ISO/IEC JTC 1 N 9658 2009-08-07

**ISO/IEC JTC 1
Information Technology**

Document Type: **NP**

Document Title: **New work item (NP) on "ITLET - Language Accessibility and Human Interface Equivalencies (HIEs) in e-Learning applications: Principles, Rules, and Attributes of Semantic Data"**

Document Source: **SC 36**

Reference:

Document Status: **This document is circulated to JTC 1 National Bodies for concurrent review. If the JTC 1 Secretariat receives no objections to this proposal by the due date indicated, we will so inform the SC 36 Secretariat**

Action ID: **Act**

Due Date: **2009-11-07**

No. of Pages: **18**

ISO/IEC JTC1 SC36
Information Technology for Learning, Education, and Training

Title:

New work item (NP) on "ITLET - Language Accessibility and Human Interface Equivalencies (HIEs) in e-Learning applications: Principles, Rules, and Attributes of Semantic Data"

Source:

National Body of Norway

Project:

--

Document Type:

Text for NP ballot

Status:

This document is circulated to SC36 P-members for ballot. Please use the ISO electronic committee balloting application and vote by 2009-09-01 at the latest.

Date:

2009-06-01

Action ID:

LB

Distribution:

P, O, & L Members

G3   New Work Item Proposal

PROPOSAL FOR A NEW WORK ITEM

Date of presentation of proposal: 2009-06-01	Proposer: National Body of Norway
Secretariat: Korea (KATS)	**ISO/IEC JTC 1 N** xxxx ISO/IEC JTC1/SC36 N1830

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 Guidelines for proposing and justifying a new work item are given in ISO Guide 26.

Title (subject to be covered and type of standard, e.g. terminology, method of test, performance requirements, etc.) ITLET - Language Accessibility and Human Interface Equivalencies (HIEs) in e-Learning applications: Principles, Rules, and Attributes of Semantic Data / Accessibilité linguistique et Équivalences d'interface humaine (EIH) dans les applications d'e-apprentissage: principes, règles, et attributs des données sémantique

Scope (and field of application) This standard states the principles, rules, and attributes for semantic data, for specifying language accessibility and human interface equivalents (HIEs) in e-learning applications.   It is structured to be able to support the requirements of applicable jurisdictional domains.

Many jurisdictional domains have enacted legislation, regulations or policies that require equal access to education and information.   In addition, there is the new _UN Convention on Rights of Persons with Disabilities (2006)._ [1]   This standard can be used in meeting these requirements.

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

See Annex A

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: ....)
__X__ a multi-part International Standard consisting of .... parts {See Annex A.3}
____ 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?

_X__a. Default Timeframe
____b. Accelerated Timeframe
____c. Extended Timeframe

Relevant documents to be considered   {See Annex B}

Cooperation and liaison {See Annex C}

Preparatory work offered with target date(s): Target   Part 1 draft CD, March, 2010 and   CD May 2010.   {See Annex D}

Signature:

---

[1]   http://www.un.org/esa/socdev/enable/rights/convtexte.htm (2009-05-13)

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

Comments and recommendations of the JTC 1 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 36/WG7

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: 2009-06-01	Closing date for voting: 2009-09-01	Signature of JTC 1 Secretary: Mr. Channy Lee

NEW WORK ITEM PROPOSAL - *PROJECT ACCEPTANCE CRITERIA*		
Criterion	**Validity**	**Explanation**
A Business Requirement		

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
A.1 Market Requirement	Essential __X_ Desirable ___ Supportive ___	A key missing component in the development of ITLET standards, in support of culture, language and individual needs is one which focuses on the actual contents of ITLET applications (including those using Web 2.0). This requires the ability to create libraries of robust, (re-)usable and accessible compenents for individual users, i.e. as Human Interface Equivalents (HIEs). . Without this work, solutions to providing language accessibility alternatives in the use of information technologies (IT) in support of learning, education, training (LET): (1) will not be integrated across IT platforms and organizations; (2) will be re-invented unnecessarily in every organization and public administration involving added large costs; (3) will exacerbate current lack of interoperability; (4) will lead to waste of potential accessibility gains for individuals unable to identify and access e-learning systems and content in their language of use; and, (5) will increase loss of usability and re-usability gains and benefits for everyone. The standard will provide cost savings to these organizations and public administrations, individuals, and suppliers of LET-based products. The standard will not only provide benefits in interoperability, usability and accessibility for all, but also do so from a multilingual requirements perspective and in support of cultural adaptability and diversity.

