GeoMedia WebMap 2023

Product description

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Product summary

GeoMedia WebMap is a web-based map visualization and analysis server product from Hexagon. From easily creating standards-compliant web services to providing sophisticated visualization and analysis within interactive web mapping applications, GeoMedia WebMap enables users to build powerful solutions for worldwide sharing and using rich geospatial data.

GeoMedia WebMap supports a broad range of customers who need to visualize and examine geographic data on the web. GeoMedia WebMap provides real-time access to customers' geospatial data or to the geospatial data from any organization that has chosen to make it available through industry-standard methods.

Click on a link below for quick navigation:

GeoMedia WebMap Essentials

GeoMedia WebMap Advantage

GeoMedia WebMap Professional

Feature comparison chart

Capability	GeoMedia WebMap Essentials	GeoMedia WebMap Advantage	GeoMedia WebMap Professional
Access and publish huge volumes of geospatial vector and raster data			
Build and deploy basic OGCweb services, including WMS, WMTS, WFS, WFS-G, WCTS and WPS-CT	X	X	X
Transform database information into highly differentiated features displayed on a map	X	X	X
Real-time access to enterprise geospatial data	X	X	X
View, query and analyze geospatial data from many formats (without any pre-translation)	X	X	X
Leverage powerful APIs to create your own web applications	X	X	X
Pre-configured, harmonized thin client included	X	X	X
Administer GeoMedia WebMap sites and services on the web server using the Administration Console	X	X	X
Use GeoMedia Desktop as a publishing platform to create high-performance web applications with the click of a mouse	X	X	X
Build and deploy an OGC OpenLS (Open Location Service/Location Utility Web Service) to perform address geocoding (and reverse)	X	X	X
Display vector and raster data in 3D with advanced myVR technology	X	X	X

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Data editing and advanced client functionality			
Build and deploy an OGC WFS-T (Transactional)		X	X
Advanced, harmonized thin client		X	X
Connects to WMS, WFS, WFS-T, WFS-G, WMTS, WMPS and GeoRSS		X	X
Browser-based data editing in web client (Geospatial Portal classic layout)		X	X
GeoMedia WebMap Mobile application for online and offline data editing in the native mobile app		X	X
Capture spatial data in accordance with a central data model and write directly to MicrosoftAccess, SQL Server, Oracle or PostgreSQLwith PostGIS		X	X
Create and update attribute data with help from drop-down lists and integrity checks during data capture		X	X
Create and run pre-defined business workflows and integrate attribute-based enterprise processes with map operations		X	X
High-End Analysis Functionality			
Build and deploy an Open Location Service implementation to perform routing			X
Conduct dynamic segmentation and linear analysis quickly over the web			X
GeoMedia WebMap Mobile			
Mobile application for online and offline access and update of enterprise vector data		X	X
Configure data access and functions for individual users of GeoMedia WebMap Mobile application		X	X
Unlimited number of concurrent GeoMedia WebMap Mobile users			X

GeoMedia WebMap Essentials

GeoMedia WebMap Essentials tier allows organizations to launch a fully scalable server solution with web services and thin client applications to provide extended GIS functionality, including real-time enterprise data access, sophisticated geospatial analysis and map generation. All data publishing and subsequent end-user access to volumes of structured vector and raster data are available through basic OGC Services. GeoMedia WebMap Publisher Portal, a preconfigured thin client application, is bundled with the product. An API is also available to create your own custom web applications.

NOTE: See detailed information for GeoMedia WebMap Publisher Portal features in the Geospatial Portal 2023 product description.

Easy administration of client application and services are available in an interoperable, web-based Administration Console.

