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Title: ITSIG Liaison Report for JTC1 Plenary

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1. Outstanding items

At the 2008 JTC1 Plenary, the following items were outstanding.

- Follow-up on XML authoring for standards
- ISO/IEC 24706 Standards Metadata, both use and the development of the standard
- Follow-up on ISO/IEC namespace identifiers and their impact on SC/WG work
- Follow-up on new PDF formats
- Participation in ISO/ITSIG activities concerning collaboration, including understanding use/needs of collaboration tools within SCs/WGs, and coordinate with ITSIG

Note 1: Attachments: (1) draft resolutions of the 2009 ITSIG Plenary, (2) ITSIG PDF project status report, (3) ITSIG XML project report, (4) minutes from most recent XML authoring / metadata meeting, (5) RFC 5141 on URN namespace for ISO standards.

Note 2: There are no items for action at the JTC1 plenary.

2. XML usage authoring standards

The XML authoring project has been making good progress, as demonstrated at the 2009-05 ITSIG Plenary. The following is the schedule of the remaining tasks:

Implementation of decisions in prototype	By 15 October 2009
Implement decision in proof-of-conception on another platform/software, e.g. for OpenOffice documents the time estimate is 30 day FTE for the round-tripping service and Word addon	By end November 2009 (if limited to a second platform)
Prototype available for testing	Word 2007 version: by end of October 2009 Other platforms: TBD
Proof-of-conception on OpenOffice available for testing	OpenOffice version: by end of December 2009
Finalization of template	2010 – as early as possible (depending on SDO's feedback)
Deployment	2010

JTC1 should continue to monitor this activity. JTC1 SCs should consider trial-use experiments for projects that can make good use of XML-based documents. See attached documents for detailed status.

JTC1 Action: None.

3. Standards Metadata, both use and the development of the standard

The ISO/IEC 24706 standard is being developed in JTC1/SC32/WG2 (Metadata). The document is presently in FCD ballot to close 2009-12-31 (see "http://jtc1sc32.org/doc/N1901-1950/32N1918T-text_for_ballot-FCD_24706.pdf"). ISO/ITSIG will provide comments to SC32.

JTC1 Action: None.

4. ISO/IEC namespace identifiers and their impact on SC/WG work

ISO CS has developed internet RFC 5141 ("<http://tools.ietf.org/html/rfc5141>") on "A Uniform Resource Name (URN) Namespace for the International Organization for Standardization (ISO)". This was discussed at the 2009 ITSIG Plenary. One issue raised was: What is the computational model for resolving these kind of URNs? Or, said differently, what are the mechanisms for transforming the URN (which is used as a reference to a standard or a portion of a standard) into a method for acquiring the data associated with the reference? If URN references are used, how are they incorporated into documents? For web access to the data, do URNs automatically transform into a single URL or are multiple URLs possible? ITSIG is interested in existing practice. I will report existing JTC1 practice at my presentation in the JTC1 Plenary.

JTC1 SCs should report existing practice on URN resolution to the JTC1 ITSIG liaison.

JTC1 Action: None.

5. Follow-up on new PDF formats

The ISO Secretary-General has postponed the transition to Acrobat 8.1 until 2010. See the attached report.

JTC1 Action: None.

6. Action plan through 2010 JTC1 Plenary

The following tasks are outstanding:

- Follow-up on XML authoring for standards
- ISO/IEC 24706 Standards Metadata, both use and the development of the standard
- Follow-up on ISO/IEC namespace identifiers and their impact on SC/WG work
- Follow-up on new PDF formats
- Monitor progress on ITSIG ISOURCE and E-committee projects



DRAFT RESOLUTIONS ADOPTED AT THE 18th MEETING OF THE INFORMATION TECHNOLOGY STRATEGIES IMPLEMENTATION GROUP

Madrid, 8 May 2009

ITSIG Resolution 1/2009

(GDV2 – Global Directory version 2)

