Honeywell

Frequently Asked Questions
OneWireless Solution Launch
June 2007

What is Honeywell announcing?

Honeywell is announcing the shipment of OneWireless™ – a universal mesh network that supports multiple wireless-enabled applications and devices within a single environment. OneWireless supports multiple industrial protocols and applications simultaneously, providing a single wireless network that is simple to manage and efficient to operate.

OneWireless supports existing XYR 5000 and the new XYR 6000 wireless transmitters. It is a global solution with robust security, predictable power management and multi-speed monitoring. In addition, OneWireless Starter Kits enable users to get started quickly with wireless technology.

Honeywell is also announcing the availability of Honeywell Instant Location System (HILS), a real-time location solution that enables industrial manufacturers to improve safety practices, plant security and operational efficiency by tracking people and valuable assets within facilities.

What benefits will OneWireless customers see?

Honeywell's OneWireless solution helps customers solve unique problems beyond just avoiding the cost of wiring. It supports multiple field protocols and applications. It is simple to learn, operate and maintain. And, it is a scalable system that conserves spectrum and power. Together, these attributes enable customers to optimize plant performance and reliability, improve safety and security, and ensure compliance. Since OneWireless is open and standards-based, any existing application with standards-based interfaces can use OneWireless information, and future applications will likewise be supported.

OneWireless applications enable customers to:

Keep plant, people, and the environment safe
• A location system throughout the facility to monitor employee locations and ensure safe procedural operations • Safety shower monitoring • Mustering infrastructure that supports first responders in the event of an emergency • Leak detection and repair capabilities
Improve plant and asset reliability
• Continuous monitoring of equipment and field devices for diagnostic equipment health assessments • Device commissioning and configuring with automated field operator rounds and access to on-line data, reports and manuals • Equipment health management visualization, such as computerized maintenance management system, inventory management and document management
Optimize plant through more efficient employees and processes
• Mobile operators operating desktop applications and control room displays on handheld computers • Input/output modules and sensors to monitor real measurements in plant versus inferred values for control • Sensors for upgrading tank instrumentation • Voice over IP for communicating among all field workers equipped with Wi-Fi devices • Continuous wireless corrosion detection to ensure integrity of piping systems
Comply to industrial and environmental standards
• Emissions monitoring • Leak detection and repair

What is Honeywell's background/expertise in wireless?

Honeywell is a proven leader in delivering wireless-enabled solutions. Honeywell was the first major automation control supplier to offer industrial wireless transmitters to the market. The XYR 5000 was launched in 2003 and is the first generation of Honeywell wireless transmitters offered in 868MHz or 900 MHz ISM bands. Honeywell has since offered wireless-enabled productivity applications like IntelaTrac PKS and Mobile Station that operate over 802.11 networks.

XYR 5000 wireless transmitters are installed in more than 500 customer sites, and multiple sites are operating IntelaTrac PKS and Mobile Station. **Honeywell has doubled the business year over year**.

Honeywell, Inc. has more than 35 million wireless devices installed in a wide range of consumer, business and industrial environments covering our aviation, satellite, homes and building, security and process control business.

What differentiates OneWireless from competing wireless technology?

Honeywell starts with a multi-functional design philosophy. OneWireless naturally supports low-speed sensor monitoring but it also supports high-speed sensing, alerting, control, high-bandwidth data applications (like video), 802.11, mobile worker applications, location functionality, and other features. At the same time, it was designed to minimize operational expense, through features like predictable power management, end-to-end security, a single management interface, reliability enhancements, investment protection architecture, scalability, and choices including openness, connection to plant systems and different protocols like HART, FF, OPC, Modbus.

Other solutions are focused on small, low-performance field sensor networks. They create their wireless network with a series of routing sensors that transmit the messages back to the main system. Honeywell's focus is on creating a highly scalable, multi-protocol, multi-functional wireless network that can support sensor radios and 802.11 communications at a variety of speeds and capabilities. The network is formed with efficient 'gateway/access point' devices that provide a reliable network, allowing the sensors to do what they're intended to do – sense and transmit. Not only does this deliver more predictable device power management, it also allows a more efficient use of bandwidth.

This unique combination of features can be summed up in these key attributes:

It's Universal – **One** platform with many field protocols and applications
It's Simple – **One** network to install, learn, operate and maintain
It's Efficient – **One** scalable network that conserves spectrum and power

OneWireless is the only wireless network customers will need.

When will OneWireless ship?

The OneWireless platform and the new XYR 6000 transmitters will be available in July 2007.

What is Honeywell's real-time location system?

