ISO/IEC JTC 1/WG 7
Working Group on Sensor Networks

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Deposition of Comments – JTC001-N-9921: Sensor Network and its Interface for Smart Grid System

JTC 1 WG 7:

Title: Deposition of Comments: JTC001-N-9921: Sensor Network and its Interface for Smart Grid System

Date: 26 August 2010	Document: **ISO/IEC JTC 1/WG 7 12**

1	2	(3)	4	5	(6)	(7)
MB[1]/ # **(e.g. GB/1)**	**Clause No./ Subclause No./ Annex** (e.g.3, 3.1, Annex A, A.1)	**Paragraph/ Figure/Table/ Note** (e.g. Table 1)	**Type of com-ment[2]**	**Comment (justification for change) by the MB**	**Proposed change by the MB**	**Proposed Editors Disposition**
CA/1			ge	Canada Supports this NP with the following comments: In addition to the liaisons noted in the NP, liaisons must be established between this work and IEC TC57 (Power systems management and associated information exchange), TC65 (Industrial-process measurement, control and automation, and especially the safety and sensor/actuator networking in SC65A and SC65C) and TC77 (EMC). Ongoing work in IEC TC82, TC88, TC95, TC105 and TC114 may also relate.		The suggested liaison relationship will be recommended to the WG 7 leadership: (1) Liaison with IEC TC65 is initiated in WG 7 London meeting in March 2010; (2) Liaison letters to IEC TC57 and TC 77 have been drafted and will be transmitted to TC57 and TC77; and (3) The on-going work in IEC TC82, TC88, TC95, TC105, and TC114 will be reviewed. Editor requests to Canadian NB for additional information regarding the potentially related documents or projects from IEC TC82, TC88, TC105, and TC114.
DK/1			ge	The Danish NC cast a negative vote in accordance with the recent IEC SMB Decision 137/18: Concerning Resolutions 25 and 26 regarding Smart Grid, and Resolution 34 on Sensor Networks, SMB instructs JTC 1 to coordinate with the SMB/Strategic Group 3 Smart Grid, and suspend the new work item proposal JTC1 N9921 Sensor Networks and Interface for Smart Grid Systems.		Since the casting of votes and subsequent new project approval in JTC1, this new project was suspended by IEC SMB. However, the suspension was lifted in early June 2010, and this new project has been initiated.

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FR/1	Scope		ge	The concept “SmartGrid” was created by all stakeholders concerned with Electric Energy. Local power grid sectors as well as nationwide Power grids are in the scope of the IEC since the very beginning. IEC is the right place to work on this subject. It seems very confusing that, without any previous coordination, another organization decides to play a role in a similar or different domain with the same name. IEC Standards Management Board has already set up a Strategic Group to analyse the state of the art in the domain of Power Grid, and to identify gaps to be covered by future standardization actions (SG3). Once this gap analysis is achieved, new proposals could be started, possibly in cooperation with other organizations such as JTC 1, depending on the needs identified. It is definitely premature to start standardization without having identified the relevant requirements for this new proposal.		JTC 1 is designated to work on the standards in the area of Information and Communication Technologies (ICT), and this new project focuses on the ICT of sensor networks for Smart Grid. Thus, JTC1 is the right place to perform this new project. With the coordination between IEC SMB and JTC1, this potential conflict has been resolved, and the suspension imposed by IEC SMB has been lifted. There are numerous organizations working on Smart Grid and its standards outside of IEC. The gap analysis is being performed by many other organizations on this topic, and this new project will leverage on the findings of multiple organizations. There are sufficient information available to start this IS project. WG7 plans to collaborate with IEC SMB SG3, and also to potentially appoint a liaison representative to IEC SMB SG3 allowing exchange of documents.

