The Orlando Utilities Commission (OUC - The Reliable One) – Delivering A Secure Wireless Network for Homeland Security

Orlando, Florida Power Plant Deploys scalable, Fully Integrated, Secure Wireless Network from AIRAYA and IP Vision Software.

Morgan Hill, Calif., USA – AIRAYA, a world-class designer of proven predictable and affordable outdoor wireless video camera systems for high capacity public and government security and surveillance networks, and IP Vision Software partner to deploy a fully integrated secure licensed Public Works monitoring and surveillance system for the Orlando Utilities Commission (OUC—The Reliable One) in Orlando, Florida. The new wireless network extends the video surveillance and monitoring perimeter of OUC's Curtis H. Stanton Energy Center, which encompasses about 3,000 acres and several remote locations that are difficult to patrol and monitor.

The wireless extension provided OUC with a scalable, fully integrated, secure solution that allows power company officials, Homeland Security and plant personnel to view live streaming video and archived video and to have VoIP capabilities to and from the most remote sections of the facility over a secure high speed network. With the AIRAYA and IP Vision Software, OUC is able to maintain a high capacity network with continuous streaming video, while offering the benefits of network integrity throughout the plant facility.

Exceeding The Security Industry's Future Needs

Partner Facts	IP Vision Software, Inc.
Headquarters:	Tampa, Florida
President/CEO:	Mark Felberg
Founded:	2004

IP Vision Software is a leading developer and provider of IP-based software solutions for the security industry. IP Vision Software leverages decades of experience and accomplishments within the Information Technology (IT) industry to continue developing new software features and functions for our clients and partners. Strategic alliances with complimentary hardware and integration vendors are the of IP Visions business model. IP Vision is very much engaged with the leading security camera manufactures' in co-developing the technology that maximizes their equipment.

For more information; please contact IP Vision at (813) 728-3175, http://www.ipvisionsoftware.com , mark@ipvisionsoftware.com

"We selected AIRAYA as the best wireless vendor for delivering the unique requirements presented by OUC," said Mark Felberg, President and CEO of IP Vision Software. "AIRAYA's mature solution includes a wide range of products, providing immediate out-of-the box connectivity and high performance, at an affordable cost. Demonstrating constant innovation in practice, AIRAYA offers a full range of supported frequency bands, channel widths and video tuning parameters, enabling us to successfully achieve our goal of supporting continuous streaming video over a large geographical area with a secure wireless network."

The Challenge

Deliver a scalable, distributed security solution that will allow security personal access to live viewing, archived video and VoIP capabilities.

The power plant provides electricity to more than 200,000 residents and businesses for the cities of Orlando and St. Cloud. Considered among Florida's busiest and most reliable power plants, the Stanton Energy Center's security plan must account for the large site and the need to monitor the remote locations and multiple entries into the plant. In some cases, the network cameras are located more than three miles away from the security station – a distance that would have made traditional cable-connected cameras cost prohibitive.

"The need for secure wireless private networks has increased significantly around the country; together with leading local service providers and partners such as IP Vision Software, deployments have been very successful," said Mike Nydam, CEO and President of AIRAYA. "As a result of Homeland Security initiatives across the country, we expect the secure outdoor wireless market to expand, for both license and license-exempt frequencies."

There were many deployment challenges
- high RF interference
- the requirement to connect long distances of over 3 miles
- support for high density deployment of high resolution cameras
- provide aggregate bandwidth requirements in excess of 80 Mbps

AIRAYA and IP Vision were responsible for the full design and deployment of the entire network. The system optimization and channelization for each bridge and camera were planned to meet the specific problems posed by the operating environment. The system required intelligent cameras with built in analytics at the edge of network that could be accessed via wireless technology.

"AIRAYA has the highest bandwidth and by far the lowest latency per hop – making AIRAYA the perfect solution for 'Evidence Grade' Wireless Video Surveillance for the Orlando Utilities Commission power plant," Felberg said.

The Solution

A fully integrated, rapid-deployment system ensures that OUC meets their long-term security objectives.

The project consists of backhaul (Point-To-Point) links from three different gates to a central building 13 stories high. The network design then ties the video backhaul links together with a fourth link to the control room less than 1,000 feet away. None of the gates are visible from the control room directly. The AIRAYA solution met OUC's requirements for capacity, speed, scalability and reliability, while optimizing available frequency.

The system uses the WirelessGRID™ Full-Duplex Backhaul radios, and

AIRAYA

WirelessGRID™ Full-Duplex Backhaul Link with 29dBi Parabolic Antenna

Fully Integrated Radio and Antenna Technology

Outdoor-ready WirelessGRID™ full-duplex links are designed to simplify installation, maximize range and capacity, and deliver ultra-low latency and outstanding performance in a dual-radio, single antenna configuration with asymmetrical dedicated transmit (TX) and receive (RX) radio paths.

Utilizing OFDM technology in the 4.90-5.85 Ghz frequency range, WirelessGRID™ Full Duplex links operate in Backhaul (Point to Point) mode at ranges of up to 12 miles* and at speeds up to 108 Mbps per radio.

Proven in thousands of networks worldwide, WirelessGRID™ radios are ideally suited for low-latency bandwidth-hungry applications that require robust, reliable, and secure connectivity.

For further information, please visit the AIRAYA website at: http://www.airaya.

Mobotics™ high resolution IP cameras transmitting at MPEG-4 video at 30 frames per second. AIRAYA radios are capable of handling the high throughput requirements of video applications due to low latency Layer 2 operation, and tuning parameters to optimize the links. The surveillance cameras at the gates capture the license plates of vehicles when they are at the facility's entrance. The video is managed with IP Visions' video management software.

"With the wireless network and cameras now in place, we can now respond more quickly and monitor multiple remote areas," said Charlie Wright, the Director of Security for OUC. "With AIRAYA and IP Vision, we placed cameras in areas we previously thought were too far for wireless equipment to reach or too expensive to trench with fiber. The network really exceeded our expectations."

AIRAYA's WirelessGRID™ backhaul radios offer the ultimate in installation flexibility with over 500 channels available through user-selectable features which include: 5, 10, 20 and 40 MHz wide channels, user selectable power settings and user selectable frequency range from 2.2-2.5 and 4.4-6.1 GHz. AIRAYA's superior time sensitive packet performance is a function of the user selectable tunable parameters combined with low latency operation in a single link and the ability to address scalability with co-located high density links. AIRAYA's 108/216 Mbps WirelessGRID™ OFDM technology allowed AIRAYA and IP Vision to design a network that met the customer's rigorous requirements.

About AIRAYA - Predictable, Fast and Affordable Technology.

Founded in 2001, AIRAYA is a world-class designer of proven, fast and affordable outdoor wireless multipoint and backhaul products for high capacity public safety, service provider, and enterprise networks. The company is located in Morgan Hill, California and is privately held. AIRAYA products are available through a network of experienced North American and International distributors and reseller partners. For more information, please visit AIRAYA's web site at: http://www.airaya.com/, email info@airaya.com, or call toll free 1.866.2AIRAYA (1-866.224.7292) - International 1.408.776.2846.

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About OUC—The Reliable One

Established in 1923 by a special act of the Florida Legislature, OUC—The Reliable One is the second largest municipal utility in Florida. OUC provides electric and water services to more than 254,000 customers in Orlando, St. Cloud and parts of unincorporated Orange and Osceola counties.

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