IEC ACADEMY WEBINAR Q&A

Future structure of standardization of Smart Homes/Buildings

Questions	Answers
Why is air quality monitoring classified as health assistance? Do you think this is the scope of TC 62?	That was the system under which we classified it. We believed it could be included as function in a way related to wellbeing of people. If we look at today's situation, any feature related to it can be seen as possible assistance for good health. (Cristiano Masini, SEG 9/WG 2 convenor)
Are geographic conditions included in the main aspect?	There are no geographic limitations in the ongoing work for Smart Homes/Buildings and it is not foreseen that any will occur. (Kim Craig, SEG 9 Convenor)
With more and more old people in the society, can we build a smart home solution for old people which can help them live alone in their home?	This is a great market segment: the Silver economy. For sure some specific Uses Cases can be packaged for this important objective that we would like all to enjoy ourselves one day! In my opinion, systems to assist the elderly living alone and to assist the one elderly caring for the other elderly in home are solutions that should be implemented in the smart home and may become the mainstay of the market in the next generation. Based on this premise, SyC AAL is working on how to approach this issue from the IEC's standpoint of standards document development to obtain a desirable future, including the development of tools for this purpose. (Mamoru Sekiyama, SyC AAL/WG 7 convenor)
What is the status of cooperation between TC 23 and TC 34? Has a joint statement been made by these two TCs on the work? Besides the better understanding, what is the outcome of SEG9/WG 5 joint TC 23 and TC 34?	The cooperation between TC 23 and TC 34 is progressing well. Agreement has been reached on including relevant statements in both SBPs. These updated SBPs have been approved by the TCs last October and endorsed by the SMB last month. Regarding technical discussions, significant progress in alignment has been made for IEC TS 63105 Lighting Systems Vocabulary, IEC 63044 HBES/BACS, IEC TS 63117 Lighting Systems - Safety and IEC TS 63116 Lighting Systems - General Requirements. Constructive work now is starting on new editions of IEC 60669-2-1 and IEC 61547-2-11. So, there is still work in progress and new topics of mutual interest are addressed when they emerge. (Nadine Bravais and John Gielen, SEG 9/WG 5 co-convenors)
If the SBP is coordinated and synchronized between IEC TC 23 and TC 34, would it be ok to close and disband WG 5 of SEG 9?	Indeed the SBPs have been coordinated and synchronized between the two TCs. However, alignment of emerging and developing technical subjects is an ongoing activity for which the SEG9_WG5 or an alternative setting is needed. Disbandment of SEG9_WG5 for now would be premature. (Nadine Bravais and John Gielen, SEG 9/WG 5 co-convenors)

What is the relationship, if any, between IEC 63044 series and ISO/IEC 11801-6 - Generic cabling for customer premises - Distributed building services?	Part 6 of IEC 63044 deals with HBES installation. There has been coordination with JTC 1/C 25/WG 3 and CENELEC/ TC 215 to avoid overlapping. ISO/IEC 11801-6 deals with BCT and IEC network, but CCCB network was excluded from its scope. (Beatriz Novel, TC 23/WG 12 convenor)
Is there any collaboration with other ISO TCs?	Yes, the following ISO TCs have been contacted during the work of SEG 9: ISO/TC 59/SC 13 on BIM ISO/TC 205 on Building Environmental Design (Beatriz Novel, SEG 9/WG 6 convenor)
Is there any standardization work on control rooms/operation centres/logistics hubs, where systems integrate to provide the knowledge management/insight and decision support tools?	You can find such standardization in the area of power generation, that could be certainly inspiring for other type of control room.
Is the word "smart" defined in the context of standards? Do the standards used in the smart home/smart buildings context guarantee that the products that comply with them are necessarily and sufficiently smart?	Smartness is a concept not standardized as such, and smartness level is not "calibrated" for now. The first important characteristic to look for is INTEROPERABILITY for products. As presented in IEC/TC 59 part, "smart ***", such as "smart operation", are defined and used in IEC TS 62950 for the purpose of clarification of the texts and for easing the readability of the text. (Takako Aramaki, TC 59/WG 15 Convenor)
Question to IEC/ISO JTC1/SC25/WG1 and JTC 1/SC 27: Cyber-security is one the important topics for smart home and building. It appeared the scope of both SC 25/WG 1 and SC 27. How about responsibility separation or cooperation accordingly?	Reply from Andreas Wolf, JTC 1/SC 27 Chair: From the scope of SC 27: The development of standards for the protection of information and ICT. This includes generic methods, techniques and guidelines to address both security and privacy aspects, … SC 27 engages in active liaison and collaboration with appropriate bodies to ensure the proper development and application of SC 27 standards and technical reports in relevant areas. From the scope of SC 25: Standards for home and building electronic systems in residential and commercial environments to support interworking devices (IoT-related) and applications such as energy management, environmental control, lighting, and security. General IT security standards are developed by SC 27 only. Domain or application specific standards are developed in a cooperative approach either by SC 27 or by a liaising partner involving experts from both domains and referring to the general standards. -- Reply from Dr. Kenneth Wacks, ISO/IEC JTC 1/SC 25/WG 1 convenor: ISO/IEC JTC 1/SC 25/WG 1 and SC 27 have a formal liaison arrangement. SC 25/WG 1 cybersecurity standards reference SC 27 standards. SC 25/WG 1 is adapting SC 27 standards to provide cybersecurity protection for customer data, privacy, and safety in homes and buildings. For example, WG 1 applied the specifications of ISO/IEC 29100 in developing ISO/IEC 15045-3.

