Southern Company’s GIS Asset Management
Proof of Concept

Using GIS to Integrate Disparate Systems for Asset Management

July 25, 2012
Asset Management – Proof of Concept

Today’s Topics:
- Southern Company overview
- The Proof of Concept
  - Project Scope & Objectives
- System Architecture
- Integration overview
- Lessons Learned
- Next Steps
Southern Company

Four operating companies
Headquartered in Atlanta, Georgia

4.4 million electric customers

Distribution service in 120,000 square miles in 4-state region

ArcFM, Designer, Core ArcGIS 9.3

500 GIS Editors, 1650 Users, 1000 web viewer users
Key Drivers

Southern Company has more than 50 disparate applications to manage the millions of distribution assets.

Conduct a Proof of Concept (POC) to gain an understanding of how ESRI ArcGIS integrated with IBM Maximo can centralize the full lifecycle of Asset Management functions and meet the requirements of Southern Company Distribution.
# IBM Maximo EAM

## Work Order Tracking

### Work Orders

<table>
<thead>
<tr>
<th>Work Order</th>
<th>Description</th>
<th>Location</th>
<th>Asset</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1207</td>
<td>Primary Conductor Inspection</td>
<td></td>
<td>5720</td>
<td>WAPPR</td>
</tr>
<tr>
<td>1245</td>
<td>hydrant repair</td>
<td></td>
<td>10234</td>
<td>WAPPR</td>
</tr>
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<td>CAM04</td>
<td>WAPPR</td>
</tr>
<tr>
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<td>Transformer Test</td>
<td></td>
<td>10102</td>
<td>COMP</td>
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<td>Light Repair</td>
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<td>2273</td>
<td>COMP</td>
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<td>9744</td>
<td>WAPPR</td>
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<tr>
<td>1218</td>
<td>Camera #4 Insp</td>
<td>CAMERA4</td>
<td>CAM04</td>
<td>WAPPR</td>
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<tr>
<td>1261</td>
<td></td>
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</tr>
</tbody>
</table>
Selecting Values with Maps

- Work Order: 1207
- Primary Conductor Inspection
- Location:
- Asset: 5720
- Configuration Item:
- Parent WO:
- Classification:
- Class Description:
- Open Map
- Launch Entry Name:
- Feature Class: PLYWOS_S
- Open Drilldown
- Classification
- Attributes
- Go To
- View Contracts
- View Work Details
- View Asset Details
Navigating and Visualizing EAM with Geography
EAM Layers

- Use Line Work Orders to calculate length of linear assets replaced. Material costs.
- Polygon work shows regions affected. Ex. Vegetation management and growth analysis.
- Point work can be aggregated for cluster analysis.
Rethinking our Roles

- Rethinking **Asset Management as Spatial Asset Management**
  - The Map becomes the central access point over the List Tab
  - Geography becomes a new dimension to analyze and feedback into maintenance decisions.

- Rethinking **GIS as an Enterprise Service**
  - Provide GIS capabilities that help other IT systems solve their problems.
  - Extend Geographic thinking to other enterprise departments.
Technical Next Steps

- ArcGIS 10.1 / Maximo 7.5
- Build GeoProcess Services into Maximo Map Tab. **Network Trace.**
- Usability tweaks – ex. Zoom to Feeder.
- Exploit **Telvent** capabilities.
  - As Built Design integration.
- Integrate system with **Spatial BI solutions**, such as the **ESRI Maps** for IBM Cognos adaptor.
Integration Overview
PM Examples - Poles

- Time to perform
- Identify the assets
- Execute PM
- Associate with PM
PM Examples - Poles

Time to perform

Identify the assets

- The ability to track inspection and remediation in Maximo
- Track treatment history over time
- Capture the cost of Contractor for each pole
- Cost of contractor units over time
- Estimated versus actual cost tracking
- Referential treatment location for analysis
- Warranty tracking

Associate with PM
CM Examples

“Third pole from intersection...”
CM Examples

- Spatially create corrective action against an asset record
- Visibility for all reducing duplication, ability to group into Work Order
- Repair history over time
- Cost of ownership for any tracked asset
Asset Life Cycle

Asset Purchase

PM Template

Asset Record Creation

Asset Repair

GIS

Asset Record Retirement

Asset Installation/Relocation

Asset Record Archive
Lessons Learned/Next Steps
Lessons Learned

- Integration of Asset Management and GIS is in the early stages of development
- Direct editing of default must be understood
  - Network features
  - GIS Business rules
- Asset information can live in GIS, Asset management or both however you can only have one owner
- Understand your asset management objectives
- Flexibility is a two edged sword
- POC is good idea that will results in savings in the long run
Questions
Answers
Discussion

Thank you for attending!
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