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# Intergraph's Government & Transportation Session Abstracts

Get a preliminary look at the exciting sessions in the Intergraph Government & Transportation sub-track at [Hexagon 2012](#). At this year's conference, Intergraph is helping you make Smarter Decisions with a wide-range of topics important to government and transportation agencies around the world. Let us help you think forward in 2012, and gain a new perspective on the trends.

## **5000: Government & Transportation Welcome and Overview - Tuesday, June 5, 11:00 a.m. - Noon**

Intergraph welcomes our government and transportation customers to Hexagon 2012! In this opening session for the Government & Transportation sub-track, the chairman of the National GIS for Transportation Task Force, Mr. Jay Adams, will speak on the benefits of geospatial technology in supporting government decision-making. In addition, Intergraph experts will introduce the key focus areas for 2012, which include enabling enterprise applications for non-GIS users with our new GeoMedia Smart Client product, remote sensing and imagery/LiDAR management, safety and maintenance planning with hot spot analysis, and new solutions for transportation in oversize/overweight routing and road information management. You won't want to miss the key technology and solution announcements for government and transportation.

## **3103: Geospatial Trends and Industry Panel Lunch - Tuesday, June 5, Noon – 1:00 p.m.**

Join us for a special panel discussion on the future and direction for the geospatial industry. During this lunch, we will collectively evaluate market trends, including the evolution of remote sensing, photogrammetry, and GIS, as well as the merging of these technologies. There is now a synthesis of desktop, web, and mobile applications with the ability to rapidly transform raw data into actionable information and deliver it to any location. Our panel includes geospatial thought leaders from around the world, including key members of the media and business partners. While you enjoy your lunch, each panel member will share a lightening presentation describing their organization's contribution to the industry. We will then moderate a Q&A session to hear their insights on our changing industry.

## **3100: Geospatial Vision & Strategy: The Dynamic GIS in Action (2 hours) - Tuesday, June 5, 3:30- 5:00 p.m.**

Intergraph's geospatial products exploit the wealth of content collected from a variety of sources. There is now a synthesis of desktop, web, and mobile applications with the ability to rapidly transform raw data into actionable information and deliver it to any location. This includes on-demand, web-based geoprocessing, integrated vector and raster-based spatial modeling, change detection, and data revision based workflows based on the fusion of imagery, point cloud, and GIS data. This session features the geospatial vision and strategy from Intergraph's industry leaders, as well as a series of presenters that will expound on the complete geospatial workflow. These "birds of a feather" presentations will highlight distinctive implementations and the transformational role geospatial technologies play across multiple vertical markets. The power of Intergraph's technology is revealed in these real implementations, where technical capabilities meet customers' business process requirements. These examples will inspire you to do more with the available technologies.

## **3101: Dynamic Geospatial Exploitation for a Changing World - Wednesday, June 6, 8:00 a.m. - 9:00 a.m.**

In this session, the presenter will highlight the vitality of geospatial image processing and analysis, GIS, remote sensing, and photogrammetry – and how you can access these tools from a single powerful and convenient package. A web processing service



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(WPS) provides a centralized production environment to manage and optimize access, processes, and output. Learn how you can work from one collective data pool to create value-added data products from custom front-ends. The system automatically catalogs resulting derivatives and immediately makes them available to other users. Discover how to use the new spatial modeler, and then deliver vector and raster models to other users over the Internet via interoperable geoprocessing services. The presenter will also introduce a suite of point cloud tools and provide an overview of the LPS user interface integration into the ERDAS IMAGINE® ribbon.

### **5001: Precision Matters: Why the Largest North American Transportation Ministry Chose Intergraph - Wednesday, June 6, 8:00 a.m. - 9:00 a.m.**

The use of commercial off-the-shelf (COTS) software to augment and/or replace the practice of software development has substantially increased during the last few years. The benefits of COTS usage are clear – reduced development cost and shorter time-to-market. However, using COTS software in development activities also raises risks, creating the critical need for a sound methodology that helps users decide which COTS software to implement in a specific development context.