ITSIG,

noting the progress made by the GDV2 project and the report of the project team (ITSIG 02, Annex 1),

invites ISO/CS, with the support of the project team, to progress with the implementation of the measures described in doc. ITSIG 02, Annex 1, i.e.:

- inform all member bodies of the availability of the "Observer" role in TC/SC/WGs and of the appropriate modalities to apply it,
- finalize the technical implementation of the numerical limitation to the number of users that can be registered to a WG by the member body of a particular country,
- develop a clarification document, in consultation with the TMB, concerning the application of such numerical limitation, with possible exceptions where the need is clearly justified,

further invites ISO/CS and the project team to progress with:

- promoting the effective deployment of GDV2,
- continuing and expanding training activities, including the provision of on-line training tools,
- carefully monitoring GDV2 use, collecting input and feed-back concerning possible improvements.

ITSIG Resolution 2/2009

(ISource – ISO Source for software development and collaboration)

ITSIG,

noting the progress made by the ISource project as reported by the project leader,

invites the project team to continue its activities facilitating practical software development efforts by sharing commonly applicable software components, source code and development tools to support the ISO standardization processes,

further invites the project team to develop communication material to provide better explanation of the resources available through the ISource repository and their applicability to support the technical and business requirements of ISO members.

ITSIG Resolution 3/2009

(ECOM – eCommittees)

ITSIG,

noting the report made by the ECOM project team,

asks the project team and ISO/CS to complete the following tasks by 31 October 2009:

- migration of the ISOTC server to the approved ITSIG eCommittees module (3.7.2, based on Livelink version 9.7.1), incorporating the interfaces to the Global Directory, Committee Internal Balloting and Meeting Management applications,
- finalization of the agreement with JTC 1 concerning a harmonized eCommittee module (based on the version demonstrated at the ITSIG meeting on 7 May 2009)

noting that, depending on the progress of the interaction with JTC 1, it would be highly desirable to finalize the implementation of the ISO/JTC 1 harmonized eCommittee module in time to support a synchronized migration of both the JTC 1 and the general ISOTC implementation,

invites the TMB to decide, at its June 2009 meeting, about the possible extension of the JTC 1 approach concerning the visibility of document attributes in N-Numbered document lists (as described at Appendix to Annex 3 to document ITSIG 02/2009) to the general ISOTC implementation, and

further asks ISO/CS and the CPA signatories to address on a continual basis the monitoring and support of the product planning cycle of Open Text's eCommittee modules, pursuing optimal allocation of ISO/CS and ISO members' resources (focusing on key ISO-specific needs and avoiding unnecessary duplication of efforts with Open Text).

ITSIG Resolution 4/2009

(NMC – National Mirror Committees 1)

ITSIG,

noting the limited progress made so far with the deployment of NMC implementations by NSBs (as described in Annex 4 to document ITSIG 02/2008),

underlining the strategic importance of this project,

urges all ITSIG members and observers to be proactive in promoting and supporting the timely deployment of their member body NMC implementation,

asks ISO/CS and the project team:

- to communicate effectively with ISO member bodies, with a view to ensure the monitoring of the take-up and use of the NMC services by them and
- to provide assistance to those ISO members needing it,

further invites TMB to provide clarification on:

- the business rules for identification (and in particular N-Numbering) of TC documents and DIS/FDIS balloting documents
- the mandatory use of the attribute “Document type” for document exchange,

further asks ISO/CS and the project team to progress with the following tasks:

- implementation of the new features described in Annex 4 to document ITSIG 02/2008, (email notification and document exclusion functionality),

- definition of the approach to be followed for identification (and in particular N-Numbering) of documents originated outside ISOTC,
- cooperation with NSBs hosting committee documents outside ISOTC, with a view to extend the number of documents to be made available for NMC dissemination.

ITSIG Resolution 5/2009

(NMC – National Mirror Committees 2)

ITSIG,

noting the needs expressed by some ISO members and the experience gained by ISO/CS in projects addressing i.a. the automated feed of Global Directory data from existing users' databases,

supports the efforts to be undertaken by ISO/CS in cooperation with i.a. AENOR, DS, NSAI and CEN/CMC, concerning the development of a generic interface supporting the ISO-GD and CEN-GD data feeds (along with their NMC extensions) from existing user's databases, and

invites ISO/CS to make it available (through the ISOURCE repository) to all the ISO members potentially interested.

