



**ISO / IEC JTC1/ SC25 WG1 N1344**

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WG1 (Lyon, Pattenden) 1  
Date: 20 October 2008

**ISO/IEC JTC1 SC25 WG1  
Interconnection of Information Technology Equipment  
Home Electronic Systems**

**Title:** Liaison Report on ISO TC205 WG16

**Source:** Pattenden, UK

**Project:** 25.01

**Requested Action:** FYI

**Distribution:** P-, L-, O- Members of SC25  
WG1

## **Notes on the meeting of CENELEC TC205 WG1 held on 10th September at the offices of AFME in Barcelona.**

### **Introduction**

This WG is concerned with the SmartHouse as it relates to ICT systems in the house, appliances, networks, applications and, to the extent that they interface with these, the services that are supplied to the SmartHouse.

The WG has been active for some years but still needs to find its role in helping to define the SmartHouse in terms of the ICT systems that are converging in this environment.

The UK has always taken a strong interest in TC205 and its WG16 as the UK is involved with defining Interoperability (through TAHI and in ISO/IEC JTC1 SC225 WG1) and the SmartHouse Code of Practice.

### **Notes on the Meeting.**

The meeting was attended by

- Alain Lambert - Legrand (Chair) (FR),
- Philippe Charpentier - Schneider (FR),
- Beatriz Novel - AFME (ES)
- Jürgen Tretter - GFI (DE)
- Alistair Munro - University of Bristol (UK)
- David Fatscher - BSI (UK)
- Stephen Pattenden - TAHI/Telemetry Associates Limited (UK)

### **1. Minutes of the last meeting**

The minutes of the last meeting were checked through and approved.

### **2. Membership**

It was agreed that the membership of the WG needed expanding and that there should be links into all the ICT related TCs that have work and standardisation into the home space. The WG also needed greater industry (and Consortium) participation.

However, it was stressed that the WG needed to define the Framework and Architecture for the SmartHouse before enlarging the group. Alain Lambert was aware of both the TAHI work and the SC25 WG1 Interoperability work and it was agreed that this would provide a start to the Framework and Architecture.

There was awareness of the work in the HGI (Home Gateway Initiative - a consortium of Telecommunications companies) but it was also understood that this work was not yet ready. It was also understood to be concerned with managing bandwidth (for communication devices) within the home.

It was agreed that the group should encourage participation (or liaison with)

- CENELEC TC13, 59X, 79, 206 and 209
- CEN 247 and 294
- IEC TC 100
- ISO/IEC JTC1 SC25 WG1
- Various consortia such as HGI and OSGi

### **3. CENELEC Submissions of Smarthouse related projects to European**

## **Commission**

### **3.1 SmarHouse Code of Practice Maintenance.**

The Commission had responded to the submission of this proposal (at the end of July) and had ruled neither in favour or against the proposal. 12 points had been raised including such points as needing to justify the use of subcontractors and making sure that the expected payment phases were correct. They were particularly keen to ensure that any "Contribution in Kind" was properly justified.

CENELEC has responded to all the points and had modified the Technical Annex and Financial Quotation to meet all the evaluation team's points. Note if this proposal is accepted, the managing National Standards Body will be DKE of Germany and the managing TC/WG will be TC205 WG16 and the steering group will be led by the Chair of TC205 WG16 - Alain Lambert.

### **3.2 SmarHouse Roadmap**

The commission has evaluated this proposal positively but had raised 4 points that needed attention. They were keen to see justification for contribution in kind and again the phasing of Commission payments needed correction. If this project is accepted, the managing NSB will be NEC of the Netherlands. It is likely to be further managed by CENELEC directly since the work covers the activities of multiple TCs in CEN, CENELEC, ETSI and SDOs in Europe and Intentionally.

CENELEC has responded to the points raised and modified the Technical Annex and Financial Quotation accordingly.

Both proposals were resubmitted before the end of August.

## **4. Development of the SmarHouse Interoperability Framework.**

Following on from the January meeting of TC205 WG15 where the WG was tasked with developing the SmartHouse Interoperability Framework under different Communication tools for control and command including voice and video, the WG proceeded to work in this area.

### **4.1 Architecture**

The WG would prepare a list of pertinent documents for interoperability methods in the SmartHouse from as many sources as possible including ISO/IEC JTC1

It was noted that the TAHI work was indeed doing this and it should be possible to share the findings from this information gathered.

### **4.2 Definitions**

Again following from previous meeting actions, the group proceeded to work on finding definitions for key words for the Interoperability and Framework objectives of the WG.

The WG intended to work on the following definitions

- Interoperability
- Interworking
- Function
- Application

Service  
Cluster (Market Sector)  
User application  
Functionality  
Application Model  
Gateway  
Safety  
Security

## Interoperability

AL introduced JTC1 document N9040 which introduced definitions for Interworking and Interoperability. SP introduced an FAQ from the TAHI Interoperability Framework Initiative,

The excerpt from N9040 is below

**Co-existence:** the use of the same network without affecting or disturbing the communication of other devices also hooked up to the same network;

**Interoperability:** the ability to send and receive datagrams and properly understand and react on them for all functions commonly supported, with the need for additional equipment (like translators or gateways) if different protocols are being used..

