Integrating ESRI and IBM software for a Web 2.0 Enterprise GIS

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Presentation Overview

• Introduction – Land & Property Information, Sydney Australia
• LPI Online Mapping – Spatial Information Exchange (SIX)
• Enterprise GIS and WEB 2.0 – LPI’s Mashup Centre
  – Arc GIS Server, Map and Image Services, IBM Websphere
  – ESRI JavaScript API, ESRI REST API
  – Vector Caches, Alpha Viewer and Mobile
  – Dojo Widgets, iWidgets and IBM Mashup Center
• The LPI Mashup Centre, doing the business
  – RoadMaps, Achievements, Challenges
Land and Property Information

• Introduction
  – Who we are …
  – What we do …

• LPI Online Spatial Services and Marketplace
  – Spatial Information eXchange (SIX)
    – Internal Systems and External Business
  – ESRI Technologies
  – IBM Technologies
  – Almost all of our business is carried out ‘online’.
LPMA and SIX

• Government Transformation and Strategy
• Evolution of Spatial Information
  – Open Standards and the Internet
  – Automate Land Related Processes
  – Less Labour Intensive
• Location Intelligence and the Web
• Spatial Information Exchange
• Data Integration and Mashups
• Whole of Government Focus
Enterprise GIS and Web 2.0 Strategies

• SIX Web 1.0’ish
  – Enablement and Transformation
  – Plugins, Channels, Geodatabases
  – LPI providing Data, Services and Viewers

• Enterprise GIS and Web 2.0
  – Empower all users through self service and the ability to address their own needs
  – Repurpose your own data together with foundation datasets from LPI
Enterprise Spatial Architecture

• EA and SOA – 2003+
• Spatial Delivery environment – EOL

• ESAR Objectives
  – Meeting strategic directions of DFS and LPI
  – Meeting NSW government priorities/objectives
  – Providing LI for government and citizens
  – Improving access to government information
  – Facilitating improved quality and reducing duplication
Software Architecture

This architecture diagram shows software components to support SIX Web 2.0 API's that are being implemented by ICT to support its Strategy 2.0.

Content Delivery Framework
DoJo, Digit JavaScript API

Execution Framework
DoJo, JavaScript API, iWidget, Google Maps API, Bing, iGoogle, ... HE, WSToolkit (?)

ArcMap, Gaia, Google Earth, MapInfo, Autocad, Imagine, iPad, iPhone, Tablet PCs, SmartPhones, Titan, ArcExplorer ...
SIX Web 2.0 Framework

• SIX Web 2.0 Framework
  – REST API – Server side
  – JavaScript API – Client side
  – iWidget – SIX Portal Integration to spatial services
  – CS2i Foundation BaseMaps – Government Only
  – Cloud Processing – Flood Imagery

• Base map of your choice – switch at threshold to CS2I Foundation data – or use CS2I SDI natively.

• Spatial client of your choice – or use SIX
Enterprise GIS & Web 2.0

• Enterprise GIS – Server Technologies
• Enterprise GIS – Client Technologies
• Enterprise GIS – Component Based Dev
• Enterprise GIS & Web 2.0
Enterprise GIS – Server Technologies

- ESRI ArcGIS Server
  - Map Services
  - Image Services
- ESRI REST API
- IBM WebSphere Technologies
  - WebSphere Application Servers
  - WebSphere Repository and Registry
  - DataPower Appliances
  - WebSphere Rapid Application Developer
DEMONSTRATIONS
Enterprise GIS – Client Technologies

• ESRI JavaScript API
  – Spatial Data Rendering
  – Spatial Search and Query
  – Spatial Data Outputs

• Rich Extensible Viewer
  – Standards Based Compliance
  – Extensible and Open
    • Tools, Table of Contents, Customisation …
Enterprise GIS – Component Based

• Extending ESRI ArcGIS Server
• DoJo Implementations
• JavaScript Based Components
• DoJo Test Harness
• Dojo Build Scripts

• Shareable Code Base
  – Multiple Platform Support
  – Write Once, Repeated Implementations
DEMONSTRATIONS
Mobile
Enterprise GIS & Web 2.0
ESRI and IBM Software Collaboration

• Mashup, Mashup & Mashup
• IBM Mashup Center
  – ESRI Map Widget
  – IBM iWidgets
  – 3rd Party iWidgets
• Components and iWidget Wrappers
• Enterprise GIS Business for the Web
DEMONSTRATIONS
Enterprise GIS and WEB 2.0

• Easy to implement and use, leading to:
  – Increased staff knowledge and better understanding of spatial information use across government
  – Improved ability for government to service clients and stakeholders
  – More efficient exchange of up to date spatial information
  – Reduced business risk and more efficient government
  – Identification of new revenue opportunities
  – Increased Commercial outcomes for government and community by more effective use of spatial information to support decision making
Enterprise GIS and WEB 2.0

• Outcomes and Benefits
  – Increased efficiency of data management
  – Enhanced sharing of spatial data and services
  – Reduced spatial data duplication, and effort
  – Data Integration on Demand

• LPI Business Enablers
  – Immediate access to updated spatial information
  – Externalise On-demand spatial product creation
  – Empower Clients to build their own web sites
  – Enable whole of government spatial services and collaboration for better decision making
QUESTIONS

Tony.Hope@lpma.nsw.gov.au
Daniel.Miller@lpma.nsw.gov.au