



**HEXAGON**  
GEOSPATIAL



# GEOMEDIA<sup>®</sup> SMART CLIENT 2015

## PRODUCT FEATURES AND COMPARISONS

GeoMedia® Smart Client enables the entire organization to access and utilize rich geospatial data in their business processes. It delivers an enterprise geospatial platform engineered to support large numbers of users who need to operate full desktop products, but whose workflows need advanced geospatial functionality that cannot be supported by browser-based, web mapping tools. With GeoMedia Smart Client, a single deployment can be configured for an unlimited number of applications – making it the perfect GIS for a smarter organization. GeoMedia Smart Client provides:

- **Focused Business Workflows** – Rules definition and workflow configuration tools enable highly focused and efficient workflows without the need for expensive custom code.
- **Intuitive Interface** – Simple interface configured for specific business workflows reduces training overhead while increasing productivity.
- **Data Validation** – Task-specific forms and workflows offer built-in data validation for quality assurance.
- **Coordinated Data Access, Models, and Workflows** – Better information sharing, coordination, and reuse prevents inefficiencies, errors, and risks that arise when departments work in data silos.

GeoMedia Smart Client is available in three product tiers to complement a broad range of customers – from a small business with few users doing simple vector editing, to large, multi-disciplinary environments supporting multiple business workflows across various departments.

## Features Comparison Chart

GeoMedia® Smart Client Essentials

GeoMedia® Smart Client Advantage

GeoMedia® Smart Client Professional

## Features Comparison Chart

Capability	GeoMedia Smart Client Essentials	GeoMedia Smart Client Advantage	GeoMedia Smart Client Professional
Easy geospatial web editing for an unlimited number of users			
Enable high-level cartographic maps of raster and vector data for unlimited number of users	•	•	•
Provide high-end vector tools including snapping, redlining, dimensioning, and measurement	•	•	•
Enable attribute and spatial queries by filtering geographic objects based on specified attributive and spatial constraints	•	•	•
Use of intelligent caching for raster and vector data to support high-performance display	•	•	•
Enable high-quality, true-to-scale printing	•	•	•
Create easy-to-read reports with detailed map content	•	•	•
Present analysis results within pie charts, bar graphs, heat maps and symbol clustering	•	•	•
Manage user-defined map configurations (bookmarks)	•	•	•
Ability to directly read ORACLE® and Microsoft SQL Server® based vector features	•	•	•
TIFF, JPG, PNG raster format support	•	•	•
Use GeoMedia Desktop for initial Smart Client project setup, in lieu of administration console	•	•	•
Configure (geospatial) plot layouts	•	•	•
Use GeoMedia Desktop for initial setup of the GeoMedia Smart Client project	•	•	•

Use with ERDAS APOLLO Essentials for optimized image delivery via ECWP protocol	•	•	•
Use with GeoMedia WebMap for broader access to various data and web service types	•	•	•
<b>Enable highly focused geospatial workflows</b>			
Enable pre-defined, geospatially enabled workflows with Workflow Manager – Runtime		•	•
Edit attributes or capture and change spatial data on the web client and push the changes back to the server database (based on pre-defined workflows)		•	•
<b>Define efficient geospatially enabled business workflows</b>			
Configure and deliver simple maps to the browser			•
Define and develop geospatially enabled workflows or revise the structure, process and forms of existing ones with Workflow Manager – Editor			•
Define automatic validation and conditions for each workflow node			•
Define task-specific forms (for queries, analysis, editing, reports, and more) using XML files			•
Define workflow steps and forms based on user and rights management			•
Define user and rights settings through a connection to Active Directory or LDAP			•
Integrate external applications on the server			•
Visualize the workflow graphically using a tree structure			•
Create multilingual workflows and forms			•

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## GeoMedia® Smart Client Essentials

Organizations can provide high-end vector redlining functionality and the ability for an unlimited number of users to display raster and vector maps, analyze and query data, print, measure, and dimensioning functions.

### Key Features

#### Client Application

On the client side, GeoMedia® Smart Client is a Java application. Deployment is based on standard Java Web Start technology, and it runs as a self-configuring and updating smart client. The client uses web protocols and standards for communications (SOAP Web Services via standard http or https protocol), but it is entirely separate and does not need to run in web browsers. Client features include the following:

- One-click start-up for a user to get working with the client
- Application configures automatically based on user profile
- Automatic updates without user action
- Look and feel and performance of a desktop application

#### High-level Cartographic Map Display

- Extended style capabilities for GeoMedia Smart Client based on OGC standard “Symbology Encoding” (SE)
- Definition of very complex and scale-dependent styles
- Coordinate system support
  - Including support for geographic (Lat/Lon) and custom coordinate systems within the primary database (ORACLE and Microsoft SQL Server)
- Use of SVG icons to style points, line strings, and area fills
- Support of Rich Text Format (rtf) and halo effects
- Style Editor
- Raster backdrop supported by file-based image formats and web services
  - Raster format support for TIFF, JPG and PNG
  - Client side integration of WMTS including on the fly coordinate transformation
  - Client side Bing Maps (street maps, imagery and imagery with labels) integration including coordinate transformation on the fly
  - Client side ECWP integration
    - Imagery is scaled and delivered on the fly (no need for pre-cached tile set)

## Measurement

Including various commands to perform point, linear, circle, and area measurements on features. The measure results are represented in the client as a working level.

