Geospatial Vision & Strategy
Cloud Services Engine

Deliver Industry Apps & Workflows Using Mobile/Cloud

Workflow Manager
Spatial Modeler
Catalog
Delivery Services

Mobile
Smart Client
Portal

Harvest Core
IMAGINE
GeoMedia Desktop
LPS/ImageStation

Services Engine
Core Components
Desktop Foundation

©2012 Intergraph Corporation
• Vector Data Management
  – Discover
  – Catalog
  – Delivery

• 64 bit support
  – Remove 3 GB Memory Barrier
  – Maximize use of hardware
Mobility

1 Image

38 TB’s

14 TeraPixels

Fast!
(Software + Content) * Cloud Infrastructure = Industry Apps
Serving 450 municipalities in Austria with 2,500 Intranet user and additional Internet solutions for more than 10 years

r/dei (owned by e.on)
Serving 30 municipal utilities (with several different geospatial apps) and 150 municipalities in southern Germany

Government Computing Centre
Serving 42 government organizations with 250 Workflows for 750,000 land parcels covering 4,000km² and 1.3 million people in Northwest Germany
Mobile Alert on a Public Cloud

Citizens see and report issues

Azure Cloud

Mobile Alert Database
- Customer Footprints
- Customer E-mails
- Users
- Categories
- Staging Area
- Incidents as GeoMedia Features

WebServer
- GeoMedia WebMap 2013
- Incident Receiver
- Incident Processor
- E-mail Dispatch
- Customer Portal
- WFS

Storage Service

E-mail Service (SendGrid.com)

Geocode Service (BING Maps)

SQL Server Spatial data server

Customer Entry Process

Intergraph Personnel

Customer
Powering Dynamic Geospatial Solutions

Dynamically Changing Earth
From the Sensor to Information

Geospatial Information Lifecycle

- Image Processing & Exploitation
- GIS & Cartography
- Enterprise Data Management
- Web Mapping
- Spatial Data Infrastructure
- Enterprise Workflows
- Cloud & Mobile Apps
- Photogrammetric Data Production
- ImageStation

Cloud & Mobile

IMAGINE
GeoMedia
APOLLO
WebMap
SmartClient
SDI
GeoMedia Desktop
• **Essentials**: Data Access, Query, Analysis along with Image Preparation

• **Advantage**: Vector Data Capture and Raster Analysis

• **Professional**: Data Management, Quality Control, and Advanced Feature Modeling
• GeoMedia Essentials includes:
  • Functionality from GeoMedia (Standard/Basic) and bundles IMAGINE Essentials; this is the same as with the 2013 release
  • Oracle R/W Data Server
  • SQL Server R/W Data Server
  • FGDB R/W Data Server

• GeoMedia Advantage includes:
  • GeoMedia Essentials
  • GeoMedia Grid
  • *And selected functionality from GeoMedia Pro and GeoMedia Fusion*
GeoMedia Professional includes functionality from:

- GeoMedia Advantage
- GeoMedia Pro
- GeoMedia Fusion
- GeoMedia Transaction Manager
- GeoMedia Parcel Manager
- GeoMedia Public Works Manager
GeoMedia 3D

- Support for Application Domain Extensions within CityGML models
- WMS performance is greatly increased
- Smoother 3D roaming
- Easier feature selection (oblique selection)
- Flight paths commands are improved – fewer key clicks makes it easier to edit
- Better support for ECW data
- Update to latest FME Import tools, thus 3D Import Utility is more robust
IMAGINE Desktop
**Benefits:**

- Spatial Modeler processes shouldn't run out of memory and should run faster via multi-threading

- FLS Segmentation segments larger images with fewer tiling artifacts

- MosaicPro can process bigger projects faster

- Ortho-resampling up to 40% faster with RPC models

- Terrain Editor can handle much larger blocks (i.e. more imagery)

