) workflow

- New catalog component allows OGC WMS, WFS and WCS services harvesting to provide management and discovery

- The IMAGINE raster decoders provide additional raster support and improves performances
ERDAS APOLLO Server

Publish, Catalog and Consume Raster and Vector Data

- Setting-up OGC/ISO-compliant web services, ERDAS APOLLO Server catalogs and delivers all the geospatial data of your enterprise over the web, via a user-friendly interface.

- Allowing publishing, cataloguing and consuming geospatial data, ERDAS APOLLO Server implements the basic functionalities of a SDI.

- ERDAS APOLLO Server is the core module of any APOLLO solution: self-sufficient for meeting common use cases, it can be completed by the other modules of APOLLO 2009 to fulfill the most sophisticated business workflows.
ERDAS APOLO Server

Key Features

New rich web client to consume APOLO, ECWP and any third-party OGC services

- Discover data: catalog search, service discovery, local data upload
- Manage and configure map contexts (WMC)
- Visualize temporal and dynamic WMS
- Edit, filter and export vector data
ERDAS APOLLO Server

Key Features

Workflow links the components:

• Easier service setup (WMS, WCS, WFS, WFS-T, Catalog)
• Easy service harvesting and management
• Better Web Map Context support
• Improved style management
Benefits

Interoperable and Scalable platform

• The core component of ERDAS APOLLO 2009, ERDAS APOLLO Server meets the requirements of enterprises operating in today’s fast-moving environment

• Based on the open standards of the Open Geospatial Consortium (OGC) and the International Standardization Organization (ISO), ERDAS APOLLO Server is an interoperable platform allowing enterprises to share their data internally and with any third party
Benefits
Extensive Support of Geospatial Data Formats

• ERDAS APOLLO Server natively supports numerous vector and raster data formats

• The optional ERDAS APOLLO Solution Toolkit can extend these supported capabilities to new, custom or classified formats at the source of your workflow

• ERDAS APOLLO Solution Toolkit also allows the creation of customized web user clients, completing this end of your workflow
Benefits

Streamlined Workflow for Vectors and Images

- ERDAS APOLLO Server implements two complete workflows for image and vector data

- The vector data workflow includes the ability to style, visualize, export, edit and filter vector data

- The imagery workflow provides styling, visualization and export of images

- With ERDAS APOLLO Image Manager, the imagery workflow’s performance and data management capabilities can be dramatically enhanced
APOLLO Server Example Applications (1)

Urban Planning and Cadastre

• Cadastre employees go into the field to verify that their database is up-to-date and potentially collect vector data directly on their laptop.

• On the field, cadastre employees can remotely edit vector data attributes and geometry using APOLLO Server web client.

• Cadastre employees can also work offline, by exporting the area’s data onto their laptop:
  – With the clip/zip/ship of APOLLO Image Manager for imagery data
  – With the filter/export capability of APOLLO Server for vector data
APOLLO Server Example Applications (2)

Cable and Pipe Operators

• Gas and electricity providers, telecom operators and water distribution operators install and maintain equipment located under the roadway

• When doing their individual works, they have to take the other installations into account, for security reasons and for not disrupting essential services

  – Publishing their data via OGC web services using ERDAS APOLLO Server, they can all be informed of the location of other operators’ underground installations

  – With ERDAS APOLLO Server, they can overlay the underground installations layers with high resolution aerial imagery, helping the field workers easily and accurately recognize places
APOLLO Server Example Applications (3)

Travel Insurance / Assistance Companies

• Travel assistance helpdesks need quick access to up-to-date information that can help people encountering material or physical problems anywhere in the world

• They must be able to rapidly identify the nearest hospitals, garages, diplomatic representations, police stations or hotels

  – With APOLLO Server, they can set-up geospatial data services and catalog them to find the most adequate up-to-date information

  – All public and partner OGC compliant services over the internet can continuously enrich the catalog of available data to the helpdesk, especially for distant, little known areas of the world
**ERDAS APOOLLO Server**

**Competitors**

- **Open Source:**
  - Open-Source provides data and catalog services
  - ERDAS APOOLLO Server provides
    - integrated services with built in workflows at very low price
    - highly skilled Support and Service teams
    - reduced project development costs