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
A.2 Regulatory Context	Essential ___ Desirable ___ Supportive _X__ Not Relevant ___	This work will be developed and structured in a manner to be able to support and facilitate legal and regulatory requirements governing the application and use of ITLET standards and solutions. Jurisdictional domains have also instituted policies or legislation that require the ability to provide access to education or recorded information in one or more languages and to do so increasingly in support of cultural diversity within a single country as a jurisdictional domain, (e.g,, Gaelic and Welsh in addition to English in the UK, aboriginal and native languages in addition to English and/or French in Canada, multiple official languages in the states of South Africa, India, Nigeria and many other countries, etc.). In addition, the EU as a jurisdictional domain has multilingual human interface equivalency requirements within itself as a jurisdictional domain. Finally, the new _UN Convention on the Rights of Persons with Disabilities_ (2006) provides a unifying basis for regulatory requirements. This work integrates regulatory requirements from both "accessibility" and "language" and thus supports the legal requirements of jurisdictional domains.
B. Related Work		

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
B.1 Completion/Maintenance of current standards	Yes ___ No_X__	
B.2 Commitment to other organization	Yes ___ No__X_	Cooperation and Liaison are identified in Annex C
B.3 Other Source of standards	Yes _X__ No___	These are identified in Annex B
C. Technical Status		
C.1 Mature Technology	Yes ___ No_X__	Some components for this standard are already developed in Parts 1, 2, and 3 of ISO/IEC 24751 multipart standard as well as in ISO/IEC and ISO standards as identified in Annex B. The underlying IT infrastructure required to support this standard is already in place but is not integrated from a LET requirements perspective. Further, some required key components are missing and this standard will fill these gaps.
C.2 Prospective Technology	Yes _X__ No___	The present (and potential) world of use of IT in support of LET is gradually establishing networks and cooperative approaches which include multiple jurisdictional domains, implement accessibility alternatives, etc.. Here and elsewhere, there is a requirement for metadata to support the ability to specify language accessibility and human interface equivalencies in the provision of content and services.

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
C.3 Models/Tools	Yes _X__ No___	A reference/framework model showing how "accessibility", "language", and human interface equivalents (HIEs) requirements can be integrated at various levels of granularity among and across jurisdictional domains.
D. Conformity Assessment and Interoperability		
D.1 Conformity Assessment	Yes ___ No_X__	

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	**Validity**	**Explanation**
D.2 Interoperability	Yes _X__ No___	Combating existing challenges in interoperabilities from a semantic perspective and ensuring greater interoperability in semantic collaboration space is a result of this project in several ways; including: 1. establishing common (default) approach(es) for: a) providers of LET products; and/or, b) public administrations to specify accessibility and language requirements. 2. providing a common reference/framework model and approach to metadata elements which in turn will provide for greater levels of interoperability in human interface equivalency of the contents as well as tools that interface with relevant IT systems, and in particular assistive technology tools.
E. Adaptability to Culture, Language, Human Functioning and Context of Use		

NEW WORK ITEM PROPOSAL - PROJECT ACCEPTANCE CRITERIA		
Criterion	Validity	Explanation
E.1 Cultural and Linguistic Adaptability	Yes __X__ No____	A primary purpose of this project is to provide a common methodology and (default) conventions for supporting cultural and linguistic adaptability. The model as well as the structure of the associated vocabulary(ies) and values for describing the contents of resources and services will be done in a manner that supports multilingual human interface equivalencies (including those from an "accessibility" nature) and do so in a manner which is IT-facilitated. In addition, the project will support the diversity of cultural contexts both within and across jurisdictional domains. This includes not only a world-wide perspective but also that of any individual anywhere in the world as a learner.
E.2 Adaptability to Human Functioning and Context of use	Yes__X__ No___	The whole project addresses this scope by providing ways to identify and describe adaptations that relate to Human Functioning, i.e. individual needs, and Context of Use.
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 standardization 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 fora external to JTC 1 to which a commitment has been made by JTC for cooperation 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 standardization.

