



For the Complete Technology & Database Professional



## Spatial SIG

# **Oracle Spatial – Pure Web Editing *for Telco' Outside Plant Engineering Planning***

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**ORACLE  
OPEN  
WORLD**



## Speaker

- Eamon Walsh, CTO eSpatial Solutions.
  - *over 20 years experience in the IT industry, primarily with distributed systems and service oriented architectures*
  - *has presented at GITA, AGI, EC GI & GIS, GIS Planet, Oracle SIGS...*





## **Agenda**

1. Drivers for Web Editing
2. Example
3. Technology
4. Functionality
5. R.O.I.
6. Client – Verizon Communications



## Drivers for Web Editing

- Need to consolidate spatial data into single data warehouse – Oracle Spatial!
- Need to provide seamless access across the organisation - Web
- Need to Capture & Update Data as well as View
  - Controlled, by user and role + No local data
- Need to incorporate data capture & edit into Business Applications
  - Pure Web, Multi-user, IT Standards...
- Need to control spatial edit in Business Workflows
  - Componentised NOT monolithic application



## **Drivers for Web Editing...**

- Replace Desktop Licenses...

iSMART@ Web Editor - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address <http://ess-qaintdemo:8888/ismart/iSmartWebEditor/pages/workspace/main.jsp?rand=0.06002192418117536> Go

Back Forward Stop Refresh Home Search Favorites Log out Logged In As: admin

Navigation Controls Digitize & Edit Help

MAP: Simple Demo Map

EDIT: ZIPCODE

# Web Editing Example Application

- No desktop tool, plug-in, download, active-X control, etc
- Full GIS editing to DB – snap, etc...

0 250 500  
feet (us)

Minnesota 2202, Central Zone (1983, US Survey feet) 532,295/165,475 Nominal Scale 1: 567,468.04

Current Center Point: 532295.0, 165475.0 Projection System: Minnesota 2202, Central Zone (1983, US Survey feet) (41072) Local intranet



## Web Spatial Editing Technology

- Architectural Considerations
  1. Multi-user – Server based, Transactional, Locking...
  2. User Session Management – Undo / ReDo, Save / Rollback, Resume....
  3. Rich GIS user interface in pure web – digitize, move, edit, label, snap...
- Technologies Used
  - AJAX, JSON
  - Platforms: Oracle Application Server, BEA Weblogic, Oracle Database with Spatial /Locator (9i, 10g 11g)



## Functionality (Current)

### A: Pure Web Spatial Editing

- Linear Element Placement
- Polygon Placement
- Symbol Placement
- Polygon & Linear Modification – Insert, Move, Delete vertices
- Snapping & Snap Options...
- Labeling: Enter or Automatic, Clash detection, Halo, Box, Anchor point, Offset, Turn labels on /off, Duplicate text, Partial objects...
- Move Label
- Attribute entry and editing
- Selection – Single, Multiple, Buffer, Boundary
- Move Graphic Element
- Delete Graphic Element
- Save, Discard, Undo / Redo...
- Multi-User Locking

### B: (Real) Web GIS

- Map Viewing - Pan, Zoom, Fence, Fit to Layer, Previous, Layer control, layer precedence,...
- Search
- Bookmarks
- Print - Scale, Plot from web, templates...
- Thematics
- Export View
- Export to Excel
- Feeds from web map services: Yahoo Maps, OGC WMS
- Role Based Access Control



## **Next Functionality**

### A: Pure Web Spatial Editing

- Complex Linear Element Placement
- Complex Polygon Placement
- Drop (Split) Complex Elements
- Extend Linear Elements to Intersection
- Partial Delete of Elements
- Trim Elements to Boundary (Polygon)
- Graphic Grouping

### B: (Real) Web GIS

- Enhanced Visualization – Vector Symbols, Custom line styles,...
- Advanced Label Capabilities
- Query Builder
  - & Advanced Thematics
- Non Scaled Maps (Schematics)



## **Pure Web Spatial Editing ROI**

1. Replace CAD / GI Tools
  1. Licenses
  2. Installation & Maintenance
2. Consolidated Database:
  1. Improved Data Quality – through consolidation
  2. Data Availability
  3. Use Web Application to force use of central database
3. Productivity – Control functions provided to users + script interactions by task
4. Integrated GI & Application – Single Web Application
5. Integration of Applications (& Data)
  1. Draw Once
  2. Inventory Management
  3. Tax management
  4. Ready for Sale View



## Example Deployment

- Verizon Communications Inc
- VEGA – “Verizon Enterprise Geospatial Application”
- First Phase: Outside Plant Engineering Planning application
- In initial Use
  - & ongoing development...
- National Coverage – 1000’s of Engineers updating data
- Aim: Organisation-wide data access 100,000s users



## Web Spatial Editing Summary

- Pure Web Based Editing to Oracle Spatial is Possible
- Technologies:
  - AJAX, JSON
  - Oracle App Server, BEA Weblogic Oracle Locator / Spatial.
- Development Components rather than just End-user tool
  - Web Tags, javascript, and java API'S
  - Integrate into Business Applications and Workflows
  - Web Editor developers' example provided
- Benefits
  - Reinforces the benefits of a consolidated spatial database
  - Increases efficiency
  - Reduces Cost
- Already in Use...
  - Verizon VEGA project –Outside plan Engineering Planning...
  - ...



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**Any Questions?**



## Thank You!

- **For more information contact:**  
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- **Or see:**  
<http://www.espatial.com>
- Please complete your evaluation form
  - Eamon Walsh, “Oracle Spatial Pure Web Editing...”