What’s New?

ERDAS Software 2009
Version 9.3.2
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Transform source data into products, including orthos, 3D data, land cover data and processing models. ERDAS IMAGINE® and ERDAS ER Mapper provide tools to create, manage and analyze imagery. LPS is an integrated suite of photogrammetry software tools for generating terrain models, producing orthophotos and extracting 3D features. The extensions for ArcGIS® are for image processing, feature collection and automatic feature extraction.

ERDAS IMAGINE®
ERDAS IMAGINE combines remote sensing and GIS capabilities, enabling you to create geospatial data, extract the most information and update your existing GIS data. ERDAS IMAGINE allows you to process images and extract the information you need like a seasoned professional, regardless of your experience. You can analyze data from virtually any source. ERDAS IMAGINE simplifies classification, orthorectification, mosaicking, reprojection and image interpretation, while maintaining the integrity of the geospatial data for updating your GIS in multiple formats, including ESRI Geodatabase and Oracle 10g. Some of the new features in this release are outlined below:

New Spheroids for the Moon and the Planets
The IMAGINE projection engine no longer restricts spheroids to the approximate size of the Earth. Spheroids for non-earth celestial bodies have been added, and users may add their own.

Map using High Resolution Radar Data
Support has been added for the COSMO-SkyMed radar sensor satellites, developed by the Italian Space Agency and Telspazio.

Support for New Defense Image Format
Read support for Enhanced Compressed Raster Graphics (ECRG) format files has been added.

Much Faster Creation of RPF Defense Data
The Raster Products Format (RPF) Exporter has been optimized and improved to export frames in multiple independent processes, greatly improving performance on high-end machines.

Display ECWP Data Faster
Simply type or paste the URL into the “Open ECWP URL” dialog.
IMAGINE Radar Mapping Suite

Radar mapping is known for its precision, providing different detailed information that cannot be extracted using traditional photogrammetric methods. IMAGINE Radar Mapping Suite provides specialized tools for processing radar data in a standard remote sensing or GIS environment. With tools for georectifying, filtering and calibrating radar images, you can derive elevation information regardless of cloud cover, day or night from stereo or interferometric pairs. IMAGINE Radar Mapping Suite includes the following modules: IMAGINE OrthoRadar, IMAGINE Radar Interpreter, IMAGINE StereoSAR DEM, IMAGINE InSAR and IMAGINE Coherence Change Detection. Some of the new features are outlined below:

Coherence Change Detection Included in IMAGINE InSAR
IMAGINE Coherence Change Detection is included as part of the IMAGINE InSAR module. All new licenses and software maintenance customers gain access to CCD capability through IMAGINE InSAR.

Batch Processing
Batch processing of IMAGINE Coherence Change Detection and IMAGINE InSAR projects is now available.

Specify & Automatically Populate DEM During Input
Now you can specify the input Digital Elevation Model image during the Input step, and it is automatically populated in subsequent processing steps.

ERDAS ER Mapper

ERDAS ER Mapper allows you to visualize, enhance and combine images for a broad array of applications. This easy-to-use solution includes mosaic, color balancing, compression, geocoding and other image preparation wizards to simplify your workflow. Complex image processing tasks can be performed, modified and repeated in a short amount of time, with minimal impact on hardware resources. ERDAS ER Mapper speeds up your data preparation, storage and distribution activities, increasing the amount of data you can easily manipulate.

ECW Compression Upgrade
Added support for ECW SDK 3.6.0.271. This provides support for JPEG 2000 compression of 32-bit input.

Increased Projection Support
Further map projection support was added onto the work done in ERDAS ER Mapper 7.2 SP1 by adding support for BMG 6.3.5.
LPS

By automating precision measurement, maintaining accuracy and including flexible operations such as terrain editing and feature extraction, LPS increases productivity while ensuring high accuracy. This release includes numerous improvements in the LPS family including Core, Stereo, ERDAS ImageEqualizer, ERDAS MosaicPro and IMAGINE Defense Productivity Module. These modules and some of their enhancements are described below:

LPS Stereo is an add-on for enabling stereoscopic image viewing. Real-world imagery perception, including 3D, greatly facilitates high-precision data collection in various stages of the photogrammetric workflow including aerial triangulation, terrain editing, and feature collection. This module also includes a more advanced point measurement interface than LPS Core, which optimizes collection efficiency on multiple images simultaneously in stereo or mono.