- Create and delete the following measurements:
  - Point (coordinates)
  - Line (angle and length)
  - Cumulative distance (segment length, angle, and polyline length)
  - Circle (radius, perimeter, and area)
  - Polygon (side length, perimeter, area, and angles)

## Dimensioning

Including various commands to dimension features on the map. The dimensioning results are stored in the database and represented in the client as a working level.

- Utilize snapping with any dimensioning function
- Simple Dimensioning – allows you to depict the distance between two points of a feature
- Orthogonal Dimensioning – allows you to depict the distance between two points of a feature, drawing the line orthogonally displaced from the existing line feature
- Free Dimensioning – dimensioning line can be placed "free" regarding the vertical orientation
- Radial Dimensioning – allows you to create radial dimensions for circle and arc features
- Chain Dimensioning – includes Orthogonal Chain Dimensioning, Chain Absolute Dimensioning, and Chain Difference Dimensioning
- Edit/delete dimensioning text and position

## Redlining

Enables drawing new graphics on the map such as points, polylines, polygons, buffers, or text. The graphics can be stored in the database or just in the local cache directory, and represented in the client as a working level.

Redlining commands include:

- Draw text features, polylines, polygons, rectangles, buffers
- Edit existing redline features
- Copy existing features to the redline working level
- Delete an existing feature(s)

## Feature Selection

Enables selecting features on the map, which is essential for conducting queries. Features can be selected by clicking on the map or may be based on spatial “fences” represented by geometric objects such as circle or polygons.

- Select active features by:
  - Point, circular, polyline, rectangular, polygonal fence
  - Map window extent
  - Click on the map

## Attribute and Spatial Queries

Enables filtering geographic objects based on specified attributive and spatial constraints. Results of the query can be observed in the corresponding data window while objects are highlighted in the map. Results can also be sorted and exported to Microsoft Excel®, for example.

- Search with attributive input (“Input-Query”) – allows you to execute queries based on attributive constraints
- Search with map selection (“Selection-Query”) – allows you to conduct queries based on a spatial map selection; the selection could be created by clicking on objects or by defining spatial fences
- Combined Search – allows you to run an “Input-Query” on already pre-selected objects

## Snapping Tools

Enables accurate creation, editing, measurement, or dimensioning of features by snapping to existing vertices, midpoints, endpoints, intersections, and tangents. Most tools are also supported by assigned “F keys.”

- Midpoint snapping – allows you to snap to the midpoint of a line segment
- Intersection snapping – allows you to snap to the intersection point of two or more feature line segments
- Tangent snapping – allows you to snap to tangent points of a circle or arc
- Perpendicular snapping – allows you to snap one feature line to another whereat the two lines are exactly perpendicular (right-angle)
- Vertex snapping – allows you to snap to single points of a feature
- Endpoint snapping – allows you to snap to the end point of a feature
- Detail settings – set snapping tolerance and feature class selection and de-activate smart snapping

## Advanced Geo-caching

Use of intelligent geospatial data caching for raster and vector data, supporting high performance, and disconnected mobile editing.

- Raster and vector data cached either on the server in the LAN or on the client

- Client caches kept current through a fully automated process using timestamps, without any need for user intervention
- Manually synchronize the client and server cache
  - Statistics panel shows static and dynamic information concerning the cache synchronization process, including:
    - How many feature classes are selected and are hence taken into account for cache synchronization
    - How many tiles those feature classes contain, including how many of those tiles have been successfully synchronized, or synchronized with failures

## Printing

Enabling high-quality, true-to-scale printing.

- Including large-format plotting in A4 to A0 formats (Letter to E size)
- Rotate content
- Enlarge or diminish the map extract to be printed
- Specify page title, the page subtitle, and any additional info text
- Dynamic attributive information
- Save print settings
- Page preview
- Create snapshots
- Include scale bar

## Reports and Graphics

Create easy-to-read reports with detailed map content

- Present results of analysis as pie charts, bar graphs, heat maps and symbol clustering
- Reports contain rich map content and attributes using online, server-side templates online or file-based reports
- Export as .pdf, .xlsx, and .docx

## Useful application tools

- Bookmarks
  - Create, delete, import, and open user-defined map configurations.
    - Save your current map settings (i.e. the map extract and contents) at any time, and then call them back up again at a later date
    - Capture thumbnail automatically from the map for visual context in the bookmark
- Smart Search



- Use a single point of input to search and set legend entries, bookmarks, queries, map center and scale.

