

NBII Geospatial Portal

Rapid GIS Application Development and Interoperability at NBII

Oct 17, 06

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USGS-NBII
Services Oriented Architecture

NBII Geospatial Portal

Agenda

- ◆ The Need
- ◆ The Challenges
- ◆ Interoperability
- ◆ Rapid GIS Application Development
- ◆ Architecture
- ◆ Important Sites
- ◆ Conclusion
- ◆ What is in it for You?
- ◆ Q & A

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The Need

- ◆ NBII, Nodes and Partners
 - Around 270 organizations
- ◆ Large Volumes of Distributed Data
 - Discovery of data
- ◆ Sharing of Data
 - Existing mapping applications were limited to the services/data served by application only.
 - Re-using of data produced by fellow orgs.
 - Enriching user experience by giving user flexibility of loading and analyzing data of his/her choice.
- ◆ Re-using developed software components and reducing development effort

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The Challenges

- ◆ Limited resources and expertise
 - Nodes, partners have limited resources & expertise.
- ◆ Existing Legacy GIS applications.
- ◆ No standard interoperability framework.

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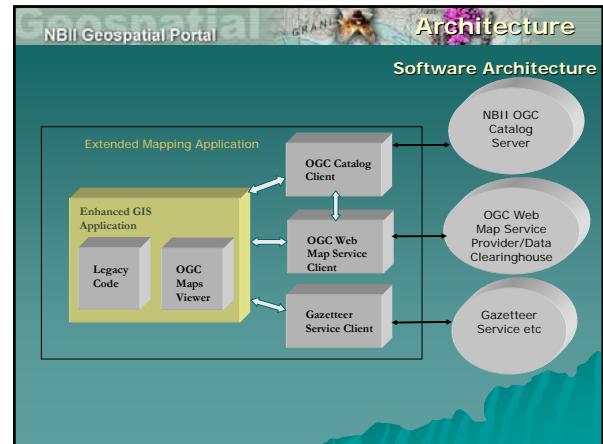
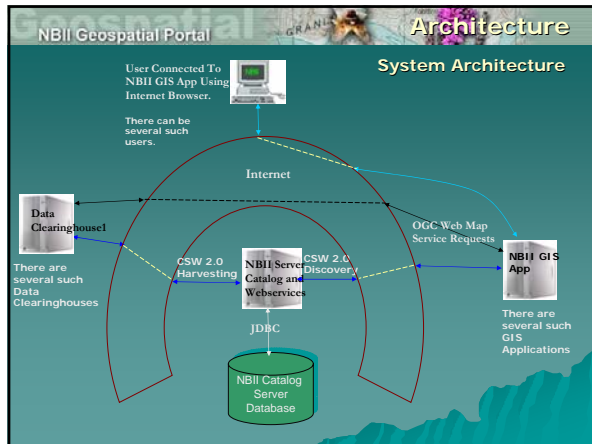
Interoperability

- ◆ How Did NBII Achieve Interoperability.
 - Standard Based Interoperability Framework
 - OGC Based Services
 - Web-services
 - Common Catalog for Publishing, Discovery and Consuming OGC Services
 - Made Data Available through WMS/WFS
 - Extended Applications for Interoperability

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Rapid GIS Application Development

- ◆ GIF Services
 - OGC Catalog Service for data publishing and discovery.
 - OGC Web-Map services
 - Bounding Box service
 - Gazetteer Service
- ◆ The Toolkits
 - Pluggable Toolkits for new or existing mapping applications
 - Toolkits for portlets



- ### NBII Geospatial Portal Important Sites
- GIF Information/Download Site
- ◆ <http://geospatial.nbii.gov>
- GIF Portal
- ◆ <http://nbii-catalog.ornl.gov>
- Applications Developed Using GIF Toolkits and GIF Services
- ◆ <http://wildlifedisease.nbii.gov/epizoo2>
 - ◆ <http://wildlifedisease.nbii.gov/mass3>
 - ◆ <http://hoosier.cr.usgs.gov/NBIIOGCNewAppTemplate/>
 - ◆ <http://128.173.240.47/MainNodeOGC/>

- ### NBII Geospatial Portal Conclusion
- ◆ Increased Interoperability
 - ◆ Enriched user experience.
 - ◆ Reduced mapping-application development time from 2 man months to few days.
 - ◆ No programming expertise is required for deploying or embedding these toolkits.
 - ◆ Pluggable toolkits enhance maintainability of applications.
 - ◆ Use of 'services' reduce overhead of software development and data maintenance.

- ### NBII Geospatial Portal What is in it for You?
- ◆ Participate in GIF
 - ◆ Make Data Available for Others to Use
 - ◆ Use GIF Toolkits for Rapid GIS App Development
 - ◆ Use GIF Services
 - ◆ Suggest the Features and Service

NBII Geospatial Portal Question and Answer

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Thanks