- **ESRI:**
  - One comprehensive APOOLLO suite
  - Similar skill set at lower price (ARCGIS server basic > 30K)
ERDAS APOLLO Server

WEB CLIENT

New rich web client to consume APOLLO, ECWP and any third-party OGC services

• Discover data: catalog search, service discovery, local data upload

• Manage and configure map contexts (WMC)

• Visualize and Navigate

• Edit, filter and export vector data
ERDAS APOLLO Server - Workflow

Web Client

Third party OGC Compliant Data Services (WMS, WFS, WCS)

Catalog

OGC Compliant Data Services (WMS, WFS, WCS)

Admin Tools

Secure

Manage and Style Data

Consume

Discover

Register

Consume

Register

vector, imagery and terrain data

Oracle, PostGIS

Admin Tools

Oracle, PostGIS

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Third party OGC Compliant Data Services (WMS, WFS, WCS)
ERDAS APOLLO Server

VECTOR

Publish, Style, Filter, Export and Edit Vector Data
**ERDAS APOLO Server**

**VECTOR Workflow**

- Compliments ERDAS APOLO Image Manager Workflow:
  - ERDAS APOLO Server enables vector data publishing, styling, visualization, filtering, export and editing
  - ERDAS APOLO Image Manager provides imagery publishing, management, styling, visualization, search and export (clip, zip and ship)
ERDAS APOLO Server

IMAGERY

- IMAGINE raster decoders available on Windows
- New GDAL 1.5 build for Windows, Linux and Solaris

Improved reprojection performances
ERDAS APOLO Server

IMAGERY Workflow

• ERDAS APOLO Server delivers a medium amount of imagery data and implements basic imagery use-cases needed for standalone deployments.

• ERDAS APOLO Image Manager manages, catalogs and delivers very large volumes of gridded data.
ERDAS APOLLO Server CATALOG

- Built in search engine
- Results in Google Earth (KML)
- GeoRSS feed

Search, Harvest, Update and Delete OGC Services
ERDAS APOLLO Server

CATALOG Workflow

- Catalog any OGC WMS, WFS and WCS service
- Search OGC services and consume them in ERDAS APOLLO client
- Manage catalog through admin interface

Integrated with the following enterprise standards:
- JTA compliant (transaction)
- Hibernate/Spring container (persistence/ security)
- RESTful interface
- HTML, KML, JSON, ebXML, GeoRSS and TEXT output
ERDAS APOLLO Server

CATALOG Benefits

• Next generation technology
• Implements concepts and interfaces that will be the standards
• Easily add interfaces (CS-W) and new metadata models in the future
• Compatible with security standards (JAAS, OpenSearch, etc.)
• Allows implementation of numerous use-cases
• Search and admin UIs are available in August 2008
• A documented framework is scheduled for ERDAS development and service teams to add their own metadata model in the catalog (and stay in the same order of performances)
• ERDAS Catalog is maintained for CS-W ebRIM, CIM and EO HMA use cases
ERDAS APOLLO Server

CATALOG interfaces

1. **STUB**: One optimized interface to allow all ERDAS applications to access remotely the Catalog with very high performances.

2. **The REST interface**
   1. is lightweight and easy to integrate with third-party technologies.
   2. provides a wide range of output and uses the one that fits the best (HTML -> browser, KML -> Titan/Google Earth, JSON -> Javascript app)

3. **Standard compliant CS-W interfaces**: the CS-W ebRIM and ISO AP interfaces are **scheduled for 2009**, to expose the metadata in a standard-compliant way (HMA/INSPIRE).
ERDAS Vector Strategy

Product Themes for 2009

• **Enterprise**

  • Support for FME (Safe Software) in ERDAS APOLLO
    • FME decoders will be natively supported in ERDAS APOLLO server, extending the number of vector formats that can be cataloged and served by ERDAS APOLLO

  • Extend support for native vector data crawlers
    • ERDAS APOLLO server will have native vector data crawlers for vector formats that will automatically extract and associated vector metadata to the ISO profile

