Service Note

Honeywell

OneWireless System and Network Design

Designed for Success

Industrial wireless networks dramatically lower the cost of communicating with field devices of all types. This leads to increased efficiency, reliability and safety, and improved plant performance.

The benefits of wireless connectivity depend on your network. To maximize your investment and minimize problems, you need to be sure that the network will operate safely, reliably and with little maintenance. This level of performance requires a combination of the right equipment and the right design.

Key Design Considerations

Simply placing wireless devices in the field may initially work, but the design must be robust enough to sustain long-term benefits. The following questions should be asked:

- Will the network performance diminish when more devices are added? Sub-optimized use of limited bandwidth can impact reliability and scalability.
- Do you know it's secure? Industrial wireless networks are extremely secure when properly configured but may not be very secure if improperly implemented.
- What sources of interference exist? Is your signal leaking out of plant property lines or interfering with existing wireless devices? Device placement, antenna selection, frequency tuning and power output configuration can dramatically reduce interference and signal leakage while increasing reliability.
- What is the right amount of infrastructure to deploy? Too many extraneous devices increase up-front and maintenance costs while lowering performance due to interference and additional hops. Too few devices may not provide high enough signal quality to insure reliable operation over the long term.

No matter what type of wireless system is used, it is important to carefully assess the site requirements and to design the network with both current and future needs in mind.

Honeywell Expertise

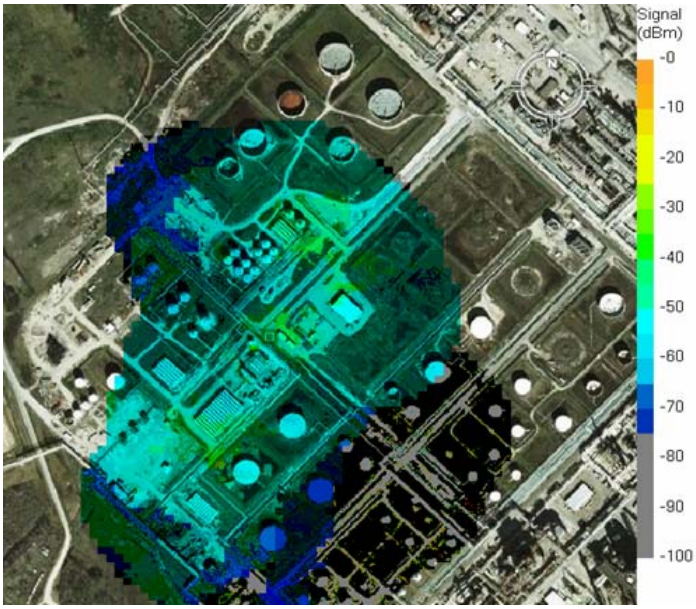
Honeywell's wireless network design experts combine their knowledge of radio frequency (RF) fundamentals and signal propagation with their experience in process control systems, network security and advanced applications to help you design a high performance wireless network.

Honeywell's approach to creating a system and network design includes an on-site study of the coverage area desired at the plant, existing power and network infrastructure, the goals for the implementation (both immediate and future), as well as a thorough assessment of interfering and operating frequencies currently in use or ambient in the environment. Honeywell takes particular care to insure robust security and will document security requirements, identify network security threats, review existing security practices, procedures and safeguards, and identify the causes of any potential security exposures.

Scope and Key Deliverables

The OneWireless™ System and Network Design report provides:

- Network topology drawing reflecting switches and access point connection to the network point of entry at each location
- Complete bill of materials required for implementation
- Detailed analysis report reflecting the following:
  - Signal strength, integrity and speed
  - Recommended antennae type and location
  - Precise infrastructure placement and mounting
  - Interference sources and characteristics
  - Best practices related to RF network security and maintenance



With expert tools and knowledge, Honeywell can create a site image of an RF coverage area, with color varying based on signal quality.

OneWireless™ is a trademark of Honeywell International Inc.

More Information

For more information on Honeywell's OneWireless solutions, visit www.honeywell.com/ps/wireless or contact your Honeywell account manager.

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