What is AAL?	You may refer to the homepage of [SyC AAL](#), Active Assisted Living.
Question to IEC/ISO JTC 1/SC 41: Digital twin is highly related to BIM. There are also other TCs responsible for BIM. Is there any collaboration & if so how does it work in practice?	Digital Twin is also highly related to manufacturing, shipping, etc. JTC 1/SC 41 will work on generic standards that are application agnostics. These standards can then be used to create more sector specific ones. For instance, there is already a first edition of a digital twin reference architecture for manufacturing. Collaboration will be through liaison and other means. (François Coallier JTC1/ SC 41 Chair).
In the smart cities' context, is there any collaboration with responsible TC by electric infrastructure for electric cars?	In IEC we have two Committees on the subject – TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks & SEG 11 - Future Sustainable Transportation. As of now we do NOT have any direct collaboration with any of them However, we plan to work with SEG 11 in the near future. Regarding the TC 69, we understand that it has direct relationship with IEC SyC Smart Energy & TC 57. We do have relationship with SyC Smart Energy. (Kishor Narang, Vice-Chair, SyC Smart City).
What about any collaboration with other standardization bodies and entities as ITU or ETSI?	SEG 9 has not had any direct collaboration with ETSI or ITU. IEC does have ongoing collaboration with these bodies and others and the SMB had both ITU and ETSI as an observer at its meetings. (Kim Craig, SEG 9 Convenor).
Should TC 57 change their CIM (Common Information Model) to something else like Electrical Network Information Model?	It should be acknowledged that "IEC CIM" is now known and renowned as an iconic brand. But of course , if needed, the name could be describing in a more focused way the intended target. The question has been forwarded to TC 57. This could be further discussed to consider updating the name to something like Electrical Network Information Model or even Electrical Grid Information Model. Renaming CIM should be analyzed at large considering other data models and ontologies from IEC and others SDOs ; IEC SyC Smart Energy WG6 would therefore be involved in the context of its work on ontologies in Smart Energy domain . Despite the general interest of the question, it might not have an impact on the future activities of SEG 9. (Richard Schomberg, SyC Smart Energy Chair).
Smart homes/Buildings are complex due to many actors involved, each actor playing a different role. How and when do you foresee a real breakthrough of real smart buildings to be in place? Any time frame when we can see real smart office/buildings? Will these actors interact with each other? will they agree? get along?	There is a significant amount of technical work being done across many IEC TC/SC/SyC's as well as other bodies – particularly in JTC1 and its SC's. This will continue and it is expected that cooperation and collaboration will grow with time so as to make the most efficient use of technical resources. There are a number of instances of cooperation in place now and the awareness is growing. The various actors can and will interact and it is expected that as the relationships between the actors mature then consensus and agreement will expand. (Kim Craig, SEG 9 Convenor)
Question to Joseph Antony: Only "efficacy", or also sensitivity/performance?	Sensitivity/performance included if safety related

