IEEE-SA Industry Connections - Convergence of Smart Home and Building Architectures
Overview

- Background
- Domains
- Benefits
- Related Work
- Member Companies
- Beneficiaries
- Proposed Deliverables
- How to Participate
Overview of IEEE-SA Industry Connections (IC) Program

An efficient, economical, safe-harbor environment for building industry consensus
- Facilitate collaboration
- Produce shared results

Minimal effort, time and expense to begin collaborative work
Respected, neutral, third-party home for activities and results
Efficient path toward prestigious IEEE publication/standardization
Flexible options for evolution, transition & conclusion of activities

http://standards.ieee.org/develop/indconn/

Complements IEEE-SA “formal” standards activities
Overview of Convergence of Smart Home and Building Architectures

There are striking similarities among the communications network architectures of smart home and building environments as they relate to applications including electric vehicle, home or building energy management, infotainment, etc. However, a gap exists for interworking among these various domains.

Although today users are able to access many domains through their TVs, smart phones and tablets, an effort is needed to enable seamless user experience that spans multiple application domains.
Domains under consideration

- Comfort (e-health, ambient assisted living, infotainment, light, temperature, air quality, etc)
- Home/Building Security, Privacy Safety and Access Control
- Fire Safety
- Energy Management (heat, A/C, hot water, appliance energy management and EV charging. Energy sources such as fossil fuel, electricity, “Renewables” including photovoltaics/solar collectors/gray water management)
- Appliance and Building Elements: Maintenance and Diagnostics

Inter-domain Communication
Association and Admission Control
Network Security and Privacy
System and Device Maintenance
Expected Benefits

- Increased granularity, visibility and awareness
- Increased level of usability
- Simplified interaction from operator point of view
- Better coordination among multiple application domains at M2M level
- Platform for virtual aggregation of multiple homes and buildings
- New business models
- Reduced implementation risks
- Semantic operability among applications
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Related Work

Many bodies address this area from the industry specific point of view. Examples of such work include:

- Home Gateway Initiative
- Artemis IoE ([www.artemis-ioe.eu](http://www.artemis-ioe.eu))
- ISO/IEC 15118
- DKE committee K716, K STD 1711
- CEN/TC 247 “Building Automation, Controls and Building Management”
- RASSA
- ETSI OneM2M and M2M
- CEN/CENELEC ETSI Smart Grid Coordination Group
- CEN/CENELEC SSCC-CG
- ITU-T JCA-SG&HN Joint Coordination Activity on Smart Grid and Home Networking, ITU-T SG-13 and ITU-T SG-16
- Open Geospatial Consortium
- IPSO

There is no known dedicated standardization activity that addresses the convergence of these multiple domains.
Member Companies

- AIT Austrian Institute of Technology
- CISC Semiconductor
- DataSoft
- Dell
- Huawei
- Infineon
- Lantiq
- LG Life's Good
- Nokia
- Siemens
- SINTEF
- SUST
- State Grid Corporation of China
- STI

IEEE STANDARDS ASSOCIATION
Beneficiaries

- End users, owners, and operators
- Manufacturers of products for the Smart Home and Building market
- Service Providers, Utilities, and EV manufacturers
Other Activities of the CSHBA group

Our activities are intended to be complimentary to existing activities on IoT, electric mobility, and IoE

| Workshops and roundtables providing a platform for industry collaboration | Analysis of existing activities and standardization gaps | An Implementation Guide White Paper on the Convergence of Smart Home and Building Architectures |
Join us!

Join our IEEE-SA Industry Connections group on Convergence of Smart Home and Building Architectures

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