

## Farmer's Cooperative Association of Canby

Yellow Medicine County, Minnesota



### CUSTOMER

Farmer's Cooperative Association of Canby is a cooperative owned by local farmers. It primarily provides fertilizer, chemical and insecticide products to farmers in Yellow Medicine County, Minnesota. It also owns several convenience stores/Cenex gas stations and operates out of five buildings across the county in the cities on Canby, Minneota and Ghent.

### SOLUTION PROVIDER

AG Wireless is a wireless network solutions provider specifically focused on the agricultural industry, serving agronomy and grain businesses that have a variety of buildings in different locations that need connectivity. It provides the agricultural community with network design and implementation services for applications, local area networks (LANs) and wide area networks (WANs) to deliver a reliable, complete networking solution.

### THE SITUATION AND CHALLENGE

The Farmer's Cooperative Association of Canby has five buildings in three main locations, each running multiple businesses, and spread over 23 miles. The businesses share corporate resources, i.e. marketing and finance, and run multiple computer work stations and several POS (point of sale) terminals at each location. The Cooperative had been upgrading its technology capabilities to increase productivity, gain better visibility into operations and reduce expenses. But the lack of connectivity between sites was keeping them from seeing that technology's full potential. A high speed DSL Internet connection was available from the Canby location, but otherwise connectivity between locations was by dial-up through the Internet.

The Minneota and Ghent facilities could be connected by wireless, but connecting those locations to the main offices in Canby was impossible. The 17.5 mile distance coupled with near-Line-of-Sight obstructions prevented wireless systems from reliably connecting; and high-speed Internet connections and a VPN were unlikely. But if a broadband link could be made from Canby, the Cooperative could realize the benefits of a networked business.

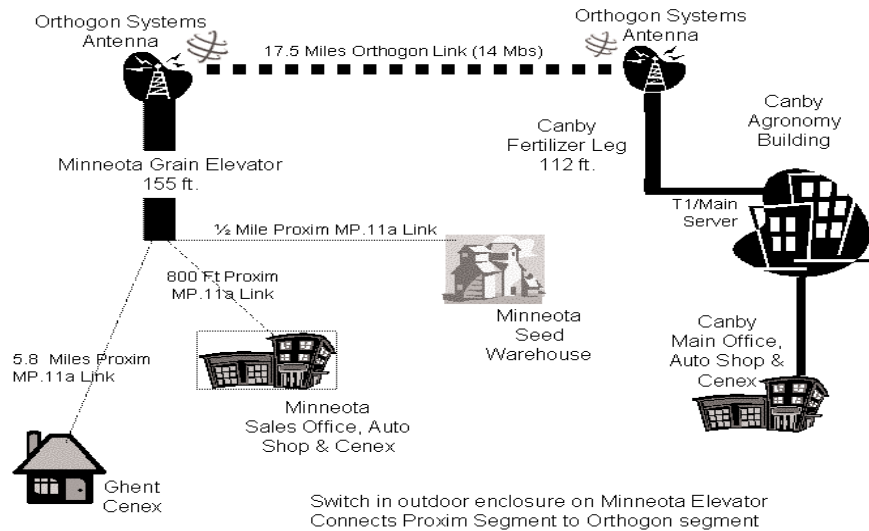
### TECHNICAL REQUIREMENTS

- The 17.5 mile link from the main location in Canby would need to run at high throughput through an obstructed fresnel zone.
- The connection was required to be carrier-class for the hundreds of business-critical transactions processed daily.
- The broadband link had to support both voice (multi-service PBX) and data
- Support for terminal services required

### DEPLOYMENT DETAIL AND INTEROPERABILITY

AG Wireless found that the OS-Gemini could uniquely satisfy the technical requirements for the long distance, near-Line-of-Sight broadband link and deployed it as the critical enabler of a private network for Farmer's Cooperative Association of Canby.

AG Wireless connected the two buildings in Canby by Ethernet cable and brought in a T1 connection. It then connected the OS-Gemini from the Canby location to a 5-port Cisco Ethernet switch in a grain elevator in Minneota. The Cisco switch connects the OS-Gemini segment with Proxim's MP.11a point-to-multipoint platform which connects the three other Cooperative buildings between one and six miles away.



## THE RESULTS

The OS-Gemini has provided a carrier-class, always-on, 14 Mbps connection over a 17.5 mile distance through an obstructed fresnel zone – a link that was impossible to achieve with other broadband wireless platforms. As a result, the remote locations of the Cooperative are now running as one local area network (LAN) for data sharing and transfer, with all locations accessing the Internet through the Canby office T1. Using the (need brand) multiservice PBX, inter-company calls are connected over IP with excellent quality and POS transactions and out-of-office calls are backhauled to the main office and connected through the T1.

The OS-Gemini was the enabler of this network. By consolidating phone line traffic onto a wireless WAN and deploying a multi-service PBX, the Cooperative expects to achieve return on investment in under a year and save almost \$40,000 in networking expenses over the next three years. In addition, productivity was enhanced and operations were streamlined.

## WHY ORTHOGON SYSTEMS?

- A wireless broadband connection was not possible with other products
- Orthogon uniquely provided a high throughput, carrier-grade connection
- Installation was complete in a few hours, as opposed to weeks for other systems

"We could not make this connection work with other products, there was neither the high bandwidth nor carrier-grade reliability of the OS-Gemini. An attempt to achieve this type of high quality connection would have entailed building a tower and using 6 foot antennas – weeks of labor and a high expense. We had Orthogon up and running in a half day."

*Paul Mehl, President, AG Wireless*

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