- ECW and JP2 compression will handle larger images
Spatial Modeler Enhancements

- Point Cloud & LiDAR operators
- Unsupervised Classification operator
- Image Segmentation operator
- Command-line operator
- Initial work for publishing Web Processing Services (WPS) containing vector-based operations
- ER Mapper Wizards converted to Spatial Models
- Spatial Modeler SDK
Other New Features

• Automated Radiometric Corrections
• Semiglobal Matching
• Sensor Models
  • Pleiades Rigorous Sensor models.
  • SPOT 6 Rigorous Sensor model
  • KOMPSAT 3 RPC
  • Landsat 8
LUT Stretch and Filter Galleries with real-time preview
Embedded spectral image processing application
Performs in-scene “enhanced” atmospheric correction
Goes beyond standard atmospheric correction to include sensor corrections
Converts spectral imagery from its native Digital Number (DN) units directly to ground material reflectance units, not just pixel radiance
Correction is fully automatic, requiring no user interaction
Numerous Improvements to Radar
• Huge increase in automated tests and tracking procedures to improve product quality.
Server
1. Server-side report engine
   - Create reports with map content and attributes
   - Use online, server-side templates online or file-based reports exported as .pdf, .xlsx and .docx.
3. **Tablet Enhancements** for Windows 8 Pro (digitizer pen is a prerequisite!):
   “Bookmark” left panel, Icon for “Esc”, support of Win8 Geolocation API, “direct” use of GPS coordinate for point data capture via WorkFlows (on- / and offline)

4. **Support Right-To-Left languages in Workflow Manager:**
   GMSC supports Right-To-Left since v2013.
   With v2014 this will be also supported for WorkFlows.

5. **Smart Search:**
   “Single point of input” to search and set legend entries, bookmarks, queries, map center and scale.
6. **Left Panel for Bookmarks:**
   Additional possibility to open or create bookmarks incl. a thumbnail which is generated automatically from the map content.

7. **GMSC for I/CAD customers:**
   GMSC as “secondary” map to the I/CAD map showing the same location automatically or on demand.
   WorkFlow examples to read from and to add “supplemental” information to the I/CAD database.

8. **Share SE based Symbology with GeoMedia Desktop (via Export / Import)**

9. **r/w connection to ESRI Enterprise Geodatabase (ArcSDE “direct connection”)**

10. **Microsoft Bing Maps client side Integration:**
    Client consumes Bing maps content (Streets, Orthophotos and Orthophotos with labels) which appears as a “standard” GMSC layer incl. coordinate transformation “on the fly”.

11. **WMTS client side integration:**
    Client consumes WMTS which appears as a “standard” layer incl. coordinate transformation “on the fly”.

• Stream NITF files via ECWP and JPIP

• New ERDAS Image Compressor to all APOLLO 2014 licensees

• Continued Performance and Quality Improvements

• Expanded integration opportunities
1. APOLLO Advantage & Professional API/SDK

2. Vector Data Management & Geoprocessing
   - **Workflows**: Crawling, Cataloguing, Publishing (WMS)
   - **Input data formats**: Shape, FGDB, GML, DWG, DGN,
   - **WMS output formats**: GIF, PNG, PNG8, JPEG, BMP, TIF
   - **Filtering Operators logical**: PropertyIsLessThan, PropertyIsGreaterThan, PropertyIsLessThanOrEqualTo, PropertyIsGreaterThanOrEqualTo, PropertyIsEqualTo, PropertyIsNotEqualTo, PropertyIsLike, PropertyIsNull, PropertyIsBetween
   - **Filtering Operators spatial**: BBOX, Intersects, Within, Disjoint, GMOverlaps
   - **Filtering Operators**: AND & OR
   - **Styling**: Basic point style, Point symbols, Point labels, Line styles, Polygon style, Basic text styles, Anti-aliasing, Attribute based Symbology, Scale-dependent styling, color classifications based on attributes, Multi-pass rendering
   - **Metadata**: Spatial Extent, Tables/views, Table/view schema, Geometry specifics, Feature count, Identity
GeoMedia WebMap