• **Vector Data Symbolization**

  • Style Layer Descriptor (SLD) editor will be integrated with the ERDAS APOLLO Data Manager RCP client
• ERDAS APOLO 2009
• ERDAS APOLO Server
• ERDAS APOLO Image Manager
• ERDAS APOLO Solution Toolkit
ERDAS APOLLO Image Manager
Centrally Manage and Serve Large Volumes of Gridded Data Throughout the Enterprise
ERDAS APOLLO Image Manager

- Addresses the business problems of organizations with:
  - Massive volumes of heterogeneous gridded data
  - Constantly changing gridded data holdings (influx of large quantities of data) that needs a system with an ability to respond to change
  - Distributed storage of data in several dataset store types (file systems (Windows and SAMBA), SANS, Oracle GeoRaster
  - Geographically distributed user base (physical geographic distances between data and end users)
  - Users of varying skill level and security policy to the data holdings
  - Varying mission critical geospatial clients (ERDAS IMAGINE, AutoCAD, ArcMap, web clients and custom applications)
ERDAS APOLLO Image Manager

The Data Model

The ERDAS APOLLO Image Manager catalog enables data managers to develop complex hierarchical data models of heterogeneous gridded data to securely expose well defined, simple consumable web service layers to end users.

- Hierarchically aggregate disparate data sources into homogenous layers
- Assign Access and Spatial Security Permissions to each User/Role for every aggregate/dataset in the system (granularly control who and where users can access data)
- Succinctly describe all levels of the data model hierarchy with ISO 19115/19139 metadata
- Extendable ISO 19115 Metadata Schema (add custom metadata extensions)
- Define service publishing options of every aggregate/dataset (WMS, WCS)
- Define ‘on the fly’ portrayal rules for WMS
- Persistence Model is a standard Object Relational DBMS (Oracle and PostGreSQL with PostGIS)
ERDAS APOLLO Image Manager

The Search

The Catalog exposes an internationally accepted interoperable web service for searching the catalog: the Catalog Service Web (CS-W EBRIM Profile).

- Enables complex searches of any catalog attribute(s) with standard search operators (>, <, =, NOT, LIKE, etc)
- Provides a standardized search response result set
- Independent of any persistence model
- Independent of ERDAS APOLLO Image Manager (OGC Standard)
- Interoperable with any CS-W (EBRIM) compliant client
ERDAS APOLLO Image Manager
The Delivery

The most comprehensive gridded data delivery protocols available on the market in a single server.

• Web Mapping Service (WMS) – deliver portrayed GIS ready and web client consumable ‘styled’ map data to any WMS client application (ERDAS IMAGINE, ERDAS TITAN, AutoCAD, ArcGIS, Google Earth, open source, web client, custom applications)
• Web Coverage Service (WCS) – deliver raw pixel data of any supported imagery format and type to imagery exploitation clients as interoperable coverage (ERDAS IMAGINE).
• ECWP – very fast and very efficient delivery of ECW and JP2 wavelet compressed imagery through ECWP protocol (ecwp://) to ECWP clients (ERDAS IMAGINE, ERDAS TITAN, AutoCAD, ArcGIS)
• JPIP – fast and efficient delivery of JP2 wavelet compressed imagery through the JPIP protocol (jpip://) to JPIP compliant clients (web applications and IAS 3.1.x)
ERDAS APOPOLLO Image Manager

Workflows

‘Out of the box’ clients for data management and end user workflows:

• Data Manager Rich Client Platform – Interface for data manager users to create catalog data model and manage data.
  – Geospatial Information Crawlers – scheduled server jobs for continuous discovery of GI at user specified dataset store locations. Auto discover imagery and terrain, auto provision data for optimized end user consumption (generate pyramids, auto harvest and translate metadata to ISO 19115, generate thumbnails). SET IT AND FORGET IT!
  – Extendable rich client platform for third party developers

• Web Client – Search, Discover, Online Navigator Mapping interface and Data Provisioning workflow (Clip, Zip and Ship)
  – Search the catalog spatially and by attribute to discover datasets that authorized end users have been provided access to
  – Compose complex online maps of ERDAS APOPOLLO Image Manager cataloged data, as well as any intranet/internet exposed WMS, WFS, ECWP service.
  – Request download of any cataloged data through Clip, Zip and Ship Workflow
• ERDAS APOLLO 2009
• ERDAS APOLLO Server
• ERDAS APOLLO Image Manager
• ERDAS APOLLO Solution Toolkit
ERDAS APOLLO Solution Toolkit

