STANDARDISATION & INITIATIVES

Dominic Ectors, VITO

Functional flexibility smart grid architecture

Customer Energy Manager

Source: SG-COM/EEBu, Functional flexibility

Source: EIB/w white paper 2.0
ETSI

» European Telecommunications Standards Institute
» Machine to Machine Communications, ETSI M2M
» Not only architecture-level standards, but also test specifications
» Smart Machine-to-Machine Communications Technical Committee (TC SmartM2M)
   » Focus on IoT, smart cities, smart appliances
   » Specifications (work in progress)
      » Framework for Smart Appliances communication based on ETSI M2M and (potentially) oneM2M specifications
      » Common Ontology and SmartM2M/oneM2M mapping

Gaps

» Being addressed by ongoing standardization work
» A standardised energy management framework has to take into account different application frameworks (use cases beyond energy management)
   » Application runtime environment specification

Initiatives

» EEBus e.V. – Agora – Energy@home
» Allseen Alliance
   » AllJoyn: software connectivity and services framework
   » Electrolux, Hayer, LG Electronics, Microsoft, Panasonic, Qualcomm, Sharp, Silicon Image, Sony, Technicolor and TP-Link
» Open Interconnect Consortium (OIC)
» IoTivity: open source framework
» Intel, Cisco, Mediatek, Samsung, ADT, Atmel, Dell, Eyeball networks, HP
» HomeKit - Apple
» ThreadGroup
   » Thread is an IP-based wireless networking protocol
   » Yale Security, Silicon Labs, Samsung Electronics, Google/Nest Labs, Freescale® Semiconductor, Big Ass Fans and ARM.

Initiatives

» ZigBee Alliance
» OpenADR Alliance
» ABB, Bosch, Cisco cooperate on smart-home platform
» Open Mobile Alliance (OMA)
» Australia: AS/NZS 4755
   » communicating DR commands to residential appliances (airco, water heaters, pool pumps, EV,...)
   » Considering to make this standard mandatory (to manufacturers, not to consumers)
» FAN, OEGMA, JEMMA,...
» ...

» Being addressed by ongoing standardization work
» A standardised energy management framework has to take into account different application frameworks (use cases beyond energy management)
   » Application runtime environment specification
Standardisation: work in progress

Physical combinations

Source: Josef Baumeister, IEC & CEN Smart Home Standardisation – status September 2014

All grey boxes in the diagrams represent control boxes. Combinations may not be complete.