ZigBee Alliance unveils unified ZigBee standard ZigBee 3.0

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(iTers News) - The ZigBee Alliance has released a unified ZigBee standard named ZigBee 3.0 that has backward compatibility with previous ZigBee standards.

The new standard unifies ZigBee standards found in tens of millions of devices enabling communication and interoperability among devices for home automation, connected lighting, energy efficiency and other markets.

All device types, commands, and functionality defined in current ZigBee PRO-based standards are available to developers in the new standard.

"Consumers expect their smart devices to just work and be simple, and we continue to deliver new and rich lighting centric experiences that are easy to control and create," said Filip Jan Depauw, head of marketing & partnerships at Philips Connected Lighting.

"The ZigBee protocols are a key enabler to achieve this, and the broader ZigBee 3.0 standard further enables seamless communication across different domains and will therefore allow us to offer even greater functionality to our users. Interoperability made simple empowers new use cases and happy consumers," added he.

ZigBee 3.0 defines the widest range of device types including home automation, lighting, energy management, smart appliance, security, sensors, and health care monitoring products. It supports both easy-to-use DIY installations as well as professionally installed systems.

**Backward compatibility**
Based on IEEE 802.15.4, which operates at 2.4 GHz, an unlicensed frequency available for use around the world, ZigBee 3.0 uses ZigBee PRO networking to enable reliable communication in the smallest, lowest-power devices.

Current ZigBee Certified products based on ZigBee Home Automation and ZigBee Light Link are interoperable with ZigBee 3.0.

A complete list of standards that have been merged to create ZigBee 3.0 can be seen on the website at www.ZigBee.org <http://www.zigbee.org/>.

"The ZigBee Alliance is addressing the critical need for application level standardization," said Mareca Hatler, director of research with ON World.

"This announcement will build on the Alliance's leadership across the Internet of Things, while continuing to provide the foundation for innovative products and services for smart homes, connected lighting, and other high growth markets."

ZigBee 3.0 is currently undergoing testing. Many Alliance members, including The Kroger Co., Legrand, NXP, Philips, Schneider Electric, Silicon Labs, Texas Instruments, Wincor Nixdorf and V-Mark have been actively involved in the development and testing process.

The draft standard is available to members of the ZigBee Alliance today and is expected to be ratified in Q4 2015. ZigBee 3.0 demonstrations are planned for CES 2015 trade show which will open on January 6, 2015.

"The ZigBee Alliance has always believed that true interoperability comes from standardization at all levels of the network, especially the application level which most closely touches the user," said Tobin J. M. Richardson, president and CEO of the ZigBee Alliance.

"Lessons learned by Alliance members when taking products to market around the world have allowed us to unify our application standards into a single standard. ZigBee 3.0 will allow product developers to take advantage of ZigBee's unique features such as mesh networking and Green Power to deliver highly reliable, secure, low-power, low-cost solutions to any market."

**Why ZigBee 3.0?**

ZigBee 3.0 simplifies the choice for developers creating Internet of Things products and services. It delivers all the features of ZigBee while unifying the ZigBee application standards found in tens of millions of devices delivering benefits to consumers today. ZigBee 3.0 standard enables communication and interoperability among devices for smart homes, connected lighting, and other markets so more diverse, fully interoperable solutions can be delivered by product developers and service providers.
Network Level Standardization

ZigBee 3.0 is based on IEEE 802.15.4, which operates at 2.4 GHz (a frequency available for use around the world) and uses ZigBee PRO networking to enable reliable communication in the smallest, lowest-power devices.

ZigBee is reliable and robust and uses multi-hop mesh networking to eliminate single points of failure and expand the reach of networks.

ZigBee is low-power allowing battery-operated devices such as door and widow sensors to operate for seven years. With the Green Power feature, you don’t need any batteries! ZigBee is scalable and supports networks of thousands of nodes providing a networking for the smart home or the smart city.

ZigBee is secure and uses a variety of security mechanisms such as AES-128 encryption, device and network keys and frame counters. ZigBee is global and is built on 2.4 GHz which is available for unlicensed use anywhere around the world. This means a product developer can sell the same product anywhere on the planet.

Application Level Standardization

The ZigBee Alliance has always believed that true interoperability comes from standardization at all levels of the network, especially the application level which most closely touches the user. So, everything from joining a network to device operations like on and off are defined so devices from different vendors can work together seamlessly.

ZigBee Application Standardization

ZigBee 3.0 defines more than 130 devices and the widest range of devices types including home automation, lighting, energy management, smart appliance, security, sensors, and health care monitoring products.

It supports both easy-to-use DIY installations as well as professionally installed systems. All current device types, commands, and functionality defined in current ZigBee PRO-based standards are available in the ZigBee 3.0.

(Credit: ZigBee Alliance)