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G3 New Work Item Proposal

March 2007

PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: 2009-09-02	Proposer: NB of US
Secretariat: National Body	ISO/IEC JTC 1 N XXXX ISO/IEC JTC 1/SC XX N XXX

A proposal for a new work item shall be submitted to the secretariat of the ISO/IEC joint technical committee concerned with a copy to the ISO Central Secretariat.

Presentation of the proposal - to be completed by the proposer.

Title (subject to be covered and type of standard, e.g. terminology, method of test, performance requirements, etc.) Specification of Data Value Domain

Technical Report on Sensor Network Reference Architecture

Scope (and field of application)

Technical Report on Sensor Network Reference Architecture (SNRA) specifies generic and generalized reference architecture (RA) for sensor networks (SN). The purpose of developing TR on SNRA is to benefit all JTC 1 SCs for horizontal applications, but also support vertical applications when SNRA is tailored by the stakeholders.

The SNRA guides SN-related standardization and also is used by SN developers and implementers. Technical Report details generic and generalized (1) SN models, entities, and components and (2) SN requirements and interfaces, directly or via reference the:

- a. Business (conceptual), system (logical), and technology (physical) models and configuration;
- b. Data, function, network, organization, and motivation;
- c. Generic and generalized system and functional requirements as well as their performance requirements; and
- d. Interfaces among the models and their entities;

Implementation (e.g., hardware and software), installation, and conformance requirements are outside the scope of this Technical Report, and need to be covered by other standards or by developing such standards. However, information given by this Technical Report may be of assistance.

Purpose and justification - attach a separate page as annex, if necessary

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Based on Technical Document (TD) from JTC 1 Study Group on Sensor Networks (SGSN) which is one of the major results of SGSN activities over the past 2 years (2008 and 2009), transitioning the TD to a Technical Report (TR) is a logical step forward. The two-year study in SGSN by the multiple NB personnel has gathered and analyzed the comprehensive information about Sensor Networks (SN). This study was focused on several key domains of the SN technology and also on SN industry/market needs.

Therefore, the TD can be transformed into multiple TRs addressing the key SN domains. As the first wave of the transformation, we propose to develop a TR for Sensor Network Reference Architecture (SNRA).

Technical Report (TR) on Sensor Network Reference Architecture (SNRA) provides and specifies generic and generalized reference architecture for sensor networks (SN). This TR has two main purposes.

- SNRA is to guide the SN-related standardization activities, and SNRA is an evolving reference architecture as new technologies surface. SNRA is the foundational information store where existing standards can be leveraged and where new standardization need domains are identified.
- SNRA is to provide SN developers and implementers with fundamental understanding of essential SN building blocks (e.g., models of components, entities, subsystems), the connectivity among those building blocks, and the basic functions provided by the essential building blocks. The developers and implementers use the SNRA as an initial SN blueprint or layout to design and build sensor network system, hardware, and/or software architectures to meet their SN products' requirements and market needs.

SNRA is to help international standard development for SN allowing data, sensors, and networks interoperable for developer and user environments. In addition, SNRA is to benefit developers by reducing cost and schedule risk.

Programme of work

If the proposed new work item is approved, which of the following document(s) is (are) expected to be developed?

- ☐ a single International Standard
☐ more than one International Standard (expected number:)
☐ a multi-part International Standard consisting of parts
☐ an amendment or amendments to the following International Standard(s)
☒ a technical report , type

And which standard development track is recommended for the approved new work

item?

- ☒ a. Default Timeframe
☐ b. Accelerated Timeframe
☐ c. Extended Timeframe

Relevant documents to be considered

Co-operation and liaison

Preparatory work offered with target date(s)

Signature:

Will the service of a maintenance agency or registration authority be required? ..NO.....

- If yes, have you identified a potential candidate?

- If yes, indicate name

Are there any known requirements for coding?NO.....

-If yes, please specify on a separate page

Does the proposed standard concern known patented items?NO.....

- If yes, please provide full information in an annex

Are there any known accessibility requirements and/or dependencies (see:

<http://www.jtc1access.org/>)?.....NO.....

-If yes, please specify on a separate page

Are there any known requirements for cultural and linguistic adaptability?.....NO.....

-If yes, please specify on a separate page

Comments and recommendations of the JTC 1 or SC XX Secretariat - attach a separate page as an annex, if necessary

Comments with respect to the proposal in general, and recommendations thereon:

It is proposed to assign this new item to JTC 1/SC XX

Voting on the proposal - Each P-member of the ISO/IEC joint technical committee has an obligation to vote within the time limits laid down (normally three months after the date of circulation).