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

D. Conformity Assessment and Interoperability

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

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

ANNEX A – PURPOSE AND JUSTIFICATION

1. Notes on Context and Current Progress of this Project

1.1 This NWIP pertains to the transfer of an existing standards development project of JTC1 ISO/IEC SC36, namely ISO/IEC 24751-8 into a self-standing multipart standard instead of it remaining a Part 8 of ISO/IEC 24751 where it has already passed the (1st) CD ballot document stage.

1.2 This standards project was proposed as a New Work Item, August, 2006 {See document 36N1341}.   The introductory Note to document 36N1341 stated that the proposed NWI:

1) could be a new and separately numbered ISO/IEC standard, and thus 36N1341 would be issued for NWI ballot; or,

2) serve as the rationale for a new Part of the ISO/IEC 24751 "Access-for-All" multipart standards project as a "project sub-division".

1.3 At its September, 2006 meeting in Wuhan, China, SC36/WG7, the Working Group responsible for ISO/IEC 24751, i.e., SC36/WG7, decided to do a "project sub-division" instead of a NWI ballot.   {See documents SC36/WG7 N0077 Resolution 08[2]; as well as JTC1/SC36N1410, Resolution 47[3]}.

1.4 While the 2nd WD (or draft CD) for ISO/IEC 24751-8 was being developed, the United Nations unanimously adopted the new _UN Convention on the Rights of Persons with Disabilities and Optional Protocols._   Integrating and ensuring that this standard supports this UN Convention was a major discussion point at the SC36/WG7 discussion on the draft CD document (WG7 N0118) at its Jeju, March, 2008 meeting.   This resulted in SC36/WG7 adopting the following resolution {See SC36/WG7 N0123}

> _**"WG7 (Jeju March 2008) Resolution 01: Support the principals of UN-Convention**_
> _SC36/WG7 resolves, that in its current standards development work and any of its new standards development projects, as well as any amendments or new editions of its existing standards, that these standards shall be architectured and structurally engineered to support and facilitate the implementation of the objectives and requirements of the 2006 UN Convention on the Rights of Persons with Disabilities" and Optional Protocols, both generally and especially in the fields of e-learning, education, and training._

---

[2] 36WG7/N0077 (2006-09-30) _WG7 resolutions from Wuhan China meeting_

Resolution 08:
WG7 recommends that ISO/IEC 24751 be split to include a new part based on 36N1341, "Language accessibility and Human Interface Equivalencies (HIEs) in e-Learning applications" as part 8 of the multipart standard ISO 24751:2007 as it falls within the scope of ISO 24751.
(approved)

[3] 36N1410 – (2006-09-23) _Resolutions of the SC36 Plenary Meeting, 2006-09-22, in Wuhan, China_

Resolution 47 (Wuhan 2006): ISO 24751 project split "Language accessibility and Human Interface Equivalencies (HIEs) in e-Learning applications"
SC36 instructs its Secretariat to initiate a project subdivision for ISO/IEC 24751 to include a new part based on 36N1341 "Language accessibility and Human Interface Equivalencies (HIEs) in e-Learning applications" as part 8 of the multipart standard ISO/IEC 24751:2007 as it falls within the scope of ISO/IEC   24751.
Unanimous

Approved"

1.5 The resulting CD ballot document, (36N1666Rev1 (2008-05-28) for ISO/IEC 24751-8 incorporated the requirements of this UN Convention. The CD ballot for ISO/IEC 24751-8 passed with 13 P-members voting Approve; 4 Disapprove, and 7 Abstain. {See 36N1709}. The BRM for the CD ballot document was successfully completed in Stuttgart as noted in SC36/WG7's Stuttgart Resolution #08 in SC36/WG7 N0144 (2008-09-09) as follows:

> ***WG7 (Stuttgart September, 2008) Resolution #08: Completion of BRM on 24751-8***
> *WG7 notes that the BRM of ISO/IEC 24751-8 CD was resolved to every one's satisfaction. The disposition of comments document is published as WG7N0140. A "sneak peak" of the proposed CD2 will be provided by 2009-02-15 for discussion at the New Zealand meeting.*
> *approved*

The disposition of ballot comments are found in document SC36/WG7 N0140 (2008-09-09).

