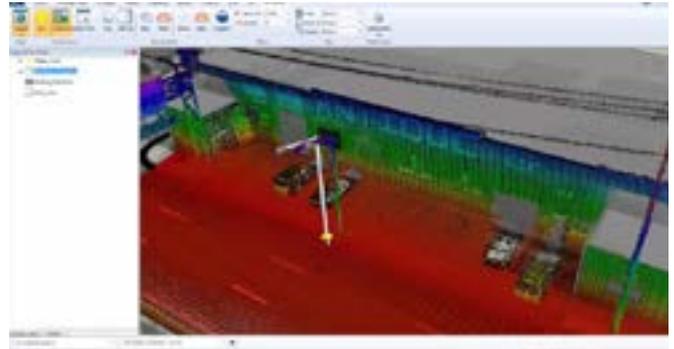# GeoMedia® 3D

Hexagon Geospatial division's GeoMedia 3D addresses the growing demand for realistic 3D views of geospatial data and enables GeoMedia users to work in a 3D environment. 3D visualization fully integrated into GeoMedia raises the bar for organizations that want to exploit the precision and power of their geospatial data, leading to quicker, more confident decision-making, visual communication, and analysis.

GeoMedia 3D is an extension to GeoMedia that enables a wide range of 3D capabilities for defense, intelligence, government, transportation, utilities, communications, public safety, and security applications. GeoMedia 3D extends the functionality of Hexagon's geospatial solutions through an integrated 3D visualization and analysis environment to visualize, navigate, analyze, and interact with 3D data natively in GeoMedia. In addition, you can dynamically integrate surfaces, imagery, vector feature data, rasters, and point clouds to provide a 3D view of all data sources in GeoMedia.

Organizations that process elevation data achieve maximum benefit through seamless visualization of 3D surfaces. The ability to understand the surroundings and visualize the terrain assists in making better environment-based decisions and performing more effective real-world assessments. With GeoMedia 3D, you can extrude features based on elevation or selected attributes, providing a rich set of options for graphical depiction of feature characteristics. Import capabilities for pre-built city models, Google files, and Trimble files give you the ability to incorporate other readily available 3D files into your 3D projects. To visualize the 3D effect of an analytic operation, other products perform the analysis in the standard 2D view, and then convert to 3D for visualization. Analytic workflows that call for frequent iterations consume time, forcing you to trade productivity for 3D functionality.

GeoMedia 3D breaks through this barrier with technology that enables an interactive, geospatially-synchronized 3D view. You have the choice of working in 3D, 2D, or both views to get the best blend of power, visualization, and performance. GeoMedia 3D is fully integrated with GeoMedia, enabling you to leverage the power of GeoMedia's core geospatial analysis for 3D. With GeoMedia 3D, you have access to 3D capabilities for visualization, manipulation, analysis, navigation, and data integration with your existing geospatial data. This level of integration provides you with superior performance, productivity, and enhanced visualization to meet the emerging challenges of today's geospatial environment. By seamlessly integrating 3D technology from Skyline Software Systems with GeoMedia and fusing multiple data sources together into a single geo-referenced 3D view, we deliver more immediately usable and actionable geospatial information across all industry segments.

GeoMedia 3D provides you a valuable tool to visually enhance your workflows in infrastructure management, land information management, geospatial intelligence exploitation and production, cartographic production, security, and reporting and analysis.

LiDAR data shown alongside GIS data checks the accuracy of lamp post placements in the GIS database.

Business Benefits

- **Enhanced decision support** – Whether it's situational awareness, road planning, green initiatives, or force protection, incorporating 3D visualization and analysis into workflows enables better decision-making. You benefit from the photo- realistic view of your assets, including the ability to fly through and evaluate areas of interest from all perspectives.

- **Urban modeling** – 3D models provide better understanding and insight into the impact of change on the environment, an increasing concern for government agencies and the public.

- **Community impact projects** – 3D makes a visual connection with the public to give a better sense of a project beyond the technical details and can assist in gaining public support.

- **Asset Management** – GeoMedia's ability to bring point clouds directly into the 3D environment alongside the GIS data creates new opportunities to precisely locate, update, and monitor the condition of assets in the field.

Integrated 3D Environment

- Access the same data, symbology, and analyses from the 2D view or create new 3D representations.

- Easily move between 2D and 3D environments as GeoMedia commands operate on the active window. GeoMedia 3D maintains the proper 2D and 3D representations as you move from one environment to the other.

- Select the most effective way to work for a particular project – with all the power and precision of GeoMedia now available for a 3D environment.

- Available for all three GeoMedia Desktop product tiers: Essentials, Advantage, and Professional.

- Leverages all GIS data servers supported by the GeoMedia Desktop.

- Works seamlessly with GeoMedia Desktop add-on products such as Incident Analyst.

3D Navigation

- Easy-to-learn six degrees of navigational freedom when moving through 3D space.

- Co-selection and co-location with the 2D view as desired for orientation and referencing.

- Follow pre-defined paths for full 360-degree views.

- Collision detection during navigation.

- First Person View navigation mode provides a realistic perspective and walk-through of the 3D landscape.

3D Visualization

- Display any 3D georeferenced data source, including 3D models, vector feature data, rasters, point clouds, imagery, and surfaces – all in the same view.

- Environmental condition settings such as rain, snow, fog, wind speed and direction, sky color and texture, cloud coverage, sun and moon positions.

- Output high definition (1920 x 1080) video files at 30 frames per second for playback and editing.

- Integrates with Skyline TerraBuilder, TerraExplorer, and TerraGate servers.

3D Analysis

- GeoMedia GIS warehouse connects and displays all spatial analytics in the 3D map window. This paradigm lets you use the wide range of GeoMedia capabilities in 3D.

- Dynamic real-time shadow casting with compensation for time of day and day of year.

- True 3D viewshed analysis enables fast and accurate planning for security camera placement, communication towers, and other visibility-driven smart city sensor implementations.

- 3D mesh layer support improves rendering when handling large 3D environments, even at city scale.

- Threat Dome analysis creates a 3D shape that resembles the top half of a sphere that displays the areas viewable from a given point in the 3D view.

- GeoMedia 3D allows users to take analysis normally done in 2D and conduct it in 3D with more compelling visual results. 3D analysis and views allow for better understanding of results by providing a truly immersive 3D experience.

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GEOSYSTEMS
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About GEOSYSTEMS

GEOSYSTEMS is a software vendor and service partner for geospatial solutions and helps public authorities, private companies and educational organizations to easily transform location-based data into actionable information. As Hexagon Geospatial platinum partner, GEOSYSTEMS offers not only leading-edge products for remote sensing, photogrammetry, GIS and data management, but also Hexagon Smart M.App solutions for easy-to-use dynamic map experiences. In addition, GEOSYSTEMS develops customized applications, implements tailor-made workflows and provides excellent trainings.

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About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications. Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Geospatial division creates leading platforms, applications and solutions for visualizing, analyzing, and deriving insight from location data. By interconnecting the geospatial and operational worlds, we help customers of all sizes – from sites to cities to nations – use 5D location intelligence to solve real-world, mission-critical challenges.

From snapshots in time to real-time streams, our technology enables autonomous connected ecosystems that deliver reliable, repeatable location information. We shorten the loop from data acquisition to action, helping clarify what was, what is, what could be, what should be, and ultimately, what will be, so we can build a thriving, sustainable world.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 4.3bn USD. Learn more at hexagon.com and follow us @ HexagonAB.