In this session, the presenter will introduce a well-defined, systematic, and repeatable COTS acquisition process, and highlight the details surrounding Ontario, Canada's Ministry of Transportation (MTO) selection of Intergraph's Multi-level Linear Referencing Solution as its foundational location management solution. This solution enables MTO to properly maintain location information for event data as the road network changes, and utilize the multiple cartographic representations used to represent its network. Hear what was involved with MTO's multi-year, rigorous evaluation, selection, and acquisition process before it selected Intergraph as the best solution in the market and the optimum spatial partner to support its needs.

### **5010: Street Address Assignment Data Modeling Made Easy - Wednesday, June 6, 8:00 a.m. - 9:00 a.m.**

Data modeling has become an invaluable tool in accurate address assignment. Intergraph's customer, the City of Virginia Beach, Virginia, is developing an address assignment tool to assign new official street addresses. Based on the URISA/NENA-sponsored FGDC United States, Thoroughfare, Landmark, and Postal Address data standards and data entry forms, this spatial data model captures addressing information and integrates it with parcel, subdivision, and master street GIS layers. In this session, you'll see how Virginia Beach's streamlined process converts existing, paper-based information into an easy-to-understand, GIS database model. The newly created data then feeds into the Master Addresses Repository (MAR), which serves as the centralized hub of address information. The system then provides addresses to internal and external business systems that need physical and mailing addresses. Built on Intergraph GeoMedia Professional and Oracle software, this address assignment tool reduces the time it takes to assign new addresses throughout the city. Come learn more about the design, conversion steps, and implementation of this important tool.

### **3102: Powerful GIS Data Production and Analysis - Wednesday, June 6, 10:00 a.m. - 11:00 a.m.**

Earlier this year, Intergraph announced Live Link, which combines GeoMedia® and ERDAS IMAGINE to deliver a comprehensive suite of GIS analysis and data management capabilities, coupled with image processing. The combination delivers what geospatial professionals have wanted for a long time – seamless integration of vector and raster data and processing. During this session, the presenter will explore the next phase of this integration that will be available in the 2012 product release, as well as present other enhancements across the desktop portfolio. In GeoMedia, you will have the opportunity to preview the new look and improved user experience, enhanced performance and scalability for enterprise databases, and the time savings in dynamic and static text placement and automated labeling. Explore how visualizing, navigating, analyzing, and interacting with geospatial data in 3D can



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greatly enhance an organization's ability to make decisions. See how GeoMedia 3D extends the functionality of GeoMedia, enabling you to exploit the precision and power of your geospatial data, which leads to quicker, more confident decision-making and visual communication in support of location-centric tasks.

### **3104: Rapid Data Management and Delivery to the World - Wednesday, June 6, 1:30 p.m. - 2:30 p.m.**

Intergraph makes it easy for geospatial enterprises to manage and use large volumes of data. Find out how our solution helps you successfully manage, distribute, exploit, and visualize your organization's unstructured data (including point clouds). Learn how ERDAS APOLLO can automatically catalog, and how you can then discover, view, analyze, and download the data. You will also learn how Intergraph's GeoMedia Grid uses LiDAR data originating in ERDAS APOLLO to perform water flow retention estimation/delineation analysis. You can then combine the analytical results from this process with your GIS data sources, all within a single 3D environment using GeoMedia 3D.

### **5003: Managing Risk from Landslides to Tunneling: High-Precision Environmental and Infrastructure Monitoring - Wednesday, June 6, 1:30 p.m. - 2:30 p.m.**

Many areas of the world are exposed to significant environmental risks, such as landslides and avalanches, floods, and earthquakes. Critical and sensitive infrastructure in these areas is subject to natural and man-made risks, both during construction and subsequent operation. Without reliable access to current, accurate information and tools to analyze and apply it, engineers and managers have to assume "maximum risk." This can adversely affect an area's economic development or result in considerably higher engineering and operational costs for no additional safety benefit.