Key features

OGC web services

WebMap Service

- Generate a map from one or more data sources

- Configure hierarchical legends and watermarks

- Publish WMS, version 1.3.0

    - OGC 06-042 OpenGISWeb Map Server Implementation Specification (ISO 19128)

    - Technical Guidance for the implementation of INSPIRE View Services - version 3.11

- Publish WMS version 1.1.1

    - OGC 01-068r3 Web Map Service Implementation Specification

    - Technical Guidance for the implementation of INSPIRE View Services - version 3.11

Web Feature service

- Retrieve or manipulate one or more features

- Publish WFS version 2.0.0

    - OGC 09-025r1OpenGIS Web Feature Service 2.0 Interface Standard) (ISO 19142)

    - Technical Guidance for the implementation of INSPIRE Download Services - version 3.1

- Publish WFS version 1.1.0

    - OGC 04-094 Web Feature Service Implementation Specification

    - Technical Guidance for the implementation of INSPIRE Download Services - version 3.1

- Export vector data to GeoRSS, KML, CSV and GeoJSON

Geocoding

- Find the coordinates of a given location

- OGC 03-006r3 OpenGIS Location Services (OpenLS): Core Services, Part 3

Reverse geocoding

- Find the location (address) of a given set of coordinates
- OGC 03-006r3   OpenGIS Location Services (OpenLS): Core Services, Part 3

WebMap Tile Service
- Serve tiled data with high performance
- Publish WMTS version 1.0.0:
    - OGC 07-057r7 OpenGIS WebMap Tile Service Implementation Standard
    - Technical Guidance for the implementation of INSPIRE View Services - version 3.11

Gazetteer service
- Enable querying by place name
- Publish Gazetteer based on the standard WFS interface, version 1.1.0
    - OGC 05-035r2 Best Practices Document: Gazetteer Service - Application Profile of the Web Feature Service Implementation Specification
    - OGC 11-122r1 Best Practices Document: Gazetteer Service - Application Profile of the Web Feature Service

Transformation
- Convert coordinates on the fly
- Publish WPS-CT, version 1.0.0:
    - OGC 05-007r7 OpenGIS Web Processing Service, version 1.0.0
    - INSPIRE Draft Technical Guidance Coordinate Transformation Services - version 2.1
- Publish WCTS, version 0.3.0 (deprecated)
    - OGC 05-013 Web Coordinate Transformation Service (WCTS) draft Implementation Specification

INSPIRE-ready services

GeoMedia WebMap services have been adjusted to meet the most recent INSPIRE Directive technical specifications. The INSPIRE Technical Guidance for View Services, Download Services, Discovery Services and Coordinate Transformation Services were followed and implemented.

GeoMedia WebMap Publisher Service

WMPS is a custom web service that allows for publishing of multiple legends (map compositions). The legends are available in raster and vector formats. WMPS combines the standard WMS and WFS capabilities, making geographical data display, analysis and querying more powerful.

- Multiple map compositions offered in one service
- Cross-composition predefined queries
- Multi-dataset analyses

GeoMedia WebMap Publisher Portal

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Using GeoMedia as a visual authoring environment, GeoMedia WebMap enables the publishing of high-performance web applications with the simple click of a mouse. GeoMedia WebMap Publisher Portal, the preconfigured thin client application, provides an interface to view, query and analyze data using web services. GeoMedia WebMap Publisher Portal uses GeoMedia as the visual authoring environment.

- Create an interactive web application based on a GeoMedia GeoWorkspace

- Perform real-time GIS analysis

    - Query GIS data warehouses and see information described in a map

    - Perform advanced analyses

    - Attribute query

    - Spatial query

    - Buffer zoning

    - Spatial intersection

    - Spatial difference

    - Analytical merge

    - Aggregation

    - Functional attributes

    - Join

    - Coordinate geocoding

    - Address geocoding

    - Find address

    - Measure length and angle

- Click map feature to see selected database information about that particular feature

- Display 3D vector data

- Display the data on 3D globe based on myVR technology

    - Display base map and raster data sources in 3D

    - Display 3D Tiles and 3D Objects

    - Display underground features

    - Consume imagery from APOLLO Essentials for extremely fast imagery streaming and rendering

    - Use extended 3D WFS service capabilities offered within GeoMedia WebMap Essentials to display vector data on the globe

    - Extrude 2D vector data based on the selected feature attribute values to rapidly build 3D scenes