At its September, 2008 Stuttgart meetings, SC36/WG7 also re-affirmed Dr. Jake V. Knoppers and M. Janice Pereira as Project Co-Editors for ISO/IEC 24751-8. {See document 36N0144 Resolution #01}. (These Project Co-editors were re-affirmed at the Wellington (March 2009) plenary. {See 36N1802 Resolution #54}

1.6 The decision of SC36/WG7 to ensure that the development of Part 8 be architectured and structurally engineered to support and facilitate the implementation of this UN Convention has resulted in a document which one should consider as the basis for a new (multipart) standard. This option is captured in SC36/WG7 Stuttgart resolution #04 {SC36/WG7 N0144}[4]:

> ***WG7 (Stuttgart September 2008) Resolution #04: NWI proposal on HIE***
> *WG7 encourages Canada and Norway to develop a NWI proposal for a multipart standard on individual accessibility, language accessibility and Human Interface Equivalencies (HIEs) to be issued and balloted prior to the March 2009 New Zealand meeting. The "location" of Part-8 will be decided upon at the March 2009 New Zealand, based on the result of this NWI ballot.*
> *approved*

2. Purpose and Justification

Note: The text for purpose and justification which follows is basically the same as that found in the original NWIP of August, 2006 document 36N1341 which resulted in the launching of the current standards development project of ISO/IEC 24751-8. It has been updated and amended to reflect progress in the JTC1 "accessibility" standards since August, 2006.

2.1 In addition to the interoperability (see D.2) and cultural and linguistic adaptability (see E.1) focus presented above, the follow purpose and justification statement applies.

---

[4] Also, 36N1721 Resolution #35
Resolution 35 (Stuttgart September, 2008): NWI proposal on HIE
SC 36 encourages Canada and Norway to develop a NWI proposal for a multipart standard on individual accessibility, language accessibility and Human Interface Equivalencies (HIEs) to be issued and balloted prior to the March 2009 New Zealand meeting.
unanimous

The language utilized in learning, education and training (LET) is determined by three key factors; namely:

1)   the language of the learner (apart from the learner wanting to learn another language);

2)   the needs of the learner with disabilities and anyone in a disabling context (this includes providing the semantics of the contents in the form of a human interface equivalents (HIEs) and doing so in a systematic and IT-facilitated manner);

   Here we already have both different forms of written representations of a language as well as in the form of symbols, glyphs, oral, pictorial, etc..

3)   the fact that the language of instruction (LOI), and thus the developed of products is often governed by: (a) general rules governing use of an official language (or de facto language) of the jurisdictional domain in which the LET takes place; (b) a particular law or regulation of a jurisdictional domain which pertains to use of a language for LET purposes, i.e., as a "legally recognized language (LRN)".

The key objective of this standard is to support language accessibility and facilitate multilingualism and do so from a perspective which incorporates both linguistic and non-linguistic equivalents.   Included here are non-written forms of communication such as oral, pictorial, etc.

Having a common IT-facilitated approach will: (1)   not only (a) benefit individual users world-wide (doing so in respect and support of cultural diversity); (b) ensure that requirements of jurisdictional domains (at whatever level) can be supported in a very cost-effective and efficient manner;   but, (2)   also benefit suppliers of LET focused products.

Multilingual communications (whatever the IT platform utilized including the Internet) is already supported by existing technologies.   Many ISO/IEC and ISO standards already exist (or are under development) whose contents can and will be utilized building blocks and integrated for this new LET standard.

2.2   These standards include the first three parts of ISO/IEC 24751*, Individualized Adaptability and Accessibility in e-Learning, Education and Training* – as well as the recent results of the work of the JTC1 Special   Working Group on Accessibility (SWG-A) as captured in the multipart ISO/IEC TR 29138 standard titled *"Information technology – Accessibility considerations for people with disabilities".*

This multipart standards project will be based on these, and other JTC1 and ISO accessibility related standards.   It will be specifically focused to facilitate and support linguistic accessibility and related requirements of jurisdictional domains.   It is recognized that requirements of this nature may vary among jurisdictional domains.   However, the requirements of the "UN Convention on the Rights of Persons with Disabilities" form a common unifying base (especially for JTC1/SC36 P-members, the vast majority of whom represent countries which already are signatories to this UN Convention.