**Added “Force North-up” icon to the Stereo Point Measurement Tool**
This new feature rotates all images to North-up direction and makes it easier to locate similar areas or common points.

**Maintain Same Scale Factor Across all Images**
Stereo Point Measurement now maintains the same scale factor across all images. With this improvement, images with different captured scale factors will be displayed in the same map scale.

ERDAS ImageEqualizer corrects variations and flaws in imagery due to hot spots, vignetting, atmospheric effects and film processing. Particularly helpful in preparing frame imagery for mosaicking, ERDAS ImageEqualizer can quickly compensate for imagery defects by applying chosen radiometric parameters for each color band to multiple images in the same project, or drive all images toward the parameters of a single image in the project.

**Store and Load Image Statistic Data Automatically**
Added “save” capability stores an image’s statistic data and loads this data automatically when you reopen the project.
ERDAS MosaicPro can be used to create and fine-tune large mosaics that may include over one thousand images. ERDAS MosaicPro’s on-the-fly seamline editing radiometric adjustment capabilities produce high quality mosaics for delivery to customers or use in other remote sensing or GIS processes.

Extract Image Acquisition Date from Metadata
A new feature in MosaicPro extracts the image acquisition date from image metadata (when available) and allows you to sort images based on acquisition date. Now you can sort images for mosaic priority with the most recent on top. You can also enter or edit the date in the cell array and revise the order. The acquisition dates and image names are carried over as attributes into the output seamline shapefile to feed other processes.

IMAGINE Defense Productivity Module extends the power of ERDAS IMAGINE and LPS to legacy and emerging National Technical Means (NTM) imagery sources and offers enhanced workflows for the defense community. This module is essential for the defense customer using ERDAS IMAGINE or LPS with these sources. This module has extremely limited availability outside the US Defense community; FVEY members must obtain the module via NGA.

Sensor Models
Significantly improved the orthorectification performance for any image that uses the CSM geometric model interface. This includes the MC&G model.

Image Slicer
Improved the segment footprint computation when using a terrain file to optimize file sizes

Precision Ellipse Generation (PEG) Tool
Added a tool to support precise computation of the error ellipse for an RPC image/DTED intersection. You can export these ellipses to fully attributed 2D or 3D shapefiles.
ERDAS Extensions for ArcGIS

ERDAS offers a number of solutions for users on the ArcGIS platform, including Stereo Analyst® for ArcGIS® and Image Analysis™ for ArcGIS®. These products provide tools for image processing and feature collection. With this release, ERDAS launched two new add-ons for Stereo Analyst for ArcGIS®: ERDAS Terrain Editor for ArcGIS® and FeatureAssist for ArcGIS®. These two new products are described below:

**ERDAS Terrain Editor for ArcGIS** is an add-on to Stereo Analyst for ArcGIS that enables you to update a Geodatabase Terrain file. The Geodatabase Terrain is decomposed into points and breaklines with triangle and contour display. As the terrain is edited, contours are dynamically updated in the stereo window to assist in the visualization and interpretation of the terrain. A complete set of point, breakline and area tools, including a tool for autocorrelating new points to participate in the terrain are provided for modifying the terrain.

**FeatureAssist for ArcGIS** is an add-on to Stereo Analyst for ArcGIS for the collection of roof structures in the ESRI Multipatch format. Using templates, FeatureAssist for ArcGIS can quickly collect these features, handling varying degrees of complexity. In addition to the templates, manual construction and editing tools are provided for the creation or modification of any roof shape. To create a scene true to reality, roofs can be ‘extended to the ground’ or to an existing terrain, creating a 3D model that can be used in a visualization package.

With ERDAS’ solutions, users can easily manage their information, including finding, describing, cataloging and serving data and web services. ERDAS APOLLO manages and serves large volumes of geospatial data located and distributed across an organization. ERDAS ADE enables individuals to update an Oracle Spatial database, with real-time interactive updates and reporting of location information for online services.
ERDAS APOLLO
Providing a unified enterprise platform, ERDAS APOLLO manages and serves large volumes of geospatial data located and distributed across an organization. ERDAS APOLLO implements an out-of-the box Service Oriented Architecture (SOA), fully equipped with publishing and consuming capabilities. With a Spatial Data Infrastructure (SDI), ERDAS APOLLO provides an interactively connected framework of spatial data, metadata, users and tools. ERDAS APOLLO includes ERDAS APOLLO Server, ERDAS APOLLO Image Manager and ERDAS APOLLO Solution Toolkit.