The Honeywell Instant Location System (HILS) is a real-time location solution that enables industrial manufacturers to improve safety practices, plant security and operation efficiency by tracking valuable mobile assets within facilities. HILS reinforces safety and security policies by allowing the operation team to include real-time location of people and assets in day-to-day operational procedures. The system offers a real-time head count of staff during emergency situations, notifies operators if an unauthorized individual walks into a restricted/hazardous zone, and reports on equipment location. HILS integrates best-in-class identification and location technologies available today, such as Global Positioning Systems (GPS), Ultra-Wideband (UWB), Wi-Fi and active radio-frequency identification (RFID), with Honeywell's process automation system, the Experion® Process Knowledge System (PKS) to deliver real-time safety and security location information across the plant.

Is an assessment recommended prior to implementing OneWireless?

Simply placing wireless devices in the field may initially work, but in order to achieve optimal performance (reliability and security) it is important to design the system right the first time. No matter what type of wireless system is used, existing conditions, site requirements and current and future needs must be assessed.

The necessity of up-front design is directly proportional to the size of the network and the need for reliability. For very small installations (such as installation of a starter kit), a very basic check of wireless performance may be sufficient. For large installations covering an entire plant, there are significant benefits to a detailed up-front system design. Honeywell offers design and implementation services to meet any size need.

How is Honeywell achieving an open solution to provide customers choice?

Currently, Honeywell provides customers choices through two different strategies:

1. Honeywell intends to provide schematics and software as part of open sensor communication kits to third-party radio providers. This allows vendors to integrate products into the Honeywell wireless network.
2. Since Honeywell based its technology on standard 802.11 Wi-Fi, it supports COTS devices, which is unique from other alternatives.

In the future, Honeywell will offer products and services that allow customer to take advantage of the emerging standards like ISA SP100.

How is Honeywell involved with SP100?

Honeywell is a member of the ISA SP100 committee. In 2005, Honeywell led an SP100 subcommittee that developed and validated overall customer wireless network requirements. These requirements were used to create technical network goals in 2006, an effort also lead by Honeywell. These technical goals are part of the standard selection process. Honeywell is also bringing its expertise and experience to the committee by having three editors on the writing standard team.

How is Honeywell involved with WirelessHART?

As a board member of the HART communications foundation, Honeywell supports HART communications for industrial use. Honeywell has many HART offerings including Field Device Manager for device configuration and monitoring as well as a multiple field instruments. Honeywell continues to support the on-going enhanced DDL efforts to standardize all field device information for host systems especially in its use for wireless.

In addition, Honeywell is a member of the WirelessHART committee and has demonstrated prototype products and adaptors. Honeywell supports the development and coordination of all open industrial wireless standards and specifications like ISA SP100 and Wireless HART and seeks to preserve the legacy HART application interfaces. However, Honeywell strongly recommends SP100 over Wireless HART because the universality of SP100 will better meet customer needs.

How is the OneWireless solution release today going to support the emerging industrial wireless standards (SP100, Wireless HART, etc.)?

Honeywell will ensure the OneWireless solution release today supports the emerging industrial wireless standards in two ways.

- First, Loyalty Discounts will be offered to all Honeywell OneWireless customers who later wish to migrate to the standard-compliant products, allowing them to take advantage of migration discounts.
- Second, an Annual Service Program will provide consultation, telephone technical support and solution upgrades to take best advantage of the emerging standards.

If the 802.15.4 radio becomes the standard in the first release of SP 100, how will Honeywell respond?

While no industrial wireless standards are finalized, we believe the SP100 standard will continue on its current path with respect to the physical radio – initially specifying an 802.15.4-based radio in release 1 of the standard, then offering a narrow-band radio (similar to Bluetooth and the Honeywell high-performance radio) in release 2 of the standard. Honeywell will initially launch with the higher-performance narrow-band radio slated for release 2, but plans to also offer an 802.15.4 radio before the standard is finalized. We are demonstrating both radios today in our demo system.

The OneWireless system was designed from the beginning to accommodate multiple radios. The two radio modules in question are similar, and based on sister chips from the same supplier, have similar cost, and run similar software. We feel we are in a unique position to offer our opinion on the respective radio technology given that we offer both alternatives, have been shipping industrial radio solutions for over three years, and have the experience gained from shipping over 35 million wireless devices across Honeywell using similar radio technology. Based on that expertise, we recommend to our customers the narrow-band solution because it provides better noise/interference characteristics for the environment in which it will be deployed as well as better scalability in a given area. However, if some customers still prefer the 802.15.4 solution, we will offer that as well. Both radios can co-exist in the same OneWireless system, so a customer also has the option of choosing to deploy both radios based on the application and environment. Since our wireless solution is versatile and flexible, it can and will embrace the SP100 standards of the future.

What can Honeywell share about its wireless roadmap?

Honeywell intends to continue to offer new and innovative products as part of the OneWireless platform. Expect additional types of industrial sensors, additional radio options, further system enhancements, and more software applications.

How can potential end users get more information?

More information about OneWireless is available at www.honeywell.com/ps/wireless

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