ITSIG Resolution 6/2009

(XML)

ITSIG,

noting the report from the ISO XML project team (ITSIG 02/2007, Annex 5),

underlines the strategic importance of this project addressing standards authoring and metadata management,

confirms that:

- the primary target software platform for the wizard version of the template is MS-Word 2007 to be finalized in 2009,
- the second target software platform (Open-Office) for the wizard version of the template will be developed in 2010 if there is an explicit request and commitment to use this implementation from at least one NSB,
- XML, DOCX and PDF are the requested output formats of the project (additional formats could be specified in future ITSIG projects concerning XML),
- a single, central Webservice as described in appendix A to Annex 5 to document ITSIG 02/2009, managed by ISO/CS, will be a core deliverable of the project. Additional tools or transformations can be developed by SDOs by setting-up and maintaining their own Webservices, using the architecture delivered by the project,

further approves the criteria for assessing the success of the project reported at item 5 of Appendix A to Annex 5 to document ITSIG 02/2009,

clarifies that the analysis and possible development of XML-based production models are beyond the scope of the project and can be addressed in a future ITSIG project, for which the XML project team will define a tentative timeframe,

asks the project team and ISO/CS to progress expeditiously with the work plan following the timeline indicated at item 7 of Appendix A to Annex 5 to document ITSIG 02/2009, taking into account the above decision regarding Open Office,

urges all the concerned ITSIG members to ensure their strong commitment and to allocate resources as needed, to collect information about authors' software platforms and to liaise closely with ISO/CS concerning their own national development, and

invites the CPSG to specify customer expectations regarding the use of XML-structured content and to provide feed-back and recommendations to ITSIG by 31 December 2009.

ITSIG Resolution 7/2009

(DRM – Digital Rights Management)

ITSIG,

noting the project progress report (ITSIG 02/2008, Annex 6),

invites the project team and ISO/CS to maintain a close interaction with Council and CPSG to receive input concerning the implementation and the possible update of the ISO DRM policy.

ITSIG Resolution 8/2009

(Update of the ITSIG GRAPH)

ITSIG,

noting the project progress report (ITSIG 02/2009, Annex 7),

asks the project team and ISO/CS to progress with the finalization of the revised template and to update the related documentation by 30 June 2009,

further asks ISO/CS to progress with the implementation of the pilot project to implement the agreed classification of different types of graphics, with a view to present preliminary results by 31 December 2009,

asks the GRP members to update the GRP Agreement to take into account the technical and organizational modifications which have occurred over the past six years,

invites the GRP members to consider the possibility of making available to all the ISO member bodies the full GRP repository of graphics (including those in revisable formats),

further invites ISO members who already make use of AutoCad to participate in the GRAPH group and join the Graphics Resource Pool Agreement.

ITSIG Resolution 9/2009

(User support services and developing countries' perspective)

ITSIG,

noting the report on the provision of user support and assistance services to developing countries,

commends the ISO/CS staff for the work done and,

decides to disband the USUP project team and

invites ISO/CS to continue to update ITSIG on a regular basis on the initiatives in support of developing countries in the ICT field (and notably in relation to the update of the ISO ICT Programme implementation) and to ask for the contribution from ITSIG members whenever appropriate.

ITSIG Resolution 10/2009

(PDF use group)

ITSIG,

noting the report from the ISO/CS (ITSIG 04/2009),

invites the PDF use group to monitor developments in this area, with a view to ensure alignment with the most recent Acrobat version in conjunction with the ISO/CS PC park migration (expected in 2010 or beyond).

