



## **Information Technology Trends and Their Impacts on the GI Industry**



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### **Abstract:**

Changes in information technology (IT) and related fields are evolving rapidly and fueling trends in the geospatial and imaging industries. These trends are impacting all aspects of the geospatial value chain, from data capture through processing and exploitation, data management through data dissemination and delivery. The presentation highlights these technology trends and their impacts on the geospatial industry, including: increased accessibility to geospatial data, including proliferation of high resolution sensors, coupled with higher spatial, spectral and temporal data resolution; new and/or advanced sensor types (Radar, Lidar, oblique, terrestrial) increasingly being used to supplement traditional optical sensors enabling more sophisticated data analysis and exploitation; more advanced data processing environments and methodologies including multi-core and parallel processing, grid-based (distributed) processing, on-demand geo processing (OGC Web Processing Service), and cloud-based computing platforms, such as the Amazon Elastic Compute Cloud (EC2) and Microsoft Azure platform; the emergence of SOA and open standards-based systems for building enterprise-class geospatial applications; increasing demand for advanced data management capabilities that accommodate frequent updates to data; multi-user, multidata source access and collaboration; and diverse models of data dissemination and delivery, including provisioning and on-demand streaming via the web.