#### Administration & IT

- Automatic delivery of applications over a web HTTP or HTTPS connection
- High-level enterprise administration for users, roles, rights, functions, projects, etc.
- Secure data access control supporting AD and LDAP and audit trails
- Integration to external data and systems
- Client is running on any Java-enabled platform
  - Version 1.7.25
  - On operating systems including Windows®, Linux®, Mac®, etc.
  - Supporting screen resolutions of 1024x768 or higher

#### Security

- Supports username/password credentials to authenticate and authorize access from the client to its server application
- Data access control: security, audit-trails and access control (using feature-level attributes, geographic areas, functional groups, etc.)

## GeoMedia® Smart Client Advantage

The Advantage level tier of Smart Client contains all of the features and functionality of the Essentials product, plus the ability for an organization to utilize predefined business process workflows and edit data. The additional Workflow Manager – Runtime module enables customers to run pre-built workflows, edit attributes, or capture and change spatial data on the web client and push the changes back to the server database.

### Key Features

#### Geospatial Workflows

- Enable pre-defined, geospatially enabled workflows with Workflow Manager – Runtime

#### Edit Features and Attributes

- Edit attributes or capture and change spatial data
- Transact changes back to the server database, based on pre-defined workflows

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## GeoMedia® Smart Client Professional

The Professional level tier of Smart Client contains all of the features and functionality of the Advantage product, plus it includes Workflow Manager – Editor, enabling an organization to develop their own workflows or revise the structure, process, and forms of current ones.

### Key Features

#### Business Logic and Efficient Workflows

A highly configurable rules and workflow engine enables organizations to implement life-cycle workflows, feature-level access control, data validation and behavior, and integration into other systems.

- Workflow Manager
  - Process experts pre-define report, form, and plot layouts
  - Configure geospatial processes (i.e. “workflow trees”) based on XML files
  - Define automatic validation and conditions for each workflow node
  - Drive (remote control) the Smart Client (map content, area, scale, functions)
  - Define task-specific forms (for queries, analysis, editing, reports, etc.) using XML files including text boxes, check boxes, drop-down lists, and context-based help
  - Integrate external applications on the server side
  - Define workflow steps and forms based on user- and rights-management, including connection to Active Directory or LDAP
  - Define disconnected workflows and forms, which enable the end users to capture and edit attributive and spatial data while offline from the internet.
- A synchronization process enables posting edits back when the client reconnects
- Project based conflict handling can be added via WorkFlow definitions
  - Triggering of server processes by user workflows using XML workflow triggers
- Workflow Editor
  - Check the XML structure and syntax of the XML
  - Easy navigation in the workflow- and form-XML
  - Support in the preparation by inserting templates, auto-completion, and copy/paste
  - Graphic visualization of the tree-structure of the workflow
  - Creation of multilingual workflows and forms

#### Share maps publicly

- Configure and deliver simple maps to the browser

## Support for other Hexagon products

GeoMedia Smart Client provides support to, or is supported by, other Hexagon products in the following way:

- GeoMedia Desktop
  - GeoMedia Desktop can be used for the initial setup of the GeoMedia Smart Client project, in lieu of using the Smart Client administration console, for adding new features and defining scale dependencies.
- GeoMedia WebMap
  - Provides broader access to various types of data within GeoMedia Smart Client including:
    - OGC® web services (WMS, WFS)
    - Additional vector support such as Esri shape, Esri File Geodatabase (FGDB), MapInfo, DWG, DXF, and DGN
    - Additional raster support such as ECW, MrSID, USGS DOQ, CCITT Group 4
- I/CAD

An interface between GeoMedia Smart Client and Intergraph's Computer-Aided Dispatch (I/CAD) solution automatically synchronizes the map extents in both applications. This powerful connection enables linked navigation and display, and ultimately provides enhanced map content for public safety customers, including symbology, OGC services, and edit functions for supplementary objects.
- ERDAS APOLLO Essentials

Raster data from ERDAS APOLLO Essentials can be delivered via the optimized ECWP streaming protocol, and rapidly displayed as backdrops within GeoMedia Smart Client. ECWP provides superior image delivery performance in comparison to any other image serving solution on the market, and substantially reduces the requirements of the client cache volume (server and client), management efforts, memory usage, and time to load.

## About Hexagon Geospatial

Hexagon Geospatial helps you make sense of the dynamically changing world. Known globally as a maker of leading-edge technology, we enable our customers to easily transform their data into actionable information, shortening the lifecycle from the moment of change to action. Hexagon Geospatial provides the software products and platforms to a large variety of customers through direct sales, channel partners, and Hexagon businesses, including the underlying geospatial technology to drive Intergraph® Security, Government & Infrastructure (SG&I) industry solutions. Hexagon Geospatial is a division of Intergraph® Corporation. For more information, visit [www.hexagongeospatial.com](http://www.hexagongeospatial.com).

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