Geospatial Integrated Framework

Supporting a New Era in Geospatial Intelligence

Whether protecting warfighters on the battlefield, assisting first responders in the wake of natural and man-made disasters, or enabling multi-INT analysis supporting security efforts around the world, there's a much greater need today than ever before for geospatial intelligence (GEOINT) to be visible, accessible and understandable to the right people at the right time.

The technology that supports such capabilities must not only be flexible and rapidly deployable, but must also meet the needs of the end user in both fixed and mobile environments. Additionally, it must be delivered in such a way that it lowers the barriers of entry for third-party applications to be added quickly — whenever and wherever needed — while significantly reducing life-cycle costs.

Services Architecture

Northrop Grumman has distinguished itself as a pioneer in developing fully open, non-proprietary, commercial-standards-based Geospatial Integrated Framework solutions that provide end-users access to GEOINT. Anywhere. Anytime.

We are an industry leader in delivering agile, innovative, service oriented architecture (SOA) based solutions that provide timely, assured knowledge of enemy threats, civilian-related crisis situations and other critical events. Our approach allows for the “federation” of legacy systems while providing the means to easily add new services, capabilities and enhancements at a reduced cost as the needs of end users change.
**On-Demand Delivery to the Tactical Edge**

Northrop Grumman’s Integrated Geospatial-Intelligence Systems enable information sharing and on-demand web browser access to deliver geospatial products to operationally relevant mobile applications. The Northrop Grumman Geospatial Integrated framework enables the development and deployment of commercial off-the-shelf mobile computing wireless intelligence, surveillance and reconnaissance application to the tactical edge.

The capability is forward deployable as a data center to host a variety of software applications and legacy programs. It provides GEOINT capabilities to Tier 3 users, giving analysts, intelligence officers and decision makers access to a variety of geospatial data, including imagery, foundation data, orthorectified data and geospatial products, as well as visualization services to display this data.

**Service Based Platform**

Northrop Grumman uses an Application Service Provider (ASP) / Infrastructure Service Provider (ISP) paradigm for constructing the Geospatial Integrated Framework with the ISP providing the hardware and the ASP providing applications as services. Other features/capabilities include:

- Integrates multiple software applications that provide unique geospatial data and access to the users.
- Supports enterprise-class information management system, providing web-service enabled storage, discovery, retrieval and analysis of application-ready GEOINT.
- Provides a common portal for visualization of data, health and status monitoring.
- Interfaces to Image Product Libraries for target/requirement correlation with newly ingested imagery via host services and applications for shared use in the ISP.
- Supplies access to metadata and data for multiple imagery file types through the Imagery Product Library.

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**System Features and Capabilities**

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<tr>
<th>Feature</th>
<th>Description</th>
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<tr>
<td>Single integrated architecture with common framework</td>
<td>Less dependence on legacy providers</td>
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<td>Architecture accredited for multi-INT security environments</td>
<td>Reduce cost without impact to schedule and risk</td>
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<td>Full spectrum exploitation capability reach back to customer sites</td>
<td>Repository for data/user storage</td>
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<td>Provides Keyhole Markup Language (KML)-formatted data to display search results on Google Earth</td>
<td>Increased delivery of capability and services to the field</td>
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<td>Work Flow Management capability allows integration of imagery and data to produce imagery products and reports</td>
<td>Significant software/service reuse for lower life-cycle costs</td>
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<td>Host legacy systems in data center without requiring software modifications by ASP services</td>
<td>Framework compatible with DCGS-A Mobile Basic, DCGS-IC and JIOC-IT</td>
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<td>Common portal for visualization of on-demand multi-INT data from ASP services and the DIB</td>
<td>Information sharing between DOD and IC</td>
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<td>Enterprise SOA expeditionary architecture that supports DIB, DoD Discovery Metadata Specification (DDMS) and Net-centric Enterprise Services (NCES)</td>
<td>Delivers QRC while ensuring reliability</td>
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