



# OHIO UTILITY MEETS FCC REQUIREMENTS WHILE IMPROVING OPERATIONS



Hancock-Wood Electric Cooperative meets the requirements of the FCC's narrowbanding mandate, minimizes outage times, improves efficiency and enhances employee safety with its new Motorola two-way radio system.

## SITUATION

**Saddled with an aging analog radio system and facing the approaching FCC narrowbanding mandate—along with a reduction in its only tower's power from 250 to 100 watts—Hancock-Wood Electric Cooperative needed a communications system that would be FCC-compliant while providing clear audio from anywhere in its coverage area. Additionally, it needed a solution that would enable it to track its mobile line workers and trucks for even greater efficiency.**

As a non-profit electric cooperative serving almost 13,000 customers, Hancock-Wood is committed to keeping the cost of power affordable for its membership while reducing (and preventing) outage time. Two of the cooperative's main concerns were ensuring communications to handheld radios throughout the service area and providing real-time location data in its outage management system to improve restore times. However, the real driving force behind the project was the FCC's narrowbanding mandate and the reduction of power. "We knew we had to build a highly reliable communications infrastructure to accommodate the future needs of the cooperative," said Shannon Thom, Hancock-Wood's Vice President of Information Technology.

## SOLUTION

**A MOTOTRBO communications system with IP Site Connect and Milsoft's DisSPatch Outage Management System with the neoNytro GPS application. This combination of hardware and software, provided by Bender Communications, Milsoft, NeoTerra Systems and Motorola, gave Hancock-Wood the functionality it needed in an easily deployed, affordable package.**

When Don Humphrey, Sales Consultant and Account Manager at Bender Communications first approached Thom about the MOTOTRBO solution, Thom was very receptive to hearing his ideas on how to get more power to his coverage area as well as how he could seamlessly integrate a GPS system. "Knowing the cooperative would not get relicensed at that high power, we addressed the issue by using 100-watt MOTOTRBO repeaters in an IP Site Connect configuration. Now, we have six towers that give Hancock-Wood better coverage than what it had from a single site before," Humphrey said. Durable MOTOTRBO radios provide clear audio and reliable communication, and the Milsoft Outage Management System in conjunction with the neoNytro application allows Hancock-Wood to improve restore times during outages thanks to real-time location data.

## CUSTOMER PROFILE

### Customer

- Hancock-Wood Electric Cooperative, North Baltimore, Ohio

### Industry

- Utilities

### Motorola Solution

- MOTOTRBO™ professional two-way radios with IP Site Connect
- Milsoft DisSPatch® Outage Management System via neoNytro GPS application

### Solution Features

- FCC narrowbanding compliance
- Real-time location data that allows dispatchers to manage crews more efficiently
- Reliable communications across coverage area, including the remote Kelleys Island
- Enhanced employee safety

## RESULT

**Not only is Hancock-Wood prepared for the narrowbanding transition, but it now has the tools in place to improve employee safety, reduce outage times and communicate effectively from anywhere in its service area—including the remote Kelleys Island.**

“Knowing we can communicate and knowing where our crews are have made it easier for us to overcome operational challenges,” says Thom. Reliable dispatch services, improved line worker safety, enhanced everyday and emergency communications along with reduced outage times are many of the benefits Hancock-Wood has seen with the new technology. “Technology drives these simplified processes. Hancock-Wood is extremely proud of the up time they have, its quick response to outages and a new level of customer service,” said Humphrey.



**“We have, for many years, depended on Motorola so that we know that our crews can communicate when they need to communicate. And now, we depend on Motorola and NeoTerra to let us know where our crews are at all times.”**

Shannon Thom, Vice President of IT, Hancock-Wood Electric Cooperative

## THE TRANSITION TO 12.5 KHZ

The FCC narrowbanding mandate requires licensees to migrate to 12.5 kHz technology by January 1, 2013. When the team at Bender Communications was evaluating the cooperative’s equipment to find solutions to its other challenges, it realized that some of its gear couldn’t be reprogrammed to be narrowband compliant. At that point, “it just made sense to get everything done all at once,” Humphrey explained. The cooperative is now able to transition to the new technology at its own pace before the deadline, since MOTOTRBO two-way radios operate at both 12.5 kHz or 25 kHz.

## GPS—THE KEY TO EFFICIENCY

When it comes to reducing outage times, knowing where employees are located in the field is imperative to sending the right teams to the job. Before the new solution was deployed, employees used either their radios or cell phones to call the dispatcher to report their location. “We need the ability to see which truck is closest to a device that is out or a line that is down,” said Thom. “Before, the only way we knew where a particular crew was located was by where they were scheduled to go in the morning, or if they had called in.”

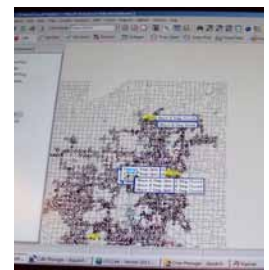
NeoNyro is a data application that has been developed for the MOTOTRBO platform, and Humphrey said that in his experience, he’s known it to be “one of the most robust and easiest GPS tracking solutions that are out there.” Using the MultiSpeak® Specification for interoperability, the neoNyro application sends GPS updates to the Milsoft DisSPatch Outage Management System that tracks Hancock-Wood’s

vehicles on its own maps. Thom shares an employee perspective on the new technology, “We have had two significant storms since implementing the MOTOTRBO and neoNyro solution and our crews were amazed by the way dispatch was able to lead them to outages close to them.”

