

## Southside Electric Cooperative sparks new efficiencies with IBM SOA solution.

### Overview

#### ■ Challenge

Provide utility employees with accurate and consistent information, enabling them to dispatch service units more quickly and efficiently, and better serve customers

#### ■ Why IBM?

Prolifics' deep experience working with SOA solutions, backed by IBM at the highest level, a trusted software provider with a proven solution that works on any platform with any software

#### ■ Solution

Information gathered from the field is updated across systems in real time, using SOA technology and the Qualcomm satellite mobile data solution, eliminating the manual data-transfer processes that previously impeded growth and customer service



The process to complete a member's service request takes 67% less time with the IBM and Prolifics service oriented architecture solution integrating Qualcomm's mobile data solution with SEC's existing back-office applications.

#### ■ Key Benefits

SOA technology enabled the utility to implement a mobile workforce management system that lets crews track service orders, enter their time and mileage, locate other co-op vehicles, review service orders, enter major storm data in real time to provide a better view of materials used and damage per county in an effort to be prepared for FEMA reporting; projected 67% reduction in turnaround time for service orders and 30% increase the number of collections SEC can complete per day

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—Linda Easter Davis,  
Information Systems Supervisor,  
Southside Electric Cooperative

## Achieving real-time information integration with re-use of existing assets

### Key Components

#### Software

- IBM WebSphere® Message Broker for Multiplatforms
- IBM WebSphere MQ
- IBM WebSphere Business Integration Adapter
- Linux®

#### Servers

- IBM System i™

#### IBM Business Partner

- Prolifics

*“Prolifics was instrumental in creating a valuable interface for Southside Electric Cooperative using IBM WebSphere software. The new interface has resolved the accuracy of this information and has dramatically improved the availability of data to all areas of the company.”*

*—George Felts, Manager of Operations, SEC*

Soaring housing costs in urban areas of Virginia have attracted residents to less costly rural parts of the state. That growth has put a strain on the utilities that provide electricity and related services in rural locations.

Southside Electric Cooperative (SEC) is a case in point. SEC is a member-owned rural electric utility that provides electricity services to portions of 18 counties, 6 towns and a city in southern Virginia. The utility, incorporated in 1937, also provides energy audits, heat loss/heat gain estimates, safety and billing programs and security lighting.

During the last five years, SEC has seen significant growth. The Cooperative needed to find a way to maintain high customer service levels while dealing with the rapid growth. Otherwise, SEC risked having dissatisfied customers. Even worse, the company faced the possibility of leaving customers in the dark—literally.

To maintain a high level of customer service as well as to conduct day-to-day business, SEC utilized a number of mission-critical applications—running on different platforms, purchased from different vendors and utilizing disparate databases.

However, data integrity issues plagued the utility, and the problem was magnified as the company looked to implement a mobile workplace solution for its linemen.

#### **Siloed systems lead to inaccurate data**

Because the disparate applications were not connected to each other, SEC employees had to manually enter data from one system into another during scheduled transfers. This process could take several days, required the keying of redundant data and often led to inaccurate and inconsistent information. There were also problems in the field, where linemen still relied solely on paper-based service orders and data entry clerks to update the systems upon project completion. With this labor-intensive method, crew members could receive only a static number of orders per day. Furthermore, the paper-based system meant that orders were inevitably misplaced and, in some cases, never completed or had to be recreated and sent out again.

“We were suffering from disparate and error-prone data,” says Linda Easter Davis, information systems supervisor, Southside Electric Cooperative. “We wanted to utilize real-time integration to provide employees with accurate and consistent information, enabling them to dispatch service trucks more quickly and efficiently, and to better serve customers, who are our member-owners.”

### Plugging in a service oriented architecture

In 2001, SEC management set out to build a real-time integrated system. However, the technology needed to make this a reality didn't yet exist. The utility had to settle for temporary fixes until IBM Business Partner Prolifics started working with SEC, having come together with the company at a National Rural Electric Cooperative conference. Prolifics introduced the company to the power of IBM WebSphere Message Broker software and service oriented architecture (SOA) technology. The solution promised to provide what no other could—a proven technology enabling real-time integration and re-use of existing assets. “We made our decision to work with Prolifics because of its expertise in SOA,” says Davis, “and because the Prolifics solution was backed by IBM, a trusted software provider and an organization that we found understood the concept of 24x7 availability.”

Teaming with Prolifics, SEC integrated its six databases and many applications using WebSphere Message Broker, IBM WebSphere MQ and IBM WebSphere Business Integration Adapter software. By using the WebSphere Message Broker tool, SEC was able to keep using its legacy systems without the need for recoding. The IBM SOA solution, running on an IBM System i platform with the Linux operating system, provides process and data flows across systems and presents a unified interface on the front end. Qualcomm OmniVISION delivers a mobile solution integrating data in real time between the field and the office. WebSphere MQ acts as the robust, resilient messaging backbone linking all the systems and providing assured delivery of information. With support for more than 80 different platform configurations, WebSphere MQ enables more to be integrated into a customer's SOA.