"smart" maybe "smart" work (standard) could start with "smart" ambient (specific ambient, for example, smart home for old people)-- here "smart" -will be explained as "safety & convenient for basic living alone", ...basic safety or convenient product...standards	"Smart" usually refers to devices that are internet enabled and can be controlled remotely. Specific TC/SC/SyC's are able to develop their scope as they wish and to include dedicated definitions of their domains. (Kim Craig, SEG 9 Convenor).
If SMB decision is to not have SEG 9 continue further, why would this be an option? Is it correct?	SMB will make decisions based on the recommendations from SEG 9. SEG 9 cannot pre-empt the decision-making process of SMB. (Kim Craig, SEG 9 Convenor).
TC 65 was briefly mentioned in one of the slides of the presenters. It would have been good if someone from TC 65 could have provided an overview, as it is very relevant to Smart Home/Building (e.g. IEC 62443-4-1, 4-2, 3-3 and 2-4).	From the TC 65 scope: To prepare international standards for systems and elements used for industrial process measurement, control and automation. To coordinate standardization activities which affect integration of components and functions into such systems including safety and security aspects. This work of standardization is to be carried out in the international fields for equipment and systems. The IEC 62443 family of standards covers non-IT security aspects of primarily industrial systems. All IEC activities related to security are coordinated by IEC ACSEC. JTC 1/SC 27 is a JTC 1 committee (and therefore an IEC committee as well) cooperating with TC 65 to make use of synergies and to avoid duplicate work. For further information, please contact ACSEC or TC 65. (Andreas Wolf, JTC1/SC 27 Chair)
Does SEG 9 address standards for an interoperable platform where smart devices can integrate themselves, especially for homes? Not the device, but the (software) platform.	SEG 9 does not produce standards which are the mandate of IEC TCs and SCs and, by exception, of IEC SyCs. (Kim Craig, SEG 9 Convenor)
For any further questions, please contact the IEC Academy, academy@iec.ch	

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Additional input from Dr. Kenneth Wacks, Convenor of ISO/IEC JTC 1/SC 25/WG 1

Questions	Answers
With more and more old people in the society, can we build a smart home solution for old people which can help them live alone in their home?	ISO/IEC JTC 1/SC 25/WG 1 is developing a family of standards for home and building automation called the Home Electronic System (HES). The HES communications infrastructure, interfaces, and applications can be the basis for commercial products that offer benefits for AAL
Is the word "smart" defined in the context of standards? Do the standards used in the smart home/smart buildings context guarantee that the products that comply with them are necessarily and sufficiently smart?	ISO/IEC JTC 1/SC 25/WG 1 has issued almost 60 standards that comprise the Home Electronic System (HES) family. Devices that interact via a home network using HES interfaces and HES communication protocols are considered "smart." The HES family includes "Guidelines for product interoperability" standards that allow manufacturers to build products with unique features while interoperating across brands.
Smart homes/Buildings is complex due to many actors involved, each actor playing a different role, how and when do you foresee a real breakthrough of real smart buildings to be in place? Any time frame when we can see real smart office/buildings? Will these actors interact with each other? will they agree? get along?	Building automation systems (BAS) have been evolving slowly since the thermostat was introduced in the 1880s. BAS already in place provides smart features for HVAC, power systems, lighting, safety and security, vertical transport (elevators and escalators), and communication networks. The challenges of integrating these systems are being addressed with standards for small buildings developed in ISO/IEC JTC 1/SC 25/WG 1 and for large buildings in ISO TC 205/WG 3. Both working groups co-operate through a liaison relationship.
Does SEG 9 address standards for an interoperable platform where smart devices can integrate themselves, especially for homes? Not the device, but the (software) platform.	ISO/IEC JTC 1SC 25/WG1 is developing a series of standards for a common user interface that can serve a variety of applications such as lighting, entertainment, healthcare, HVAC, and energy management. SC 25/WG 1 is also expanding the gateway and interoperability standards (ISO/IEC 15045 series and ISO/IEC 18012 series) to provide application services and a platform for applications to interoperate. Manufacturers can conform to these standards with appropriate software modules.
For any further questions, please contact the IEC Academy, academy@iec.ch	