OneWireless Provides Reliable Solution for Long-Range Multisite Connectivity

“Honeywell’s OneWireless network provided us with a proven wireless backup solution in case our fiber link between our two sites was somehow disabled, severing communications between our main gas plant and our remote facility. Their solution provided an unprecedented 7.5 mile point-to-point mutinode range resulting in effective and reliable wireless communications between our two sites.”

Greg Andrews, Process Controls Coordinator, Enterprise Products, Meeker Plant

Benefits
Enterprise Products needed to have a backup solution in place for its fiber link between two of its sites in Meeker, Colorado. Having gone through several instances where the fiber link was cut, effectively severing communications between its gas plant and remote facility, the company knew it was time for backup plan. Honeywell presented its OneWireless™ network and discussed several options to effectively provide a wireless point-to-point connection that would automatically come online if the fiber link was broken.

After various discussions regarding signal strength and failover switches, Honeywell was able to install a reliable wireless point-to-point connection over a span of 7.5 miles – the longest distance installed to date. Other benefits included:

- Services and radio frequency assessment expertise resulting in 100 percent signal strength and reliable wireless communication between the two facilities
- Enterprise Products retained ownership of the communication without having to rely on a third party for wireless communication
- Failover testing was successful and system demonstrated wireless link’s ability to perform under the operating load of the network
- Switches were configured to use the spanning tree algorithm to activate wireless automatically in the event of the fiber link going down
- Reliable, effective communications between the two plants helped operators maintain peace of mind with wireless backup network in place

Background
Enterprise Products Partners L.P. is the largest publicly traded energy partnership and a leading North American provider of midstream energy services to producers and consumers of natural gas, natural gas liquids (NGLs), crude oil, refined products and petrochemicals. The partnership’s assets include 49,100 miles of onshore and offshore pipelines; approximately 200 million barrels of storage capacity for NGLs, refined products and crude oil; and 27 billion cubic feet of natural gas storage capacity. Services include natural gas transportation, gathering, processing and storage; NGL fractionation (or separation), transportation, storage, and import and export terminalling; crude oil and refined products storage, transportation and terminalling; offshore production platform; petrochemical transportation and storage; and a marine transportation business that operates primarily on the United States inland and Intracoastal Waterway systems and in the Gulf of Mexico.
Enterprise Products Partners L.P. is managed by its general partner, Enterprise Products GP LLC, which is wholly owned by Enterprise GP Holdings L.P.

**Challenge**
Ensuring that its gas plant and remote facility maintained secure, reliable communication with one another was a key challenge for Enterprise Products. The fiber link between the two sites had been repeatedly cut, severing communications between the two facilities and operators needed to be able to have visibility into both the process and treatment sites which were more than seven miles apart. The company had previously discussed the possibility of wireless instrumentation and mobile workstations, but this soon evolved into a discussion around the possibility of a wireless backup link that would provide failover capabilities if the fiber line was ever severed.

“We discussed various options that may work for our facilities and looked to a leader in wireless to help provide us with a proof of concept to meet our needs,” said Greg Andrews, Process Controls Coordinator, Enterprise Products, Meeker Plant.

**Solution**
Enterprise Products worked with Honeywell and its wireless experts to develop a proof of concept and verify if a wireless point-to-point connection over 7.5 mile stretch was even possible. Honeywell’s OneWireless network not only provided the wireless backup solution but was also able to ensure that the switches were able to manage automatic failover from the fiber link to wireless in case the link was broken.

“My original idea was to somehow have a backup communication path between our main gas plant and the remote facility. After talking with Honeywell and determining that we could make this work, we were able to install a wireless network with a throughput of 11 Mbps, providing our operators with the peace of mind that they had a reliable, effective means of communication at their disposal should anything happen to our main fiber link,” said Andrews.

Both the local and remote Enterprise Products sites use Honeywell’s Experion® Process Knowledge System (PKS). The fiber line and backup wireless link provide the necessary view into each operation ensuring that control data is visible to both parties, but both sites still run independently of one another. Honeywell also tested various options for radios looking at both the 2.4 Ghz and the 5.8 Ghz before deciding to go with the 5.8 Ghz due to less wireless interference at that frequency. Upon installation, Honeywell also further aligned antennas to achieve 100 percent signal strength and the switches were configured to use the spanning tree algorithm to activate the wireless link in the event of the fiber link going down.

“In addition, Honeywell did failover testing to ensure that our wireless backup solution would come online and operate under the current load of the network,” said Andrews. “We are very satisfied with the wireless installation and now we have the peace of mind that if something does happen to our fiber link we have a secure, reliable wireless solution to make sure we can continue to operate effectively and communicate with one another right away.”

Experion® is a registered trademark and OneWireless™ is a trademark of Honeywell International Inc.

**More Information**
For more information on Honeywell’s OneWireless solutions, visit [www.thewirelessplant.com](http://www.thewirelessplant.com) or contact your Honeywell account manager.

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