This standard will also facilitate and reduce costs to providers of LET-based products and services not only for the requirements of a particular LT market but especially from a global multilingual market perspective as well as user requirement perspectives, i.e., in the preferred accessibility language (or Human Interface Equivalent) of an individual user.

13

3. Simple or Multipart Standard

This standards project is currently Part 8 of the ISO/IEC 24751 multipart standard of JTC1/SC36.   In the field of "accessibility," the JTC1/SWG-A also has a multipart TR standard.

It is most unlikely that all the requirements for language accessibility and human interface equivalencies in the field of learning, education and training (LET) can or should be addressed in a single standard document.   The existing CD 24751-8 document should be re-configured to serve as the basis for a "Part 1: Framework".   This will focus and expedite the transformation and completion of the current CD "ISO/IEC 24751-8" document as an IS.   The approach of a multipart standard will also ensure that such a "Part 1: Framework" can focus on the essentials, i.e., primitive level, with more detailed and specific issues being addressed in subsequent Parts.

ANNEX B – RELEVANT DOCUMENTS TO BE CONSIDERED

<u>Notes:</u>

1) The original 36N1341 NWI proposal document identified, in its Annex B, over 24 international standards as well as 26 documents and contributions as JTC1/SC36 numbered documents.

2) These and other relevant documents have already been incorporated in Clause 2 "Normative References" and Annex X "Bibliography" of the ISOIEC CD 24751-8 ballot document (see 36N1666Rev1).

3) In addition, the recent JTC1/SWG-A documents forming part of the multipart ISO/IEC TR 29138 standard will be considered.   The common title for this 3 Part TR is *"Information technology – Accessibility for People with Disabilities".*

ANNEX C – COOPERATION AND LIAISON

Note:

Annex C is divided into two (2) sections; namely:

- C.1 – ISO/IEC and ISO Committees; and,
- C.2 – Other bodies (including those having liaison status with ISO/IEC JTC1/SC36 (and WG7 in particular)

C.1 ISO/IEC AND ISO COMMITTEES

- ISO/IEC JTC1/SC2 – Coded Character Sets

- ISO/IEC JTC1/SC32 – Data Management and Interchange

- ISO/IEC JTC1/SC34 – Document Description and Process Languages

- ISO/IEC JTC1/SC35 – User Interfaces (especially its WG8 - User interfaces for remote interactions)

- ISO/IEC JTC1/SWG - Accessibility

- ISO TC 37 – Terminology and other languages and content resources

- ISO TC 46 – Information and Documentation

- ISO TC 159 – Ergonomics

C.2 OTHER BODIES (Including those having liaison with ISO/IEC JTC1/SC36)

(in alphabetical order)

- AICC
- AUF
- CEN/ISSS/WS-LT
- DCMI - Accessibility
- IEEE LTSC
- IMS - Accessibility
- Infoterm
- ITU- G3ict (Global Initiative for Inclusive Information and Communication Technologies)
- ITU-T
- UNCITRAL
- UN/ECE
- UNESCO
- WC3/UWA (World Wide Web - Ubiquitous Web Application)
- W3C/WAI (world Wide Web – Web Accessibility Initiative)

ANNEX D – PREPARATORY WORK OFFERED TARGET DATE(S)

The purpose of this NWIP is to   use existing work on ISO/IEC 24751-8 as the basis for the development of a new multipart   standard. The CD ballot document for   Part 8 of 24751 has already been prepared and successfully balloted.   {See JTC1/SC36 documents 36N1666Rev1; 36N1709; and, SC36/WG7 N0144}. It was in response to the Part 8 CD ballot comments, that   SC36/WG7 re-affirmed the Scope of Part 8 of 24751 and decided that this standards development work would be better served via a new multipart standard rather than as an existing Part   of 24751.the scope of   Part 8SC36/WG7 , that standards development   Should this NWI proposal be successful, "Part 1: Framework" of the new multipart standard   will be based on the existing Part 8 work would be balloted as a   CD following   following the Septmber, 2009 meeting., depending on the decision of SC36/WG7.