



ANSI Open Forum
Building Bridges across the
Standards Ecosystem

October 9, 2012



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Presented by

Ed Eckert

Chairman of the Board of Directors, ZigBee Alliance

ANSI Open Forum: Building Bridges across the Standards Ecosystem
October 9, 2012

Part of the World Standards Week 2012 series of events



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ZigBee Alliance Overview

- ❑ **Organized as an independent, neutral, nonprofit corporation in 2002 for Wireless Sensor Network (WSN) Standards Development**
- ❑ **Open and global**
 - Anyone can join and participate
 - Over 420 companies worldwide are members
 - Membership is global [approx. 40% Americas, 30% EMEA, 30% Asia]
- ❑ **Activities include:**
 - Open Standards for wireless sensor and control
 - Product Certification and compliance programs
 - Branding, market development and user education
- ❑ **ZigBee is a key enabler for the Internet of Things**



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ZigBee Alliance - 400 Members & Growing

Promoter Companies



Participant Companies





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Specification Development Process

- **Open, balanced, transparent, diverse interests**
- **Marketing Working Groups formalize market requirements**
- **Technical Working Groups execute technical requirements and specification development**
- **Organization-based membership and voting**
 - **Attendance-based voting rights**
- **Specifications must go through several reviews before ratification by ZigBee Alliance Board**
- **Specifications made publicly available for free download once complete and ratified**
- **The ZigBee Alliance is working towards recognition as an ANSI Accredited Standards Development Organization**



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ZigBee Application Areas

•Demand Response

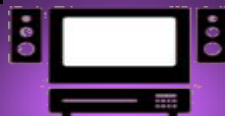
- Net Metering
- AMI, SCADA

ENERGY MGT. & EFFICIENCY



TELECOM SERVICES

- M-commerce
- Local gaming
- Local chatting
- Info Services



CONSUMER ELECTRONICS

- TV
- VCR
- DVD/CD
- Universal Remotes



PC & PERIPHERALS

- Mouse
- Keyboard
- Joystick
- Touchpad



HOME AUTOMATION

- Security
- Safety
- HVAC
- Lighting Control
- Access Control
- Irrigation

- Security
- HVAC
- AMR

- Lighting Control
- Access Control



BUILDING AUTOMATION



PERSONAL HEALTH CARE

- Chronic Disease
- Elder Care
- Fitness
- Wellness



INDUSTRIAL CONTROL

- Retail Store Mgmt
- Shopping
- Supply Chain
- Environmental
- Energy Mgmt



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ZigBee Alliance Partner Relations



AMERICAN TELEMEDICINE ASSOCIATION



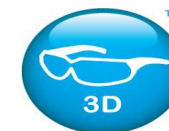


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Smart Energy Standards





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How are Smart Energy Standards Used?

Programmable Communicating Thermostats
respond to pricing signals and grid disturbances

Rooftop Solar
provides renewable energy
coincident with peak demand

Fixed Electricity Storage Batteries
stores off-peak power to use during peak periods

Smart Appliances Respond
to grid disturbances and shifts
consumption during peak demand
periods

Plug-In Hybrid Vehicles
draw energy from its roaming plug-in
location. It can store energy for utility
or home use.

Source: wsj.com



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Smart Energy Standard Key Functions

- High performance link security
- Pricing Communication
- Demand Response and Load Control
- Metering / Energy Usage Information
- Messaging
- Pre-Payment
- Plug-In Electric Vehicles
- Distributed Energy Resources
- Billing
- Firmware Download
- Energy Theft Detection
- Support for electric, water, & gas





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Smart Energy Options

- **ZigBee Smart Energy 1.x**
 - ZigBee PRO stack on IEEE802.15.4
 - In widespread deployment today
- **Smart Energy Profile 2.0 (SEP2)**
 - Internet Protocol based Stack
 - For use on IP compatible networks, wired & wireless
 - Currently in multi vendor interoperability testing phase with completion expected later this year (CSEP)
- **Smart Energy developed in global community of stakeholders using an open consensus process**





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Questions / Discussion



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