Combining their extensive domain expertise in high-precision monitoring, best-in-class technologies (both geospatial software and hardware), and the ability to provide customers with total solutions, Intergraph and Leica have implemented an integrated high-precision infrastructure and environmental monitoring solution you can apply to planning, prevention, monitoring, and operational management. In this session, discover how this smart approach to high-precision integrated monitoring is designed to exploit advanced spatial monitoring technologies (including the in-situ, real-time exploitation of information coming from passive remote sensing, radar, laser-scanning, and active networks of precision sensors) to optimize the analysis of areas and infrastructure at risk, and – for the most sensitive sites – implement an active 24/7 monitoring and response process.

### **4006: Intergraph's New Rapid Mapping Solution (RAMP) for Map Producers - Wednesday, June 6, 1:30 p.m. - 2:30 p.m.**

Today's military mapping users, whether operating in theatre or in the production headquarters, need to generate and exploit maps that reflect the latest geographical and intelligence information in a matter of minutes after the request has been made. This is vital for commanders to accurately and safely deploy troops without putting them into unnecessary danger, thus protecting as many lives as possible.

In this session, learn about Intergraph's new Rapid Map Production "Map Kiosk" capability (RAMP), developed for the purposes of generating rapid mapping in crisis or disaster situations. Intergraph has based RAMP's initial release on a combination of the Dynamo DCS and GeoMedia product lines, and designed it to generate fully symbolized MDG military map products within minutes through a very simple client interface and automated cartographic process manager. While the initial release of RAMP will be based on the military's current operational and crisis support requirements, this high-performance cartographic production solution can benefit any government, utility, public safety, security, or other organization that needs to quickly produce and disseminate high-quality map products to support time-critical operations, such as disaster relief and event and crisis management.



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**3107: Real-World Modeling & Analysis with GeoMedia, GeoMedia Grid & GeoMedia 3D Workshop-  
Wednesday, June 6, 1:30 p.m. - 5:30 p.m.**

During this training session, users will obtain hands-on experience with the wide range of spatial analysis tools available in GeoMedia and GeoMedia Grid. The session begins with practical applications of GeoMedia's powerful vector-based analysis tools taken from actual customer case studies. The session will then showcase GeoMedia Grid, highlighting the strengths of using both raster and vector data formats without having to worry about data conversion and translation issues. This will allow you to easily apply analysis and modeling techniques that best suit your specific needs. Finally, attendees will use GeoMedia 3D to easily create 3D representations from existing 2D GIS datasets and incorporate 3D models to provide a real-world view of the data. The resulting visualizations will be exploited to provide powerful corroboration and additional insight for traditional GIS analysis.

**3105: The Smart GIS for a Smarter World - Wednesday, June 6, 3:30 p.m. - 4:30 p.m.**

Working in multi-disciplinary environments introduces complex requirements and challenges that many conventional GIS solutions cannot support. While all users in an organization may require access to common data, access to specific records may vary depending on department, role, or geographic jurisdiction. User access may also vary as responsibilities change over the course of a project life cycle. GeoMedia Smart Client meets the needs of multidisciplinary organizations, such as Departments of Transportation or municipal governments. At its core is a highly configurable rules and workflow engine that enables organizations to implement dynamic life-cycle workflows, feature-level access control, data validation and behavior, and integration to other systems. Learn how Intergraph's software provides a powerful, web-based "smart client" that supports high-end functionality, including vector data capture and editing. Discover the breadth of organizations that have deployed this solution – from municipalities and transportation and utility infrastructure operators to government emergency management agencies.

**3106: Portray Your Geography to the World- Wednesday, June 6, 4:30 p.m. - 5:30 p.m.**

Geospatial organizations need to use and distribute volumes of geospatial data, but disparate legacy information systems may hinder data-sharing. When departments use different geospatial software and data formats, data silos result, forming obstacles to effective collaboration within the enterprise. Additional problems arise when trying to share data with outside organizations. Intergraph's Spatial Data Infrastructure (SDI) solution removes the obstacles associated with distributing and using copied data. Adherence to industry standards, including INSPIRE, Open Geospatial Consortium (OGC®), and International Organization for Standardization (ISO), not only breaks down barriers, but also allows organizations to comply with government mandates. With GeoMedia SDI Portal and its powerful browser application, you can easily visualize and share accurate geospatial data to collaborate internally, and with government agencies, commercial businesses, and the public. Attend this session to learn how this solution can benefit your organization.

