

CASE STUDY

ORION®

Radio Frequency System



*Meter reader using ORION® Symbol®
Walk-By Handheld*

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This case study was originally published in Badger Meter's *CONNECTIVITY™* newsletter in June 2003.

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ORION® Receiving Stellar Reviews

By: Ted Schaar

ORION®, Badger Meter's newest radio frequency automated meter reading system, was released in September, 2002, and is being greeted enthusiastically by utilities across the country.

For this report, representatives from five utilities were asked why they selected ORION and how the new system is working out in their communities. Some of the customers were already using an AMR system and others are new to automated technology.

Sunshine State Community Automates with ORION

Holly Hill, Florida, is a city of about 12,000, located in east central Florida, between Daytona Beach and Ormond Beach.

Customer Service Superintendent John Manuel, City of Holly Hill Utility Billing Department, was instrumental in the decision to purchase ORION. "Previously, we used a manual read system," he said, "and we were looking for a way to streamline the process, provide better service, and bill customers as accurately as possible." ORION was selected after a thorough evaluation process involving several vendors, Manuel said, "because it's a superior system."

About 900 ORION radio-read units are in and working; approximately 4,900 more are scheduled to be installed. "We've read the ORION meters once so far, and it went very well," Manuel continued. "When all of the meters are in, we think we'll be able to cut our read time from 18 days to three days."

Manuel also described Badger's CONNECT® software as "easy to use" and said it interfaced well with Holly Hill's billing system. "It took us about a day to learn the new system," he recalled, "and now it's a cinch."

ORION Serves Customers Stricken by Drought

Moore County, North Carolina, a resort area of 75,000 residents located in the southern part of the state, is well known for golf courses, including famed Pinehurst, site of a number of professional tournaments.

Moore County Public Utilities supplies water to 13 municipalities and trialed a competitive RF system in the past. In addition, a substantial number of residences draw water from private wells. After a drought of four years, however, many of these are running dry and affected homes are being connected to the public water system. ORION was chosen to serve the new connections.

Customer Service Manager Peggy Deak said that about 135 meters have been installed so far out of a total of 700 that will go in during the first phase of a three-phase installation process. Formal meter polling has not occurred but, during training, utility personnel were impressed by ORION's performance. "We had 30 or 40 meters in the ground at the time," Deak remembered, "and noticed the read range was really good." Deak also said "training on ORION was great, and the CONNECT software is easy to learn."

ORION Supplements Phone-Based System

Romeoville, Illinois, a community of about 21,000, located 32 miles southwest of Chicago, has used Badger Meter's ACCESSplus® system since 1987. ACCESSplus relies on a customer's



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telephone line to transmit water usage data. The system worked well for years but the growing use of cellular telephones has made the village re-think its AMR strategy.

According to Water Foreman Chris Drey, "When people change their primary phone service to cellular, they often forget about the meter connection, so suddenly we stop getting readings."

Only about 200 have switched to cell-only service, Drey pointed out, but he thinks the trend will continue. He selected ORION® to accommodate customers who no longer have landline telephones and also plans on using it for newly built homes and new commercial accounts. "One of the nice things about ORION," he said, "is you don't have to worry about customers disconnecting their phone lines."

Drey chose the ORION Global Positioning System (GPS) option because the village is spread over 25 square miles: "We'll need to input the latitude and longitude for each ORION account but once we do, it will be very easy to pinpoint and contact residences or businesses that have unusual usage patterns. The GPS capability will pay for itself quickly."

Another ORION feature Drey likes is the ORS touch screen mobile reading system. "Everything we need is in a handy laptop package that is very easy to use," he said. "Our people can be ready to read meters in about five minutes."

ORION Accommodates Cell-Phone-Only Customers, Meets Other Needs

Roselle, Illinois, is also located in the Chicago area, about 32 miles due north of Romeoville. Water Superintendent Mike Schulz, Village of Roselle Water Department, is happy with the Badger Meter ACCESSplus® telephone-type reading system his community of 21,000 has depended on since 1991.

"ACCESSplus lowered our cost to read dramatically," Schulz said, "and it can't be beat as long as there's good telephone service, but we're seeing people abandoning hard-wired telephones in favor of cell service."

So far about 100 Roselle customers have switched to cellular but, like his counterpart in Romeoville, Schulz sees the trend



ORION® Meter Installation

continuing and selected ORION to take up the slack: "We liked the fact that ORION worked with our existing Badger® meters and also that we wouldn't need an FCC license - that's a major advantage to the 'bubble up' broadcast approach ORION uses. It's a very economical system."

Radio-read meters are also being employed in situations that were not amenable to ACCESSplus such as outside drinking fountains and landscape irrigation systems. "We like to account for all the water we use, and ORION is helping us read those meters efficiently and to detect leaks faster," Schulz said.

ORION was a natural choice for Roselle, Schulz continued, because "we look at Badger as our strongest partner." Schulz also liked the fact that ORION works with the same CONNECT® software the village has used with ACCESSplus. "It makes it less like running two systems," he explained, "and that made the transition very easy." Because the village is geographically small, Schulz opted for the non-GPS system but has found additional uses for the ORION laptop. "We're looking at putting applications on it that will help us address service requests, keep an appointment book, and accomplish other tasks."

ORION Brings Cost-Effective Meter Reading to Small Town

Alpena, South Dakota, a community of 260 residents, is located nearly in the center of the state. Until recently, Alpena relied on a community well but now is receiving water from Mid-Dakota Rural Water, a pipeline system that serves more than 30,000 South Dakotans in an approximately 7,000-square-mile area.

Town of Alpena Finance Officer Shelly Orth said concerns about water quality and maintenance costs associated with the

community's well were primary reasons for switching to a pipeline system. Mid-Dakota Rural Water meters the water it supplies the town so Alpena officials decided to pass the costs on by metering the usage of each home and business. "ORION was viewed as cost-effective because we wouldn't have to visit customer locations on a monthly basis," Orth said.

Citizens were informed about the planned change in a series of town meetings and Orth was hired to collect monthly readings and send out bills. "I've never done anything like this before, but I've had great support," she said. "The ORION training was excellent and Badger Meter people have been very responsive and helpful. Even though we're a small town, and I'm basically a one-person utility, Badger treats us as if we had thousands of meters."

Orth characterized the ORION system as "user-friendly" and said that setting up the laptop and driving around to pick up readings from the town's 135 meters takes her about thirty minutes. "I've only completed one billing cycle but not a single customer complained or even called with questions," she said. "ORION did alert me to about ten customers whose usage indicated a possible leak. I contacted them and most of the problems were due to malfunctioning toilet valves that were fairly easy to repair."

ORION Meets Varied Needs, Produces Similar Benefits

Five unique utilities, five unique situations, but many of the same reasons for choosing ORION: accuracy, effectiveness, ease of operation, reliability and economy.

"From my perspective, utilities cannot afford not to automate," concluded Roselle Water Superintendent Schulz. "Manual read systems might initially cost a little less than ORION, but they are way more expensive to operate."

Asked why so many utilities are choosing ORION, Moore County Customer Service Manager Deak replied, "Everybody trusts Badger meters, so you might as well go with their newest radio-read system, too." ■