Customize or Extend Your APOLO Solution

- ERDAS APOLO Solution Toolkit ensures 100% fitness between the APOLO solution and your business use case

- Enables creation of custom web clients, as well as enhancing underlying web services with the support of new data or metadata types

- ERDAS APOLO Solution Toolkit is the solution for building the customized geoportal user interface, accessible via a simple browser, from any computer, without any software installation
Benefits
Adapted to Your Unique Business Case

- ERDAS APOLLO Solution Toolkit offers flexibility and adaptability for the proper support of your custom or classified requirements and formats

- Completes your APOLLO solution to manage all your geospatial business workflows, from the most standard to the most specific
Benefits

Minimized Integration Time and Risk

- ERDAS APOLLO Solution Toolkit is not a bundle of thousands of micro-components

- Designed to make you reach your business objective rapidly, ERDAS APOLLO Solution Toolkit contains functional widgets that require reasonable programming skills

- Enriched with extensive documentation, samples and application skeletons, ERDAS APOLLO Solution Toolkit significantly facilitates integration of your customized elements.
Benefits

Optimized Customization Effort

• With ERDAS APOLLO Solution Toolkit, you can either create a brand new web client, or modify any of the three existing web clients offered in APOLLO Server, APOLLO Image Manager and the APOLLO Solution Toolkit modules

• Fill the smallest gap with your specific business case and get quick results
APOLLO Solution Toolkit
Examples (1)

APOLLO Solution Toolkit complements APOLLO data and metadata support:

- Defense / intelligence projects: support of additional classified formats

- With the flexibility offered by APOLLO Solution Toolkit, accredited Defense integrators can partner with ERDAS to plug their format decoders into the ERDAS APOLLO infrastructure (for example European STANAG formats)
APOLLO Solution Toolkit
Examples (2)

• The iGLT client is built on top of Apollo Solution Toolkit
APOLLO Solution Toolkit

Examples (2)

• UN client and iGLT client are built on top of APOLLO Solution Toolkit
ERDAS APOLLO Solution Toolkit

Web Toolkit

Web toolkit for building geospatial web applications:

- Developer guide
- Javascript doc: complete API documentation
- Samples: simple examples demonstrating all widgets and simple integration
- Quick start projects: Easily start a new web client
- Maven archetype to quickly start the project

Class ERDAS.ui.GeometryEditor

Extended ERDAS.ui.AbstractEditor.
A specialized type of ERDAS.ui.AbstractEditor for editing geometry objects.

Configuring the geometry editor

Additionally, those supported by the super class of this type, the following properties will be taken into account if provided in the config object:

- map: mandatory. A ERDAS.ui.Map instance
- type: optional. A geometry type to specify the editor. A string. One of the ones available in ERDAS.ui.geometryTypes (e.g. ERDAS.ui.geometryTypes.POINT, ...). Defaults to undefined.

Defined in: GeometryEditors.

Class Summary

<table>
<thead>
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<th>Class Summary</th>
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<tbody>
<tr>
<td>ERDAS.ui.GeometryEditor(config)</td>
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Field Summary

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<th>Field Summary</th>
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<tbody>
<tr>
<td>geometryType</td>
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<tr>
<td>A specific geometry type</td>
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<tr>
<td>map</td>
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<td>A reference to the map</td>
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Connectors

Connector APIs to enhance the underlying web services with the support of new data or metadata types:

- Developer guide
- Java doc: complete API and interfaces documentation
- IMAGINE raster decoders are plugged through these interfaces!
ERDAS APOOLLO Solution Toolkit

Service Access

JAVA remote APIs to remotely consume the WMS, WFS, WCS web services, the Babel Catalog remote API, as well as managing the Web Map Contexts (WMC):

• Developer guide
• Java doc: complete API documentation
• Samples: simple examples
• Maven archetype: developer helper to build the project
Thanks for your attention

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