**5005: Field Data Collection with GeoMedia Smart Client - Wednesday, June 6, 4:30 p.m. - 5:30 p.m.**

In this session, discover how you can now achieve powerful and efficient field data collection using Intergraph's new GeoMedia Smart Client software. GeoMedia Smart Client provides inspection and capture tools in simple-to-use workflows using a server-based web environment product. You can implement both connected and disconnected workflows to serve field crews with high-speed displays using localized data caching. With GeoMedia Smart Client's Workflow Manager, only the commands required for a field data collection task are presented to the user. Business rules in the form of attribute and geometry validation minimizes data errors in the field. Come learn about field data collection using GeoMedia Smart Client!



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### **5004: Smarter Decisions with Intelligent Convergence: Sensor and Video Integration for Governments and Transportation Agencies- Wednesday, June 6, 4:30 p.m. - 5:30 p.m.**

Governments and transportation agencies increasingly rely on the power of multi-source data, such as video cameras, sensors, closed circuit television, and other systems. Seamlessly integrating these technologies into a common operating picture is useful in improving operations, protecting populations and infrastructure, and collaborating across agencies. In this session, you'll learn how Intergraph's exclusive EdgeFrontier middleware enables the intelligent convergence of devices and systems in real time to turn data into information, and information into smarter decision-making.

### **3108: Maximize ROI with Project and Production Photogrammetry – Thursday, June 7, 8:00 a.m. - 9:00 a.m.**

In this session, learn about Intergraph's two robust platforms for solving photogrammetry problems and turning raw data into useful information. Professionals can benefit from ERDAS IMAGINE (with LPS) to address image processing, photogrammetry, and/or LiDAR data workflows. Commercial photogrammetry customers benefit from the high-throughput capabilities of Intergraph's ImageStation® products. Whether you need an integrated platform to work with all types of geospatial data, or a cloud-oriented solution to create or update large spatial databases, Intergraph's proven solutions can improve your productivity. You'll also find out about new technological developments, including on-going efforts to cross-pollinate our photogrammetric tools across our portfolio. In addition, the presenter will explore unmanned aerial vehicles' (UAVs) heightened susceptibility to in-flight environmental influences, the smaller footprints of the images they collect, and the software workflow necessary to correct the imagery. Imagery obtained from GheorRhea's UAV platform will be used to demonstrate a complete and accurate workflow for correcting the artifacts inherent in UAV-sourced imagery.

### **5006: Intelligent Vehicle Routing– Thursday, June 7, 8:00 a.m. - 9:00 a.m.**

In today's economy, agencies must operate as efficiently and effectively as possible to reduce operational and organizational overhead, while preserving public safety. In the state of Oklahoma, this means utilizing automated routing technology to streamline the workflows of permitting and routing oversize and overweight vehicles throughout their jurisdiction and enhancing safety for the traveling public.

In this session, the presenter will discuss how automated routing and location intelligence are being used to support operational efficiencies, reduce overhead, and provide the ability to have more legally permitted trucks along the highways. You'll hear how Oklahoma is using Intergraph's Automated Routing and Restriction Management technology to reduce not only the state's operational overhead, but also the benefits seen as a result for the commercial trucking industry.

### **5007 Decision Making with Geospatial Asset Management – Thursday, June 7, 8:00 a.m.- 9:00 a.m.**

Year over year, municipal officials tasked with caring for infrastructure systems have professed the need for better coordination across city departments – not only from finance, legal, administrative and public works, but also between water, wastewater, storm water and other utilities. Better coordination of infrastructure construction and repair saves time and money, increases efficiency of city crews, and reduces disruption to city residents and businesses. An infrastructure information decision support system can help a municipality predict and prioritize capital expenditure spending on physical infrastructure, as well as develop long-term, economical intervention plans while maintaining an acceptable level of service. In this session, the speakers will discuss best practices for applying risk management and financial analysis to infrastructure asset management - helping asset managers and other key decision makers understand the relationship between budget, asset failure risk and level of service. The session will also discuss how the City of Hamilton's city leaders are using the software to assist in the decision-making process regarding right-of-way



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infrastructure (water mains, sewer mains, and roads), and how integrating GeoMedia technology within a financial asset management decision support system can greatly improve the strategic and policy planning process.