    - Apply First Person Perspective view

    - Use interactive tooltips and hot spots

- Choose from a variety of map output types:

    - JPEG image format

    - PNG image format

    - Improved SVG (can be rendered with Adobe SVG Viewer or natively in Web browser)

    - Differentiating between features based on single or multiple attribute values

- Translucency of all raster data and area color fill
- Dynamic label generation with conflict detection
- Identifiable text features as you pan and zoom
- Additional advanced rendering features:
  - Text/symbol masking with a halo
  - User-defined area hatching, symbol and text display in a single legend entry
  - Endcap and midline joint specification
  - User-defined styles
  - View-independent text and symbols
- Choose from a variety of map output types
  - Cache on the client
  - Files are maintained automatically
  - Server-side geocaching for feature classes that are not frequently updated

NOTE: See detailed information for GeoMedia WebMap Publisher Portal features in the Geospatial Portal 2023 product description.

Data access and interoperability

Access geospatial data warehouses of all GeoMedia-supported data formats.

- GeoMedia Grid raster engine
- Google Maps™, BingMaps, HereMaps, Open Street Maps
- OracleSpatial, MicrosoftSQL Server, Microsoft Access, PostgreSQLwith PostGIS, GeoPackage
- EsriFile Geodatabase (FGDB)
- ArcView, ArcInfo, MapInfo
- MicroStation, AutoCAD
- MGE, FRAMME, G/Technology
- Text file, ODBC source
- OGC WMS, WFS, GML
- Bitmap, JPEG, TIFF, GeoTIFF, MrSID, ECW, USGS DOQ, CCITTG4
- Export to AutoCAD, MicroStation, ArcView, MapInfo, Microsoft SQL Server

Map tools and high-fidelity rendering

GeoMedia WebMap generates both raster and vector maps, rendering them on the web using native browser functionality.

Instances are created automatically using simplified publishing workflows for GeoMedia WebMap, reducing the service and portal publishing process to a single page in GeoMedia WebMap Publisher Administrator. Suitable instances are created automatically in the Administration Console without requiring additional steps.

Publishing GeoMedia GeoWorkspaces with dynamic labeling configurations result in automatic LRF file creation. Administrators no longer need to create the file manually. This feature, combined with the other Simplified Publishing enhancements, reduces the time to set up GeoMedia WebMap's services and portals.

Remote service publishing

Using the new GeoMedia WebMap Publisher capabilities, the Administrator can easily create fully operational services (WMS and WFS), as well as remotely create GeoMedia WebMap Publisher Portals. The enhanced wizard performs all the necessary actions, creating the Service Source and creating the Service (or Portal) Instance, then binding them together so that the remaining action is publishing the data.

Administration Console

Administration Console is used for creating and configuring all aspects of server-side engines, web services and web applications in one location.

- Web service instances (for any type of service) can be created, configured and removed

The following features can be configured:

- Service metadata (OGC and INSPIRE) for WMS, WMTS, WFS — GeoMedia WebMap Administration Console provides a dedicated user interface to support editing of service metadata

- Logging capabilities for the service to log its performance data to a selected location (this feature can be turned on and off)

- Source of data for the service (depending on service type)

- Administration Console provides users with the ability to change GeoMedia WebMap engine parameters and test services being instantiated:

    - Configuring server parameters (timeous, thresholds, number of parallel map servers and more)

    - WebMap logging configuration

    - WebMap cache configuration

    - Virtual folders configuration

Web application deployment

- Deploy Web applications with:

    - VMWare ESX

    - Amazon EC2

GeoMedia WebMap Advantage

GeoMedia WebMap Advantage tier bundles the complete Geospatial Portal; read/write (R/W) data servers for Oracle, Microsoft SQL Server or PostgreSQL with PostGIS; and the ability to create WFS-T (transactional WFS.) In addition, it provides 3D vector data display, including underground features and 2D vector data extrusion for rapidly building 3D scenes, as well as first-person perspective view for 3D scene walkthrough.

NOTE: See detailed information for GeoMedia WebMap Publisher Portal features in the Geospatial Portal 2023 product description.