1. 3D View based on myVR
2. WFS serving 3D geospatial data
3. Printing enhancements
4. Geospatial Portal API/SDK incl. documentation
5. GUI enhancements (new skins, more icons, smooth zoom etc.)
6. Translate to more languages
7. Access ESRI File Geodatabase (FGDB)
8. Display engine improvements
12. Display engine improvements – Quality improvements for maps generated as raster output PNG files to provide smoother (anti-aliasing) rendering of the input vector geometries:

![No anti-aliasing](image1.png)

![Anti-aliasing](image2.png)
Perform print with any connected print service:

- **Local**: basic map printing functionality
- **External**: comparable to local printing but providing more template options to configure legend, overview map, date, titles etc.
- **Portal GUI**: use data source definition dialog to register an external print service, all printing capabilities are available under the same „Print” icon
Geospatial Portal - 3D View based on myVR Plug-in

- View 3D maps and data
- 2D/3D mode switcher
Geospatial Portal SDK

- Provides APIs, documentation and examples to customize and enhance the Geospatial Portal workflows
- Use in conjunction with all Geospatial Server products that include Geospatial Portal as the client application
Support for APOLLO Vector Data Management theme
GUI enhancements include:

- New skins
- More icons
- Smooth zoom
- Etc..

GeoMedia SDI Portal 6.1

Geospatial Portal 2013

Geospatial Portal 2014

NEW
Geospatial Portal – New language translations

- Geospatial Portal is a multilingual application
- Comes localized to a variety of languages out-of-the-box
- New languages added include:

  - Catalan
  - Dansk
  - Deutsch
  - Ellinikà
  - English
  - Español
  - Français
  - Galego
  - 日本人
  - Polski
  - Português
  - Русский
  - Slovenčina
  - Srpski (Latin)
  - Српски (Cyrillic)
  - 中文
Mobile
What is Mobile Alert? – Key Features

• Camera is automatically engaged to take incident photo. GPS is used to georeference photo

• Location is used to reverse geocode incident to an address to report to subscribing authority

• If GPS signal is weak or outside accuracy threshold, citizen can pinpoint incident on a Bing Hybrid map display

• Category with graphic display can be quickly selected for incident

• Citizen has an option to enter a comment or clarify the “Other” category
What are the Benefits of Mobile Alert?

- **Crowdsourcing to reduce costs**
  - Cost-effective means of collecting actionable data
  - Extends reach and response

- **Empower citizens and communities**
  - Watchful citizens use GPS-enabled smartphones
  - Simple means to report on issues
  - Citizens play an active role
    - Contribute and improve the quality of life in their communities

- **Concentrate on the business, not the technology**
  - Flexible cloud-based solution
  - No in-house IT requirement
  - Intergraph provides the total solution
    - Installation, upgrades, support, and maintenance handled by Intergraph
  - Free app available on iOS and Android mobile devices from respective app stores
  - Citizens use their own hardware!
What is Mobile MapWorks?

- Tablet-based, field inspection and editing app for enterprise GIS data
- Supporting asset management for:
  - Local governments
  - Transportation authorities
  - Utilities
  - Communication companies
- Provides view, create, edit, update and photo-upload functionality
- Configurable user interface to fit a wide variety of purposes
- Free client app available for iOS and Android smartphones
  - From respective app stores
What are the Benefits of Mobile MapWorks?

- Bring GIS to the field
  - Efficient field capture of critical business information
  - Validate and update your enterprise GIS
- Tailored to meet your organization’s needs
  - A practical tool for field and site inspection workflows, e.g.
    - Pole or vegetation inspection
    - Traffic light and bridge inspection
    - Cell or mobile tower site inspection
- Leverages your current investments
  - Interoperable ensuring easy integration
  - Users work directly in their database
  - Instant availability of field updates to GIS desktop, web, mobile
  - Improve business processes
  - Free app available on iOS and Android mobile devices
Thank You