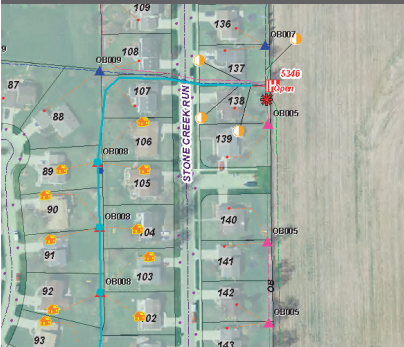




Northeastern Rural Electric Membership Corporation

Improving Outage Response with Mobile GIS

CASE STUDY



CHALLENGE

Northeastern REMC needed to create digital maps of its entire network, enable field crews to respond more quickly to outages, and improve network data accuracy to keep customers and staff informed.

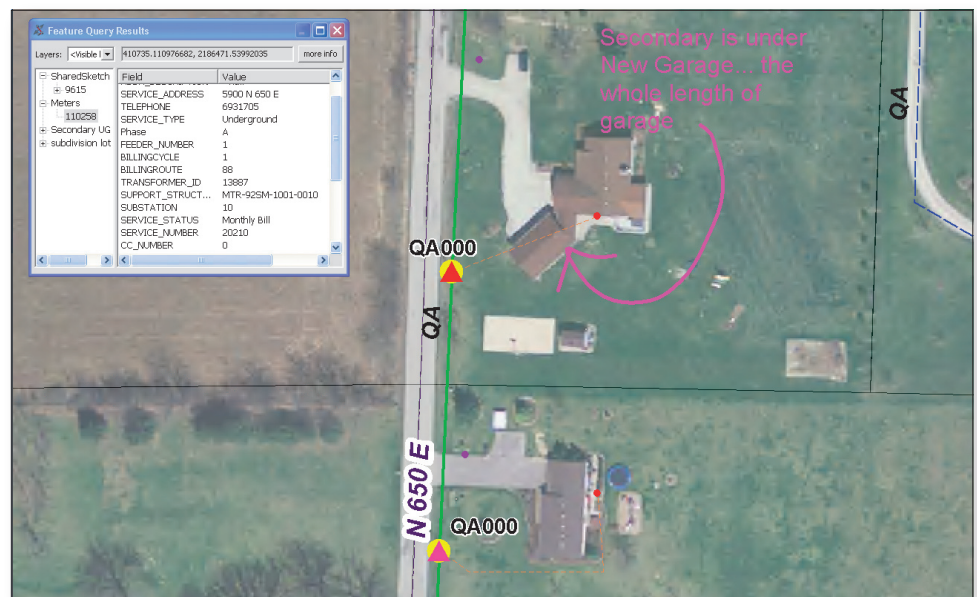
RESULTS

- Accurate maps of the service territory are now available throughout the organization.
- Outage response is improved by equipping field crews with up-to-date maps, GIS-based routing, and accurate network data.
- Staff and customers are better informed with data that can be viewed, revised, and searched from the office and the field.

“With GIS, our engineering model is more accurate, our outage predictions are better, and our staff and customers are better informed. GIS has saved our company a lot of time and added simplicity and efficiency to the work of our employees.”

Steven Weber
GIS Technician
Northeastern REMC

Northeastern Rural Electric Membership Corporation (REMC) is a consumer-owned utility that supplies electric power to members in northeastern Indiana. More than 26,000 households and businesses receive power from Northeastern REMC. Utility linemen have traditionally navigated the service territories by memory, armed with a handful of paper maps. However, over the years, the once sparsely populated service territory has become heavily populated suburbia.



Using mobile GIS, staff members can make notes, or redlines, on their PCs. Once the user returns to the office, the software syncs with the GIS server and sends the redlines to all other users as well as the mapping department for review.

The Challenge

Northeastern REMC field crews were working with outdated paper maps of the service territory, and the company had not yet mapped a single meter. The utility needed to create accurate, digital maps of its entire network. To satisfy the needs of its growing suburban customer base, Northeastern REMC was also tasked with enabling field crews to improve outage response time. To keep its customers and staff better informed, the utility had to improve network data accuracy as well.