Key features

In addition to all features included in GeoMedia WebMap Essentials tier, the Advantage tier offers:

Complete Geospatial Portal bundled

GeoMedia WebMap Advantage includes the full Geospatial Portal product; a configurable and customizable browser-based web portal used for finding, viewing, querying and analyzing geospatial data published by Hexagon products or other standards-based web services. Using modern services-oriented architecture, Geospatial Portal enables the user to take advantage of many data sources at the same time.

- Integrate multiple data sources into a single map view
- Easily navigate and interact with maps
- Connect GeoRSS

Transactional Web Feature Service (WFS-T)

- OGC Web Feature Service – Transactional (WFS-T) allows editing of vector data and saving changes directly back to the database
- Build and deploy an OGC WFS-T (Transactional) over Microsoft SQL Server, Oracle or PostgreSQL with PostGIS

Read/Write data servers

- Build applications that edit geospatial data
- Capture spatial data in accordance with a central data model and write directly to Microsoft Access, SQL Server, Oracle, PostgreSQL with PostGIS or GeoPackage.

GeoMedia WebMap Mobile Application

- Online access and update of enterprise vector data
- Offline editing and on-demand synchronization capabilities
- Data access and functions can be configured for individual users

Mobile Features of GeoMedia WebMap Publisher

- Prepare configurations for GeoMedia WebMap Mobile that address key aspects of the configuration, including user identification, field zone geometry specification and field work definition; based on the choices undertaken by the Administrator, GeoMedia WebMap Publisher generates a ready-to-use configuration for the mobile application
- Support of both mobile configuration types: online and offline

Support for business workflows

When deployed with Workflow Manager, GeoMedia WebMap can be used to automate typical business workflows that are run regularly in the enterprise environment.

- Construct automatic, highly focused attribute-based processes using Workflow Manager
- Run pre-configured workflows with Workflow Manager using Geospatial Portal thin client application provided with GeoMedia WebMap
- Intuitively use map operations when necessary for adjusting or creating workflow steps

GeoMedia WebMap Professional

The Professional level tier of GeoMedia WebMap extends the GeoMedia WebMap Advantage tier to include advanced linear analysis functions, including routing (OpenLS routing), linear referencing system (LRS) services and dynamic segmentation. GeoMedia WebMap Professional is the best solution when networks and network-related information matters.

Key features

In addition to all features included in GeoMedia WebMap Advantage, the Professional tier offers:

Linear Referencing System (LRS)

- LRS precision location web service

- All advanced linear analysis web services can be created and configured in the Administration Console

- Overlay Web Service

Routing

Determine the best route from one location to another or to multiple locations.

- Supports best multi-location routing

- Finds shortest route

- Supports HERE (NAVTEQ) and TomTom (TeleAtlas) data without building a separate routing network

- Support for plain GeoMedia Warehouse, which allows ingesting data from e.g., OSM (either directly or pre-processed by Geofabrik) using a known process

- Supports step-by-step instructions

- Supports Z-elevation

Dynamic segmentation

- Analyze tabular data referenced to linear features on a map

    - Clearly visualize asset inventory

    - Click features to view attribute details

- Web services for both dynamic segmentation and reverse dynamic segmentation allow basic linear referencing

Proximity analysis

- Determine the distance between a selected point and other features

Allocation areas

- Determine the area surrounding the selected location (facility) that can be traversed in the given time interval, taking into account various factors (for example, speed limits or one-way roads)

GeoMedia WebMap Mobile Application

- Unlimited number of concurrent GeoMedia WebMap Mobile users

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About Hexagon

Hexagon is the global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Safety, Infrastructure & Geospatial division improves the resilience and sustainability of the world's critical services and infrastructure. Our solutions turn complex data about people, places and assets into meaningful information and capabilities for better, faster decision-making in public safety, utilities, defense, transportation and government.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,000 employees in 50 countries and net sales of approximately 5.2bn EUR. Learn more at hexagon.com and follow us *@HexagonAB*.