ERDAS APOLLO Server is the core module of any APOLLO solution. ERDAS APOLLO Server catalogs and delivers enterprise vector, raster and terrain data over the web. A user-friendly web client implements complete vector data filtering, exporting and editing.

APOLLO Catalog Service Exposes an OGC-Compliant CS-W ebRIM Web Interface
Third parties are now able to search and discover web services metadata using the CS-W 2.0.2 and ebRIM 3.0 standards.

Imagery Performance on Solaris
The IMAGINE Raster Decoders are available on Windows and Solaris to provide support for a wide range of raster data formats, improve WMS and WCS services scalability and ensure high delivery speed.

Easy Installation, Licensing and Deployment
Improvements include reduced install prerequisites (bundled JDK and JAI), one-click port selection, especially useful to deploy APOLLO Server and Image Manager on the same server, automatic database parameters check and more.

Client-side SLD Styling
Style remote data sources using the SLD OGC standard. Users can now configure the vector and raster data rendering from the web client (for example, by mapping colors on range of values).
ERDAS APOLLO Image Manager rapidly disseminates massive volumes of gridded data through interoperable web services, delivering data to any desktop or web-based platform. ERDAS APOLLO Image Manager supports delivery to clients through the Web Mapping Service (WMS), Web Coverage Service (WCS), ECWP or JPIP streaming protocols, enabling you to publish and consume millions of images to any client application.

**Extremely High Performance Interoperable Catalog**
The new catalog schema has greatly increased the performance of the Geospatial Information Crawlers, large search queries, web service performance and the system load the server is capable of supporting.

**NITF Output Format with DOD Metadata Management**
This format has been added to the clip, zip and ship workflow to support the DOD community. The NITF output format will contain DOD metadata if the original images the user selected to clip contains DOD metadata.

**“Intelligent” Capabilities Documents**
ERDAS APOLLO Image Manager supports tagging all leafs of the hierarchical data model with WMS and WCS publishing options. The capabilities documents are dynamically produced to only contain the aggregates published to the service, allowing the Data Manager to design a hierarchical data model where all leafs of the service are consumable by client applications.

**Oracle 11g Support**
The Catalog can now be stored in an Oracle 11g database as well as Oracle 10gR2 and PostGreSQL with PostGIS.

**ERDAS APOLLO Solution Toolkit** extends existing APOLLO web clients or creates new ones. ERDAS APOLLO Solution Toolkit enhances web services, supporting new data and metadata types. It includes OGC services discovery, rendering and visualization, all in a customized GIS application. Enriched with extensive documentation and samples, ERDAS APOLLO Solution Toolkit facilitates the integration of customized elements.
Client-side SLD Styling
Enhance your web client with remote data sources styling using the SLD OGC standard. You can now configure the vector and raster data rendering, for example, by applying hill-shading on elevation data.

Improved Vector Workflow
Automatically discover both the OGC WFS and WMS interfaces exposed by the APOLO vector services and provide their respective benefits in a joint workflow.

Support of WCS (Raster) Layers
Discover Web Coverage Services by URL or catalog search, visualize and style the coverage data.

Increased Web Browser Support
Support for Internet Explorer 7 and Firefox.

ERDAS ADE Enterprise and ERDAS ADE Remote (BETA RELEASES)
ERDAS ADE enables real-time interactive updates and reporting of location information for online services. ERDAS ADE Enterprise provides the ability to edit data directly in the database, in a form usable by all applications throughout the enterprise. ERDAS ADE Remote provides the capabilities of ERDAS ADE Enterprise to users who are disconnected, connected or occasionally connected to the database.

Support for WMS
A WMS layer can now be loaded as backdrop imagery in ERDAS ADE. New tools for swiping data in the view allows the raster or vector data to be temporarily removed from the view to expose the data underneath.