Date of circulation: YYYY-MM-DD	Closing date for voting: YYYY-MM-DD	Signature of Secretary:
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NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	Validity	Explanation
A. Business Requirement		

A.1 Market Requirement	Essential <input checked="" type="checkbox"/> Desirable <input type="checkbox"/> Supportive <input type="checkbox"/>	
B. Related Work		
B.1 Completion/Maintenance of current standards	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
B.2 Commitment to other organisation	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
B.3 Other Source of standards	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
C. Technical Status		
C.1 Mature Technology	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
C.2 Prospective Technology	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
C.3 Models/Tools	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
D.2 Interoperability	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
E. Adaptability to Culture, Language, Human Functioning and Context of Use		
E.1 Cultural and Linguistic Adaptability	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
E.2 Adaptability to Human Functioning and Context of Use	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
F. Other Justification		

Notes to Proforma

A. Business Relevance. That which identifies market place relevance in terms of what

problem is being solved and or need being addressed.

A.1 Market Requirement. When submitting a NP, the proposer shall identify the nature of the Market Requirement, assessing the extent to which it is essential, desirable or merely supportive of some other project.

A.2 Technical Regulation. If a Regulatory requirement is deemed to exist - e.g. for an area of public concern e.g. Information Security, Data protection, potentially leading to regulatory/public interest action based on the use of this voluntary international standard - the proposer shall identify this here.

B. Related Work. Aspects of the relationship of this NP to other areas of standardisation work shall be identified in this section.

B.1 Competition/Maintenance. If this NP is concerned with completing or maintaining existing standards, those concerned shall be identified here.

B.2 External Commitment. Groups, bodies, or for a external to JTC 1 to which a commitment has been made by JTC for Co-operation and or collaboration on this NP shall be identified here.

B.3 External Std/Specification. If other activities creating standards or specifications in this topic area are known to exist or be planned, and which might be available to JTC 1 as PAS, they shall be identified here.

C. Technical Status. The proposer shall indicate here an assessment of the extent to which the proposed standard is supported by current technology.

C.1 Mature Technology. Indicate here the extent to which the technology is reasonably stable and ripe for standardisation.

C.2 Prospective Technology. If the NP is anticipatory in nature based on expected or forecasted need, this shall be indicated here.

C.3 Models/Tools. If the NP relates to the creation of supportive reference models or tools, this shall be indicated here.

D. Conformity Assessment and Interoperability Any other aspects of background information justifying this NP shall be indicated here.

D.1 Indicate here if Conformity Assessment is relevant to your project. If so, indicate how it is addressed in your project plan.

D.2 Indicate here if Interoperability is relevant to your project. If so, indicate how it is addressed in your project plan

E. Adaptability to Culture, Language, Human Functioning and Context of Use

NOTE: The following criteria do not mandate any feature for adaptability to culture, language, human functioning or context of use. The following criteria require that if any features are provided for adapting to culture, language, human functioning or context of use by the new Work Item proposal, then the proposer is required to identify these features.

E.1 Cultural and Linguistic Adaptability. Indicate here if cultural and natural language adaptability is applicable to your project. If so, indicate how it is addressed in your project plan.

ISO/IEC TR 19764 (Guidelines, methodology, and reference criteria for cultural and linguistic adaptability in information technology products) now defines it in a simplified way:

- "ability for a product, while keeping its portability and interoperability properties, to:
- be internationalized, that is, be adapted to the special characteristics of natural languages and the commonly accepted rules for their use, or of cultures in a given geographical region;
- take into account the usual needs of any category of users, with the exception of specific needs related to physical constraints

Examples of characteristics of natural languages are: national characters and associated elements (such as hyphens, dashes, and punctuation marks), writing systems, correct transformation of characters, dates and measures, sorting and searching rules, coding of national entities (such as country and currency codes), presentation of telephone numbers and keyboard layouts. Related terms are localization, jurisdiction and multilingualism.

E.2 Adaptability to Human Functioning and Context of Use. Indicate here whether the proposed standard takes into account diverse human functioning and diverse contexts of use. If so, indicate how it is addressed in your project plan.

NOTE:

1. Human functioning is defined by the World Health Organization at <http://www3.who.int/icf/beginners/bg.pdf> as: << In ICF (International Classification of Functioning, Disability and Health), the term functioning refers to all body functions, activities and participation. >>
2. Content of use is defined in ISO 9241-11:1998 (Ergonomic requirements for office work with visual display terminals (VDTs) Part 11: Guidance on usability) as: << Users, tasks, equipment (hardware, software and materials), and the physical and societal environments in which a product is used.>>
3. Guidance for Standard Developers to address the needs of older persons and persons with disabilities).

F. Other Justification Any other aspects of background information justifying this NP shall be indicated here.