



Integrating Transformer Lifecycle Management Into ArcGIS

A locally owned and controlled not-for-profit municipal utility, Garland Power & Light (GP&L) serves 68,000 customers, making them the third largest municipal utility in Texas and the 39th largest in the nation. Garland's electric distribution system has 1,007 miles of overhead lines and 1,000 miles of underground lines. Its transmission system consists of 22 substations and 133 miles of transmission lines.

Having used an enterprise ESRI GIS for over 3 years to track their energized assets, GP&L decided in 2008 it was time to extend GIS to other departments within the utility. The focus of this project was to begin tracking the lifecycle of transformers from cradle to grave within the existing ArcGIS system. GP&L chose SSP Innovations to manage and implement the project based on their proven track record for extending ESRI and Telvent Miner & Miner GIS to the enterprise.

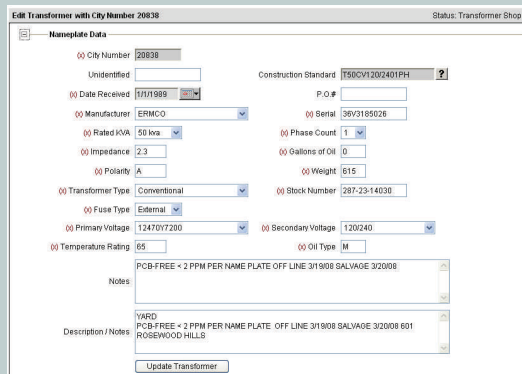
The first stage of the project focused on the creation of a web-based application to allow the storeroom personnel to enter transformer nameplate data directly into the GIS as soon as they were received into stock from the manufacturer. Then all subsequent lifecycle events were also entered digitally. Events including the issue of the transformer from the storeroom, the installation of the transformer, and the removal of a transformer were captured first hand by the field crewmen via a mobile application deployed to each truck. This data was transferred to the back office GIS over a wireless connection where it was immediately made available to all users.

Project Highlights:

- Full Asset Lifecycle
- Enable Warehouse
- Integrate Storeroom
- Web Editing
- Field Editing

Technology:

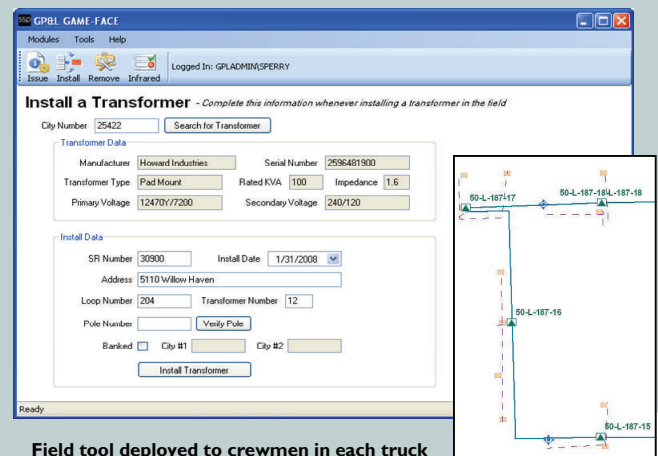
- ESRI ArcGIS Desktop
- ESRI ArcIMS
- ESRI ArcSDE
- TM&M ArcFM
- Microsoft SQL Server
- Microsoft .Net
- Microsoft ASP.Net
- Web Services



Web tool deployed to storeroom and warehouse

When the as-built work prints reached the GIS office, the GIS techs simply needed to relate the transformer install reported by the field crew to the data they were digitizing on the map. Later in life, the transformers could be tested, repaired if needed, and finally salvaged. Tracking the full lifecycle in the GIS allowed extensive reporting via the web tool which enabled better management of the assets from start to finish.

SSP Innovations implemented this project including design, development, deployment, and training in just over three months with a team of three GIS software specialists. The success of the project has GP&L management considering expanding the web and field tools to manage all assets tracked within the GIS.



Field tool deployed to crewmen in each truck