ITSIG Resolution 11/2009

(Internet-draft submission to the IETF concerning URN for ISO)

ITSIG,

noting the report from the ISO/CS (ITSIG 03/2008),

invites ISO/CS, in collaboration with Frank Farance (as the representative of JTC 1) and the TCs which originated the request for an ISO URN, to develop a position paper by 30 September 2009 highlighting immediate use of the URN and other possible types of applications.

ITSIG Resolution 12/2009

(Standards as databases)

ITSIG,

noting with interest the report on the ISO Concept database (ITSIG 05/2008) and the establishment of an ITSIG interest group on the matter,

invites ISO/CS to keep ITSIG informed on progress of the ongoing project and to post under the ITSIG document folder updated information material covering the various aspects of the project and,

further invites the interested ITSIG members to follow the CDB implementation (and in particular its use by the concerned technical experts from their countries) and to provide input and feedback to the ISO/CDB project.

ITSIG Resolution 13/2009

(Implementation plan 2009)

ITSIG,

approves the updated implementation plan for the year 2009 (ITSIG 06/2008), asking ISO/CS to amend the document to reflect the decisions taken with ITSIG resolution 9/2009 (USS) and ITSIG resolution 6/2009 (XML),

approves the establishment of a project team for the evaluation of the IT tools for informal collaboration with the objective and scope defined in Annex to ITSIG 06/2009,

approves the establishment of an ITSIG interest group for sharing information on the evaluation of Web and voice conferencing systems, and

asks ISO/CS to consult the ITSIG members and observers on their interest in participating in the agreed projects, with a view to update the composition of the 2009 project teams by 31 May 2009.

ITSIG Resolution 14/2009

(Implementation plan 2010)

ITSIG,

approves the draft implementation plan for the year 2010 (ITSIG 07/2009), asking ISO/CS to amend the document to include the decisions referenced in ITSIG resolution 13/2009, and

invites ISO/CS to consult in due course the ITSIG members and observers on their interest in participating in the agreed 2010 projects.

ITSIG Resolution 15/2009

(Standards linking)

ITSIG,

noting the proposal from BSI concerning standards linking (ITSIG 11/2009) and the interest expressed by some ISO members,

welcomes the pilot project to be initiated by BSI and a group of NSBs to investigate in more detail the issue of standards linking (and in particular the possible use of DOI), with a view to build a business case, and

invites BSI and the group of interested NSBs to keep ITSIG informed about their findings.

ITSIG Resolution 16/2009

(Cooperation with DEVCO)

ITSIG,

thanks DEVCO for the successful organization of the joint ITSIG/DEVCO session in the framework of the DEVCO plenary meeting in Dubai on 12 October 2008, and

looks forward to continue the collaboration with DEVCO on matters related to the support of members from developing countries in the IT field.

OTHER ISSUES RELEVANT TO ITSIG

AGENDA ITEM 5.2 PDF USE GROUP

1. Background

The issue of adoption of new versions of Acrobat was addressed at the ITSIG plenary meeting in 2007, which approved the following resolution:

ITSIG Resolution 10/2007

(Adoption of new versions of Acrobat [PDF use group])

ITSIG,

noting the report from the ISO/CS (Annex 1 to ITSIG 03/2007),

recalls that a “PDF use” group lead by ISO/CS, was established in 2006 with the following tasks:

- monitoring, on a continual basis, of the evolution of PDF and in particular its use by the ISO community and for archiving;*
- testing and cost/benefit evaluation of the adoption of more advanced versions of Acrobat/PDF and/or add-on products;*
- recommending to ITSIG of migrations/adoption of new products when considered appropriate;*

invites more ITSIG members to join the group, indicating to ISO/CS if they wish to do so by 31 May 2007.

Further to the indications received by ISO/CS after the meeting, the list of members of the PDF use group was updated.

The matter was then re-considered at the ITSIG plenary meeting in 2008, which approved the following resolution:

ITSIG Resolution 9/2008

(Adoption of new versions of Acrobat [PDF use group])

ITSIG,

noting the report from the ISO/CS (Annex 1 to ITSIG 03/2008),

invites ISO/CS to develop by 30 June 2008 a document describing the objectives to be achieved and the tasks to be completed in 2008,

further invites interested members to join the group.