“Prolifics was instrumental in creating a valuable interface using IBM WebSphere software,” says George Felts, manager of operations at Southside Electric Cooperative. “The new interface has resolved the accuracy of this information and has dramatically improved the availability of data to all areas of the company.”

### Tested, proven solution

Prolifics' dedicated experts were able to implement the robust integration platform from architecture and design to deployment and knowledge transfer in under four months. “SEC is now reviewing expanding the integration project with a new outage-management system and IVR,” says Davis. “Additionally, SEC looks to enhance our user environment and gain single sign-on capabilities leveraging IBM WebSphere Portal software.”



*Real-time integration provides employees with accurate and consistent information, enabling them to dispatch service units more quickly and efficiently, and to better serve customers.*

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Southside Electric  
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*– Jeff Edwards, President/CEO,  
Southside Electric Cooperative*

“We are also considering using IBM Business Modeler to improve our business process management,” continues Davis. “There are three phases to our Business Modeler implementation. Phase I can deploy a view of the business procedure to our users, which would enhance the training and understanding of our procedures. Phase II would allow us to augment our business processes by entering data so we could see any bottlenecks as well as cost. Phase III uses data processed through the broker to display real-time activity on the business process. For example, if members call in to check on the status of their work order, the Call Center CSR would actually display the workflow for those particular work orders, highlighting the status. We are considering implementing these phases over a three- to five-year period. SOA opens the door for better data decisions as well as providing better information for our members.

“WebSphere has three basic components: messages, adapters and a broker,” Davis explains. “Messages are the data. Adapters are used to retrieve the data from a database and send it to the broker as well as sending it from the broker back to the database. The broker sits in the middle between all databases and is programmed to know what data needs to be sent to what database. There are different adapters for the different types of databases. Once configured, this process moves the data as it changes on any of the databases in real time. IBM SOA technology is tested and proven and works on any platform. Once the data is sent to the broker, it can be sent to any of SEC’s databases to keep data consistent and accessible without relying so heavily on a vendor to provide data for a simple spreadsheet. SEC controls the broker and its data, not an outside software vendor.

“Eliminating the point-to-point integration we once used simplifies the data management,” continues Davis. “As other software is developed for electric utilities, we have the option to review it and determine if that’s the best solution for SEC. The complicated point-to-point integration and cost involved with changing software is no longer an issue. Using the broker, you simply remove the existing software and replace it with the new and create that one integration back to the broker. The broker continues to send the data to the other applications in the format they need. NRECA’s Multispeak has helped us because many electric cooperative software vendors have created Web services. We simply use those Web services to move our data through the broker. We have worked with Daffron, Hunt Technologies, Milsoft, Miner and Miner and Qualcomm. We appreciate their support of our SOA and look forward to working with other vendors in the future.”

## **Cutting service turnaround time by 67 percent**

By having an integrated, centralized view of the systems needed to respond to a service request, SEC has saved time, improved the productivity of its employees and boosted customer satisfaction. WebSphere Message Broker software and SOA technology enabled the utility company to implement a mobile workforce management system that lets crews track service orders, fill out time sheets, locate other co-op vehicles and review service orders—all from the cabs of their trucks. Information gathered from the field is updated across systems in real time, eliminating the manual data-transfer processes that previously beleaguered SEC. The solution integrates each application to function as if it has a single database and provides employees with consistent, accurate and up-to-date information.

“The Prolifics/Qualcomm/Southside Electric Cooperative partnership has benefited our members in many ways. Customer service has improved due to the increased efficiencies realized through the optimum blending of new and existing technologies,” says Jeff Edwards, SEC president and CEO.

The automatic updates enable technicians as well as customer service representatives to have the most correct information while on the job. Further, SEC was able to move from a 12-step paper-based metering process

to a five-step paperless system, reducing the turnaround time for service work by 67 percent. Technicians are able to complete more service orders. SEC estimates that these greater efficiencies will help decrease average service order requests by 70 percent—from a maximum of one week to two days or less. SEC also reports a 30 percent increase in the number of collections that it can complete per day, accelerating cash flow.

Without the need for redundant data entry across multiple applications, the utility has been able to reallocate resources to more critical tasks. The SOA environment has enabled the organization to handle the unexpected, allowing the company to be more agile. As Davis sums up, “Thanks to IBM, Prolifics and Qualcomm, our SOA and mobile data solution bringing the office and field together is the single most important business improvement we have worked on in the 20 years I have been here.”

### **For more information**

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