The Solution

Northeastern REMC selected geographic information system (GIS) technology from ESRI. Using GIS, the utility would be able to map the entire network. Field crews would then have access to digital maps, up-to-date data, and new routing functionality. Mobile GIS would enable updates from the office and the field to ensure that customers and staff members would have the most accurate data.

Learn more at www.esri.com/utilities.

Northeastern Rural Electric Membership Corporation

ESRI SOFTWARE USED

ArcGIS® Desktop
ArcGIS Server

OTHER SOFTWARE USED

GO! Sync Mapbook by TC
Technology

DATA USED

Road Centerline Data
Digital Orthophotography

HARDWARE

PC Laptops

FOR MORE INFORMATION

ESRI

380 New York Street
Redlands, CA 92373
Phone: 800-447-9778
Fax: 909-793-5953
Web: www.esri.com

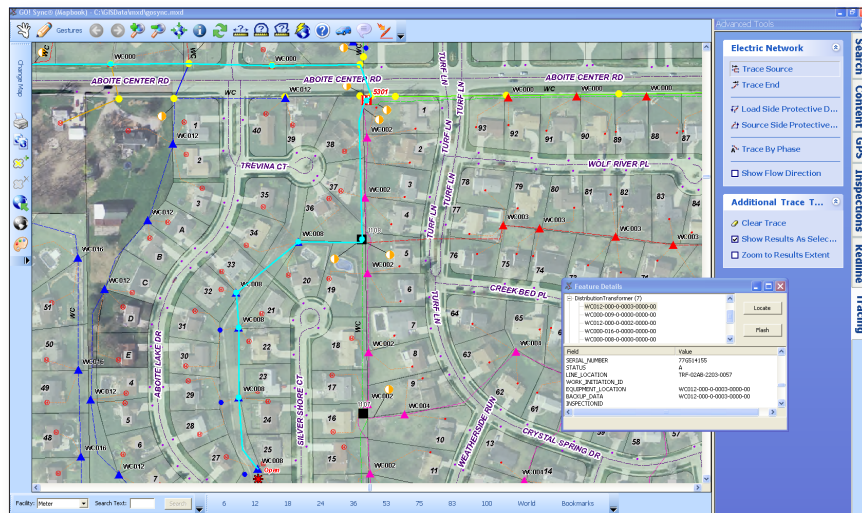


Copyright © 2010 ESRI. All rights reserved. ESRI, the ESRI globe logo, ArcGIS, and www.esri.com are trademarks, registered trademarks, or service marks of ESRI in the United States, the European Community, or certain other jurisdictions. Other companies and products mentioned herein may be trademarks or registered trademarks of their respective trademark owners.

G43699 PIP5M8/10sh/ms

To remap its entire service territory, including every customer meter, the utility took its GIS to the field. A mobile GIS application allowed the utility to transfer data to and from the field, keeping information updated throughout the organization. To ensure that GIS data is automatically updated to the mobile application, the utility deployed GO! Sync® Mapbook by TC Technology.

To speed field crew response during outages, Northeastern REMC employed new routing functionality with road centerline data from local counties. Utility field crews now use a GPS device built into their laptops to search for facilities or equipment and generate the optimal driving route.



Color-coding facilities by their electrical phase and tracing functionality allows field personnel to quickly assess the severity of an outage.

The Results

The utility's entire service territory is mapped, increasing the accuracy of information for customers and staff. Field crews now use mobile GIS to update from the field, ensuring up-to-date network data. Crews have improved outage response with routing functionality and GPS capabilities. GIS data is now accessible throughout the enterprise, with approximately 43 users on different devices in several departments.

"Using GIS technology, we can deliver the right information to the right hands at the right time," said Steven Weber, Northeastern REMC GIS technician. "Field crews can view, search, and revise GIS data and use GPS for facility locating and routing. This improves the flow of accurate information from the field to the office to the customers."

By integrating its other systems with GIS, the utility is able to use meter status information from its advanced metering infrastructure (AMI) to create a network health report map. The map is used as a troubleshooting aid and to help ensure that the network is reporting the expected configuration. GIS-based electric network data also contains intelligence on power source and feed direction. A tracing functionality within GIS enables field staff to quickly determine tie points and load information during outage situations.

Learn more at www.esri.com/utilities.