The project plan describing the project objectives and the tasks to be addressed was circulated to the ITSIG PDF use group on 2 September 2008. The project plan foresaw the finalization of recommendations for use of Adobe Acrobat 8.1 by mid December 2008, to pave the way for the migration of the ISO Central Secretariat to Adobe Acrobat 8.1 in the first half 2009.

2. Update

As indicated in the project plan, the PDF test set was made available to the PDF task force on 2008-11-11, with a deadline for feedback by 2008-12-15. This was subsequently extended on request to 2009-01-30.

The review of the comments and the process envisaged to finalize the PDF use group recommendations for submission to ITSIG, were subsequently put in abeyance pending a decision as to whether the ISO/CS would migrate to Acrobat 8.1 in 2009 (a step linked, in the ISO/CS IT plan, to hardware renewal and migration to Windows Vista).

The Secretary-General has subsequently decided to postpone the ISO/CS PC park migration to 2010 or beyond. As a consequence, migration to Acrobat 8.1 was also postponed and the project plan for the PDF use group needs also to be updated – with a view to ensure alignment with the most updated Acrobat version at the time of the PC park migration.

REPORT ON THE ITSIG PROJECTS BY THE ITSIG PROJECT LEADERS

AGENDA ITEM 4.5 XML

The XML proof-of-concept template was demonstrated at a meeting on 2008-10-20 in Geneva and made available to the project team members for review and testing. The ITSIG secretary requested that the prototype be made available by end Q1 2009 with roll-out end 2009.

The comments regarding the proof-of-concept template were discussed at a follow-up meeting held on 2008-12-05 in London. This meeting identified a number of action items, and in particular the need to progress on the following:

- a) the *schema for terminology* (once the revised version of ISO/DIS 10241-1 is available);
- b) the needs regarding *metadata management* and how these should be addressed in the template architecture;
- c) the *metadata needs*;
- d) the evaluation of the resources necessary to create an *OpenOffice Addon* having the same functionalities as the proof-of-concept Word 2007 Addon.

Furthermore, some members expressed the desire to test the scenario STD \Rightarrow Word 2007 \Rightarrow XML, and possibly back again.

The current status of the project is as follows.

- a) *Schema for terminology*: The ISO/TC 37 meeting to discuss the voting comments on ISO/DIS 10241-1 was held only on 2009-03-30. Unfortunately the work was not completed and is scheduled for completion by the end of April 2009 at which time a decision will be made by the committee as to whether a second DIS vote is required. Accordingly, the target structure is not yet final.
- b) A majority view was expressed regarding the needs for *metadata management* in the template.
- c) The *metadata review* planned to be circulated in January 2009 is behind schedule: a draft will be sent out in April 2009.
- d) Although it had been planned to decide on the subsequent steps in the project in February 2009, the comments received subsequent to the London meeting have revealed that:
 - a number of project team members currently do not have the capability to test a template running on Word 2007, and
 - the target platform(s) and certain of the details agreed to in the original project specifications were being drawn into question.

In response to the comments received, the Project manager has developed a summary document confirming and further clarifying the project objectives, key action items to be undertaken and an updated timeline. The document is attached as Appendix A and **ITSIG is invited to discuss it with a view to approve it.**

The consolidated document incorporating all comments received further to the London meeting, is attached as Appendix B.

XML authoring/metadata template project — Updated specification 2009-04-20

1 Introduction

This document is based on the specifications provided in the [Template functional specifications](#) together with feedback received concerning the proof-of-concept template.

The template represents an evolution of the current STD template

- to facilitate the drafting work of experts;
- to improve the usability and functions of the STD template (no reduction in usability and functions is desired);
- to facilitate the exchange of document files during the drafting phase;
- to help the translation process and to increase the consistency between versions in different languages;
- to facilitate the publishing work of the SDOs.

Whether or not this template is used by any particular SDO as a publishing tool is for the particular SDO to decide, but the DTD or schema shall cover the needs for publishing of the documents specified in 1.2.