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FR/2	Sub-clause B.3		te	As obviously several other standards have already been developed to interconnect sensors; checking "NO" for other sources of standards looks like no state of the art analysis has been performed before deciding to launch a new proposal. When the real needs will be known, explaining how information will be exchanged, it will be the time to choose and/or adapt one of those.		Existing standards for interconnecting sensors will be reviewed for their applicability to Smart Grid. It is no surprise that numerous existing standards would be applicable. The box is checked “No” because there was not a specific study and/or review performed prior to the writing of this new project proposal. However, during the JTC 1 SGSN study, existing standards were identified and studied for sensor networks.
FR/3	Sub-clause D.2		te	The Smart Grid concept is intended to ensure interoperability among distributed sources of electrical energy. Therefore ticking “NO” could be interpreted as a lack of knowledge of what are (multi source) sensor networks as they already exist in local or nationwide power grids. There is also an obvious need for sensor networks to be integrated (and therefore interoperable) with the upper levels of a power grid system (SCADA, EMS…).		It is well understood that “interoperability” is the key issue for Smart Grid system -- within current systems, between legacy and new systems/technologies, and also for future emerging technologies -- which will be distributed and disparate systems of systems. The box is checked “No” not because of the lack of knowledge, but because of incomplete reviews of existing technologies/systems and emerging technologies/systems at the time of the proposal development.

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DE/1			ge	Scope too wide and unclear.	Define Scope significantly more precise.	The scope has been revised and attached to this DoC. WG7 will closely collaborate with other entities within JTC 1, such as SWG on Smart Grid and SC 25 on home network related electrical systems.
DE/2			ge	In the NP it is unclear what a Smart Grid is.	Use definitions of IEC SMB SG3 document (SMB/4175/R).	Both IEC (SMB/4175/R) and European Technology Platform SmartGrids definitions were reviewed. Editor intends to review additional, available definitions for electric and other utility grids from other international/regional organizations.
DE/3			ge	Without knowledge what Smart Grid is, it will be difficult to specify the appropriate Sensor Network.	Evaluate from other sources what Smart Grid is first. There is already a lot of solutions on the way. See also attached document SMB/4175/R.	Review and evaluation of other sources are already in the plan. Request of a full content copy of SMB4175/R was made to NB delegate in the 2nd WGSN Meeting.
DE/4			ge	There is ongoing activity on Smart Metering in several regions, e.g. in CENELEC standardization (CENELEC TC13 WG2).	Avoid duplication of work.	This new project will avoid any duplication of work. Request of specific, related documents was made to German NB delegate in the 2nd WGSN Meeting.

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DE/5			ge	Sensor Networks: There is a big number of application specific solutions already available for many mentioned use cases.	Avoid overlaps and duplication of work. Contact ISO/IEC JTC1 SC25, IEC TC65, IEC TC57, CENELEC TC205 etc.	This new project will avoid overlaps and duplication of work already performed. Suggested organizations' work will be considered. Request of specific, related documents was made to German NB delegate in the 2nd WGSN Meeting.
GB/1			ge	The UK believes that there is currently insufficient definition on how the work relates to other standards activity on Smart Grid and the steps to be taken to avoid duplication of effort. The UK considers that there are valid areas of work on Sensor Networks relating to Smart Grid and would support a suitably worded proposal with a revised definition that addressed these points.		Other source documents will be reviewed and information gathered to avoid duplication of work. The scope of the project has been revised and attached to this DoC.

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ISO/IEC JTC 1 WG 7 on Sensor Network

Date: 26 August 2010

ISO/IEC NP 30101 – Sensor Network and its Interface for Smart Grid System

Revised Scope (from the 2nd Meeting of ISO/IEC JTC 1 WG 7)

The project will work within the scope of JTC1 to investigate how sensor networks can support Smart Grid technologies for power generation, distribution, networks, energy storage, load efficiency, control and communications and associated environmental challenges. It will characterize the requirements for sensor networks to support these applications. Data from sensors in Smart Grid systems is collected, transmitted, published and acted upon to ensure efficient coordination of the various systems and subsystems. The intelligence derived through the sensor networks supports synchronization, monitoring and responding, command and control, data/information processing, security, information routing, and human-grid display/graphical interfaces.

This standard will specify the

- interfaces between the sensor networks and other networks
- sensor network architecture to support smart grid systems
- interface between sensor networks with smart grid systems
- sensor network based emerging applications and services to support smart grid systems
- visualization of sensors/devices status and data/information flow in large scalable heterogeneous network systems, for example, geospatial information systems