With this new process in place, the cooperative has been able to reduce “windshield time”—the time it takes the crew to arrive at an outage or work site—and manage its crews to be more efficient. This allows the cooperative to expand and enhance its services without having to hire more employees.

## RELIABLE COMMUNICATIONS, ANYTIME, ANYWHERE

Before the new communications system was implemented, employees at Hancock-Wood experienced hiccups in communications at the fringes of the coverage area, resulting in missed calls and poor audio quality. This was a particular concern in the southern part of the territory. Poor coverage for handheld radios was also a problem. Thom illustrates this, “When our utility crews were up working in the buckets on their trucks, the only communication they had was cell phones.” Adds Humphrey, “Once a line worker got out of their truck, if they were far away, they couldn’t always talk to dispatch.”



GPS tracking

## CASE STUDY

HANCOCK-WOOD ELECTRIC COOPERATIVE



Kelleys Island also presented a unique challenge. Located more than two hours away from Hancock-Wood Electric Cooperative's service area, radio communication with the crew on the island had been non-existent; crews could only communicate via cell phone. With the new IP Site Connect system in place, for the first time, the barriers to communicating with crews on this small resort island were removed.

Reliable communications not only came in the form of improved coverage with the new solution, but also the hardware itself. Hancock-Wood is now using MOTOTRBO XPR 4550 mobile radios and XPR 6550 portable radios. Thom relays, "Like the other Motorola products we have used, they are rugged and work hard when you need them to. We have not had the MOTOTRBO radios long enough to abuse them, but we sure abused the old Motorola equipment on occasion. One of our guys ran over one with a riding lawn mower once. It was chopped up a bit, but it still worked!"

### ENHANCING EMPLOYEE SAFETY

Reliable communication has improved efficiency at Hancock-Wood—and enhanced employee safety. With the expanded coverage and GPS technology, "Our teams can communicate when they need to communicate," explains Thom. "And, if we have a safety issue with any one of our crews, we know right where to go for help." "It all goes back to peace of mind," says Humphrey, "Knowing if you're in trouble you can get a hold of somebody on the radio—whereas in the past, that may not have been the case."

### "What made Motorola the right choice? Quality, reliability, price and support."

Shannon Thom, Vice President of IT, Hancock-Wood Electric Cooperative

### MOTOROLA WAS THE RIGHT CHOICE

Before deciding to go with Motorola's MOTOTRBO communications system, Hancock-Wood explored several other options. Initially, the cooperative considered doing away with radios altogether and relying solely on wireless providers. They also considered a trunking system. In the end Thom concluded, "The combination of MOTOTRBO and neoNyro provided the functionality we wanted. We were looking for a fully functional voice communications system that was not vastly different from what our employees were used to."

Ultimately, Hancock-Wood wanted a solution where it could own the infrastructure to avoid recurring costs and give it control of its own communications. "The level of ROI was better for the deployment of their own internal communications system," Humphrey explained. "They control the assets, they control the sites ... they're not relying on outside forces to maintain the operation of their system."

"We knew it was going to be a Motorola system from the get-go. It was a no-brainer," said Thom. "What made Motorola the right choice? Quality, reliability, price and support."

### SATISFIED EMPLOYEES—AND CUSTOMERS

At Hancock-Wood, everyone from the dispatcher and line units to service personnel and office staff use the new technology, and they all have been impressed. "After some initial training it's been an easy transition," says Humphrey. "They've got the kinks worked out and it's going even better than they envisioned." The new communications system has made the dispatcher's job much simpler, and now everyone can communicate with each other when they need to.

## CASE STUDY

### HANCOCK-WOOD ELECTRIC COOPERATIVE



The membership of the cooperative is seeing the benefits of the new system, too. “We’ve reduced outage times, we are sure of it,” says Thom. The cooperative has been able to respond to other customer needs as well. Both of these things bode well for Hancock-Wood, as it is always looking for ways to improve customer service and attract new businesses to the community—and a stable utility can be a key influencer. “Although we have 13,000 meters, more than 60% of our revenue comes from a few hundred commercial and industrial members. Attracting additional commercial and industrial members is beneficial to all members of the cooperative,” Thom explains. As part owners of Hancock-Wood, the cooperative membership will also be pleased with the efficiencies gained from the new technology. Greater efficiency can mean lower operating costs and better operating margins. Operating margins can be used to improve reliability, reduce the impact of increasing generation costs and also can be returned directly to the members in the form of Patronage Capital.

## WHAT’S NEXT

“Implementing technologies to improve efficiencies and reliability is what our membership expects from us,” says Thom. “Our goal is to implement solutions that keep the cost of power affordable for our membership.” He went on to say that the cooperative is currently exploring texting for expanded operational efficiencies. “We’re just getting started texting from dispatch to employees and also between units,” explains Thom. “At some point, we would like to use an automated system to text outage and device location numbers to them and also let them text back to verify suspected problems or even text that a problem has been resolved.”

Humphrey praises the cooperative, “Innovation is something that drives everything they do. Making things as easy as possible so they have incredibly high up times for their customers is very important—and a lot of this is driven by Hancock-Wood’s IT department.”

For more information on how Motorola’s MOTOTRBO radios can improve your utility’s operations, please visit us on the web at [www.motorolasolutions.com/MOTOTRBO](http://www.motorolasolutions.com/MOTOTRBO)

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