Note: here and in what follows the acronym "SDO" is used to designate collectively ISO/CS, NSBs and CEN/CMC. Other standards developing organizations (international organizations such as IEC and ITU or other national SDOs) might find the ISO XML template useful and might wish to apply it to a certain extent: however, they are not the intended target of the project.

2 Table of contents

This document is organized in five main sections covering the following aspects.

- Project objectives on which there is consensus: they are described in detail for the sake of clarity.
- Project objectives which require some clarification: issues are presented, with a view to discuss them and take a decision, whenever possible, at the next ISTIG plenary meeting on 7-8 May 2009.
- Criteria to be used for assessing the project success.
- Key action items to be addressed by the project team.
- Updated project timeline.

3 Project objectives on which there is consensus (➤ related information)

3.1 DTD or schema

Creation of ISO/ITSIG XML DTD(s) or schema for drafting documents having a structure in conformity with the ISO/IEC Directives, Part 2, and providing for the following:

- MathML for maths
- CALS ETM for tables - from the e-mail discussions this appears to be the preferred choice
- markup of thousand / decimal separators
- markup of provisions (additional, not in original specifications, but no objections seen)

3.2 Coverage of SDOs and document types

3.2.1 Ability to prepare ISO and ISO/IEC document types specified in the ISO/IEC Directives, Part 2, as well as Amendments and Technical Corrigenda thereto, and consolidated amendments.

3.2.2 Ability to be extended to other SDOs and deliverables mentioned in the Template functional specifications (➤ the 7 document types).

3.3 Validation

Validation of

- structure
- fonts
- links
- references contained in PMDBs of SDOs

3.4 Export and import of metadata

3.4.1 Project metadata

Restrict complexity of template by use of minimum metadata to permit project identification:

- SDO
- Projectnumber
- Language
- Stage code
- Creation date & time

Provide for export/import of

- project metadata, e.g. titles data, metainformation on committees, number of technical/manuscript pages, etc.,
- data for SDO references with related metadata and validation of references

3.4.2 Provide for extracts of certain elements

- table of contents
- introduction
- scope
- conformance
- normative references
- terms and definitions

3.5 Aspects related to migration from STD

3.5.1 STD to XML authoring template migration:

- as seamless as possible (➤ similar user interface and equivalent ease of use; identical terminology and style names where possible)
- for any wizard version, installation no more complicated than the installation of the current STD template
- for a manual version, no need for administrator privileges or I.T. expertise to install the template on their machines
- easy import of documents prepared using previous versions of the STD template (➤ identical style names where possible)
- context-sensitive help (➤ possibility to include extracts from the ISO/IEC Directives, Part 2)

3.5.2 Template user interface

- having a similar look and feel to that of the current STD template within the limits possible depending on the platform/software chosen
- designed to encourage the use of the correct structure and correct markup for content

3.5.3 Supporting materials: similar to those provided for the current STD template:

- user manual
- helpdesk
- training

3.6 Software for running the template

Provide for

- a "basic" (passive) version (equivalent to the current model documents) for experts which places no restrictions on operating systems, and which has reduced functionality
- an "XML-Professional" version for working on specific operating systems

3.7 Use of the template off-line and on-line

Allow for work off-line but also allow for a document instance to be validated on line

- Validation of document structure
- Validation of fonts
- Conversion to and from XML
- Validation of links inside documents

3.8 Management of template versions

Prohibit the change of ISO and CEN channels by National Standards Bodies; in effect, each SDO shall be permitted to change only things specific to that SDO

4 Project objectives and technical/implementation issues which require clarification, discussion and agreement for development of the prototype

4.1 DTD or schema — Validation of extension to cover additional needs

It is necessary that

- the current schema definition be validated to ensure that it corresponds to the needs of the project team members,
- the schema be extended for the management of consolidated documents (i.e. merging of mother document plus amendments),
- it be determined how to treat tables that are too complex (or don't have an exact semantic description) to be transformed into an CALS ETM,
- the schema and exchange format for terminological data be determined,
- the metadata (ISONET plus additional elements) be validated – to be provided by ISO/CS shortly, and
- where possible, more constraints are added in so that undesirable features are caught at the validation stage.