This includes the ability to interoperate together with the conformance to a described behavior. Interoperability includes the combination of data types for the realization of a specific functionality in “functional blocks”.

**NOTE** Interoperability ensures that different application clusters (e.g. Home Controls [lighting, shading, HVAC, security] and Home Entertainment) can be connected for an integrated system user experience.

**NOTE 2** If a protocol is used on different media, the devices are still considered as interoperable when they are separated by a media coupler ensuring the conversion of one physical encoding into another (e.g. PL to TP)

**Interworking:** the ability to send and receive datagrams and properly understand and react on them for a limited number of functions, without the need for additional equipment (like translators or gateways). If a protocol is used on different media, the devices are still considered as interworking when they are separated by a media coupler ensuring the conversion of one physical encoding into another (e.g. PL to TP). This includes the ability to understand the protocol and decode the actual payload of the message and the ability to interwork together with the conformance to a described behavior.

In case of interworking, the standardization does not go beyond the definition of common data types for payload encoding.

**NOTE** Interworking ensures that products from different manufacturers for an application cluster (e.g. Home Controls or Home Entertainment) can be connected for an integrated application cluster user experience without any additional gateway.

From the TAHI FAQ

Interoperability is the ability of two or more networks, systems, devices, applications or components to exchange information between them and use the information so exchanged (Source CENELEC)

and

“The ability of two or more systems, or components to exchange information, and to use the information that has been exchanged.” (IEEE)

There was considerable discussion around this point

The meeting tended towards the N9040 definition:

the ability to send and receive datagrams and properly understand and react on them for all functions commonly supported, with the need for additional equipment (like translators or gateways) if different protocols are being used..

... but the use of the word "datagrams" is specific to particular protocols and may not be general enough. Because Interoperability is assumed to be the ability of devices or systems or applications to communicate with systems in the external environment as well as the internal environment of the SmartHouse, a more appropriate word might be "Information" or possibly "Data".

The meeting agreed to prepare more information on the definition of Interoperability.

The discussion also ranged around Interworking and there was possibly some agreement that this was internal to the SmartHouse and might not need translators or gateways and that the N9040 definition could be used.

Interworking: the ability to send and receive datagrams and properly understand and react on them for a limited number of functions, without the need for additional equipment (like translators or gateways).

Again the use of the word "datagrams" is controversial.

### **Application**

Again much discussion and research around this definition. An agreed definition was:

An application may consist of a number of elements or entities working together to provide functions which may be utilised by a service or product.

This led to the definition of Functions. It was acknowledged that functions were a well known mathematical term with defined inputs and outputs. However within the scope of the SmartHouse, the following definition was put forward:

Functions react by defined processes to inputs and deliver outputs. Inputs can be events, or can be invoked by discovery, configuration or processes under management.

Further

The functions may be system functions and describe an Application may described by the functions that are information outputs  
Service level functions. Defined by SLAs and Contracts  
Provider level service provided and described by functions. (external to system)

### **Service and Services**

There was considerable discussion around the description of a service as a product or a "good" or a benefit to consumers or end users. In the SmartHouse consumers were agreed as a general term. The following was suggested:

A product or benefit provided by a Service Provider to a consumer. A service may use objects and functions that are available to it

Clusters (Market Sectors).

There was some discussion around the definition of clusters and how a cluster might map on to a market sector.

Picking up on a presentation by Alain at the TAHI Forum, a list of clusters might include:

- Multimedia
- Sound System
- Social Alarm system
- Intruder Alarm system
- Porter (Door Entry control)
- Lighting
- Heating
- White Goods

Each Cluster has:

- their own cabling
- their own transmission techniques
- their own data formats exchanged
- their own Gateway for remote services

Standards are made independently cluster by cluster

Whereas Market Sectors might include:

- Home Systems
- Security Alarms
- Telecare (social alarms plus)
- Assisted Living
- Health Care
- Smart Metering and Energy Management
- Entertainment

Services might include ( from Smarthouse Code of Practice)

- Automatic Reader metering
- Energy management (energy saving
- Home Control
- Security(Intrusion – detection)
- Presence simulation
- Technical alarms
- Windows/door opening
- Safety (sensing)
- Maintenance
- Remote Diagnosis
- Medical Monitoring (Basic)
- Community Care and Sensitivity
- Digital TV & Video
- Video Conferencing
- Voice over IP
- On-line Gambling
- Health – Medical care
- Health and well being
- On-line Music
- On-line and download gaming
- Home shopping
- Learning and education
- Family and local networks
- Home security +CCTV
- Video on demand
- Video on request
- Home working

As can be seen there is some overlap but the latter is more service based while the

former is more network and device based.

It was also certain that convergence was causing both Market Sectors and Clusters to merge amongst each other and together.

The meeting decided to prepare lists of Market Sectors versus Clusters and prepare diagrams. Action on all participants.

At this stage the meeting participants - the Chair in particular had to depart for the airport. This meant that the meeting was forced to close (at around 3.30pm.)

### **5. Other projects in the field of smart house**

Not covered (although some input in 3. above)

### **6. Relationship with other Standardization activities**

Not discussed (although N9040 was).

### **7. Date of the Next Meetings**

The date of the next meeting is December 18th in Barcelona from 9am to 3.30pm.

SP 14/09/2008