Automatic PDF Generation via Print Templates
Users may automatically generate a PDF document using the style and size definitions of a predefined template. The file can then be stored or sent to a printing device for the production of a hardcopy map.
Improved Support for Offline Files
The Remote Project Import, Export and Manager tools allow for better control and handling of offline data. Multiple project files and imagery data can be used and associated for easy loading/dissemination of data for users working offline.

Improved Conflict Resolution Tools
A new dialog allows for the rapid review and resolution of conflicts arising from simultaneous, differing edits of the database. The feature’s versions and original state may be reviewed and flagged to be resolved by taking one user’s edits over another’s, leaving the feature unmodified, or employing a merged version of the edits.

Improved History Management Support
The History Manager is a utility for managing geometry tables that have date columns defined for creation, deletion, and updating. As such, the History Manager functions as a version control for a geometry table.

ERDAS provides geospatial solutions that securely connect users to share content throughout an organization or business-to-business. ERDAS TITAN is a geospatial data sharing infrastructure that enables users to publish their “top drawer” data to anyone else across the network, without shipping gigabytes of data in a bandwidth intensive manner.

ERDAS TITAN
ERDAS TITAN is a secure solution for rapid permission-based data publishing from the desktop. ERDAS TITAN provides access to unlimited data resources across the organization and enables consumption in a variety of desktop, Internet and 3D virtual globe applications. Empowered by a 3D virtual globe, users create data and content mashups that can be quickly published and viewed by others. Some of the enhancements in this release are outlined below:

TITAN Viewer as Standalone Application
The TITAN Viewer may now run as a standalone application. Users may search, discover and integrate data and web services from a variety of sources in a standalone 3D environment.
Broadcast Query to Multiple ERDAS APOLLO Image Managers
Broadcast one search query across multiple ERDAS APOLLO Image Managers, GeoHubs on a TITAN Network and your local data, either directly from the TITAN Viewer or from the GeoIM.

See Video and Images in KML Placemark Balloons
Images and videos can be viewed directly in KML placemark balloons via HTML.

Measurement Tool and Coordinate Display
The annotation tool now includes distance and area measurements, plus x, y and z (elevation) for points. Defaults for measurement units along with new coordinate display preferences may be set.

Live Camera Feeds
Add live camera feeds to the TITAN Viewer, resize and pin to terrain. The feeds refresh every 2 minutes.

Save and Load Local Scene Files
Mash up local data, data consumed from others, web services, location-based content and save everything, including the spatial extent, in local scene files. Load local scene files back into the Viewer at any time.

With ERDAS’ solutions, subscription, mobile and web services containing value-added content may be delivered to a variety of domain-specific and business applications. ERDAS Image Web Server is a high-speed, specialized application that distributes massive amounts of geospatial imagery to thousands of users, all on a single server.

ERDAS Image Web Server
In ERDAS Image Web Server, users quickly access the information they need, solving the infrastructure congestion problems traditionally associated with deploying large amounts of image data. Individuals may access imagery using CAD, GIS, mobile, web and desktop applications.
Optimized Tile Delivery
ERDAS Image Web Server now delivers more than 4000 tiles in one second. Some public sites now offer data via a tile-based delivery method. Typically, this type of imagery delivery has been hardware intensive, requiring a multitude of servers or caching systems for good performance on high-demand sites. Optimized Tile Delivery enables a single ERDAS Image Web Server to replace an entire server farm and/or caching system when providing tile-based geographic data.

Persistent Cache in Web Browser Plug-in
Cached data from the ECWP web browser plug-in now persists over different browser visits. The client-side data caching features are configurable, enabling a user to increase or decrease the amount of space that the cache consumes.

ESRI ArcGIS Server 9.3 ECW Connector
ERDAS Image Web Server now provides access to ERDAS Compressed Wavelet (ECW) files to any ESRI ArcGIS Server installed on the same physical system. With ERDAS Image Web Server, ArcGIS Server can consume ECW files when delivering services.

Bonus: Website Creation Wizard
Create your own ERDAS Image Web Server enabled website at http://iws.erdas.com/. This wizard lets you integrate your imagery served with ERDAS Image Web Server with a WMS server. The wizard takes only a few minutes to run and simplifies deploying geospatially rich web applications.

Other enhancements
• Administration console improvements
• Support for 8-bit PNG files in the WMS / ImageX services