All these are specific technical aspects that should be addressed and resolved at the next XML project team meeting.

Consideration should also be given by the project team members to whether it would be necessary to cover additional markup needs (e.g. graphical symbols, codes, etc.). However, these possible extensions should be considered *after* the release of the prototype (for a subsequent version of the ISO Template).

4.2 Platforms, software, output formats and web services

4.2.1 Platforms and software

Which platforms and software do we need to cover for the wizard and manual versions of a template?

The target platforms considered in the original project specifications are:

- Windows running Microsoft Word 2007
- OpenOffice 3.0

ITSIG should discuss this matter at its plenary meeting, with a view to

- either confirming its original specifications, or
- specifying additional target platforms.

Note that any platforms and software selected shall (in accordance with the original project specifications) link and package resources (e.g. images) to documents.

In any decision, it is also necessary to take into consideration the related issues of

- the conversion of documents drafted in the current STD template running on Microsoft® Word™ 2003 from and to the target platforms and software, and
- the deployment of updates (e.g. to take into consideration any changes in the ISO/IEC Directives, Part 2) -- the more platforms and software there are, the greater the maintenance overhead.

4.2.2 Output formats

The original project specifications considered only XML and PDF as output formats.

Furthermore they stated that "the layout of texts written with the template shall be very similar to the layout of the published documents; publishing documents directly from the template is the aim of the XML template, and further treatment of the document before publication should be necessary only in exceptional cases".

Some interest has been expressed in the creation of (X)HTML - in which case it will be necessary to create a CSS to improve the presentation.

ITSIG should discuss these matters at its plenary meeting, with a view taking decisions on the following:

- a) which output formats are expected from the project -- XML, PDF and (X)HTML?
- b) whether the layout of texts written with the template shall be very similar to the layout that of the published documents; publishing documents directly from the template is the aim of the XML template.

4.2.3 Web services

One or several: If the SDOs are happy to use a standardized set of tools, then a central webservice might be sufficient. If they need a certain level of customization or want to add additional tools or transformations, then the easiest solution is probably for the SDO to set up their own webservice based on the standard webservice. In both cases the SDO will be responsible for maintaining their content. If the SDO intends to set up its own webservice, it will be responsible for maintaining it.

ITSIG should confirm the scope of the web service to be provided by the project.

5 Criteria to be used for assessing the project success

S1 Ease of replacement within the ISO system of STD template by XML authoring template, requiring minimal retraining of the document authors (e.g. secretaries) already using STD.

S2 Ability to construct a table of contents/table of figures etc. from the XML.

S3 Ability to generate easily, and with no loss of data, content extractions (e.g. abstracts, normative references, terms and definitions, etc.) from documents created with the XML authoring template.

S4 Ability to roundtrip (target software/platform-XML-target software/platform) the document content within the limits agreed for that functionality by the ITSIG XML template authoring group.

S5 Ability to link content between XML documents (conformant with the XML schema).

S6 Possibility to “slice and dice” XML documents (conformant with the XML schema)

S7 Richer metadata

6 Key action items to be addressed

6.1 DTD or schema -- Validation of extension to cover additional needs

6.2 Validation of metadata schema

6.3 Agreement on terminology schema

6.4 Decisions regarding

- which platforms and software are covered, and prioritization of their development and deployment,
- depending on the platform/software selected, selection of math editor,
- the points within the process at which use of web services are obligatory (they may well differ depending on the SDO),
- output formats,
- web services

Validation service: Decide how users relate faults in the output document to faults in how they have created their document.

- tables (see 4.1)
- parsing output from XML validation.