### **3109: Together at Last: Remote Sensing and GIS Workshop – Thursday, June 7, 10:00 a.m.- noon**

Intergraph has combined GeoMedia and ERDAS IMAGINE to deliver a comprehensive suite of GIS analysis and data management capabilities, coupled with image processing. This combination delivers what geospatial professionals have wanted for a long time – seamless integration of vector and raster data. This stronger, more streamlined geospatial workflow combines the strengths of GeoMedia’s extensive querying capabilities with ERDAS IMAGINE’S library of image manipulation features to help you with true spatial insights. Now, you can leverage both products in unison to manage the demand for more data, more analysis, and more effective results. During this hands-on workshop, you will experience the benefits of this cohesive image processing and GIS product pairing, focusing on workflows that can process large volumes of imagery, precision terrain data, and vector-based geospatial information to update GIS and computer-aided design (CAD) resources.

### **5008: Geospatial on the Move: Intergraph Technologies Applied to Key Mobile User Scenarios – Thursday, June 7, 10:00 a.m. - 11:00 a.m.**

Unlike desktops and browsers, spatial capabilities for mobile platforms are still relatively new. They are also evolving quickly, reflecting rapid growth in the range and capabilities of mobile devices and operating systems. At the same time, common limitations of these platforms (such as screen size, user interface, and operating environment) makes mobile applications far more susceptible to rejection by intended users. For mobile technology, matching the application to the user is critical. Different workflows require different capabilities, just as individual users require diverse devices and interfaces. In this session, the presenter will highlight a range of common mobile scenarios and give examples of how Intergraph technology is addressing them.

### **5009: Safety and Infrastructure Planning for Governments – Thursday, June 7, 11:00 a.m.- Noon**

Geospatial tools for decision support are available today to improve safety and infrastructure planning. This session will focus on hot spot analysis for safety planning and functional attribute analysis for infrastructure planning. Hear how Arkansas State Highway and Transportation Department (AHTD) uses I/Incident Analyst to identify repeat incident spots on rural roadways. AHTD has accumulated extensive incident data, which it can present visually with bar charts and maps, and then use these maps to take preventative measures that protect motorists. I/Incident Analyst provides an intuitive, user-friendly environment for analyzing incident activities, which allows agencies to make well-informed decisions and effectively deploy resources.

You’ll also hear how San Jose Water uses Intergraph GeoMedia to view, query, and analyze its water model. Functional Attributes powerful analysis tools unlock valuable information for decision-makers and customers. Custom maps are built by refining the data to ensure that internal and external customers see only the most relevant information in a format that serves their needs for infrastructure planning.

### **5011: Government & Transportation Sub-track Closing LUNCH SESSION – Thursday, June 7, noon – 1:00 p.m.**

Come join the Intergraph team for the official closing session of the Intergraph Government & Transportation sub-track. Participate in a Q&A forum for product direction, marketing, sales, and support.



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**3110: Dynamically Jumpstart Your GIS with GeoMedia Smart Client Workshop – Thursday, June 7, 1:30 p.m. - 3:30 p.m.**

The enterprise wide “smart GIS” obliterates the growing disparity between the status quo and what a GIS needs to be. A smart GIS is the perfect GIS, connecting and equipping ALL users with the power of GIS, breaking down the walls of legacy that have resulted in closed, passive, and uninspiring one-dimensional systems. During this hands-on workshop, you’ll have the opportunity to apply what you’ve learned about GeoMedia Smart Client during the first two days of the conference, and will receive an introduction to the administration and workflow configuration. Upon leaving this workshop, you’ll have the tools you need to make your organization progressive, empowering individuals and departments to collectively ignite your dynamic GIS.

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