7 Updated project timeline

Agreement of DTD or schema	
Distribution of metadata schema for comment	End April 2009
Distribution of terminology schema for comment	End May 2009
Decisions regarding <ul style="list-style-type: none"> • which platforms and software are covered, and prioritization of their development and deployment • output formats • web services 	ITSIG plenary (7-8 May)
Action items in Clause 6	Project team meeting (end May 2009)
Implementation of decisions in prototype	By 15 October 2009
Implement decision in proof-of-concept on another platform/software, e.g. for OpenOffice documents the time estimate is 30 day FTE for the round-tripping service and Word addon	By end November 2009 (if limited to a second platform)
Prototype available for testing	Word 2007 version: by end of October 2009 Other platforms: TBD
Proof-of-concept on OpenOffice available for testing	OpenOffice version: by end of December 2009
Finalization of template	2010 – as early as possible (depending on SDO's feedback)
Deployment	2010

XML authoring/ metadata template project: consolidated feedback following London 5 Dec meeting and related responses

AFNOR feedback

I am interested in participating in a terminology sub-group.

I will also attend the next STD meeting

Remarks on your report :

Amendments and Corrigenda I may propose a prototype of XML structure that manage AMD 1, AMD 2, I will send to you a dtd in january.

Thank you.

2009-04-01: DTD not yet received and therefore not made available.

Mathematics : for XML point of view, Mathml should be used, but I think it is ok for everybody.

Noted

Math remains problematic in the context of Word itself. The equation editor in Word 2007 is not as good as one would like, but its representation of math can be converted to Mathml pretty easily.

The plugin MathType editor is better, but it stores the math in a format which is much more difficult to convert. A specific development in word can transform the equation to MathML/LaTeX and add it in a hidden paragraph style so it could be easily extracted (those "features" could be included in the new template). Design Science doesn't provide any "out of the box" solution to save their equation properly to MathML in Word 2007.

Tables : François Xavier reported to me that some complex or large tables would be created in image format.

Image is useless for a large table on screen. So large table should be xml as much as possible. Can you give me some more precision ?

Yes this was decided only for cases wherein the table cannot be represented in whichever markup (CALS ETM has been proposed) is chosen.

It would be interesting to speak about "vector" formats (ie svg) for "graphic" tables.

From the point of view of the process, whether a table is represented as a bitmap image (e.g. a JPEG) or a vector image (e.g. SVG) is immaterial. So far as the document is concerned there is a "black box" picture.

Note meanwhile that it is the intent to convert as many table features as possible. However, some tables are simply too complex (or don't have an exact semantic description) to be transformed into an XML table model (e.g. tables with image overlays where arrows between certain table cells describe a relationship between these cells - such "tables" cannot be transformed automatically and therefore the black box approach was proposed).

Furthermore, on the technical side, it would need to be studied how we save/generate the tables in a graphic format (Word doesn't allow to export tables for example). Vector images will imply dedicated programs to edit them (Illustrator, Corel Draw).

amicalement,

Pierre

**XML authoring/ metadata template project: consolidated feedback following
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BSI feedback

Our Ref: ISO-XML Template

Date: 22 January 2009

To: ISO/CS: IT Strategies Implementation Group (ITSIG), Joanna Goodwin

Dear Joanna

ITSIG PROJECTS: TESTING OF THE PROPOSED ISO XML DRAFTING TEMPLATE

We write with reference to ISO ITSIG/XML Document: Confirmed minutes London 2008-12-05, and specifically, Action 12 — "Those members wishing to test the scenario STD ⇒ Word 2007 ⇒ XML, and possibly back again: provide testing feedback: interested members, deadline 2009-01-12".

The testing carried out by BSI when participating in previous ITSIG initiatives, e.g. EB 3, helped to refine and develop such projects to successful implementation. We hope that our efforts this time will be no different in achieving similar success. However, this particular project has presented some challenges and is revealing issues which could have significant impacts on our NSB role, particularly for the Secretariats and Convenorships which we hold.

Concerns remain over:

- the success criteria and end use viability for the whole project
- the ability of NSBs to use documents supplied by ISO in their workflows
- the ability of drafters who do not have administrator privileges or I.T. expertise to install the template on their machines;

The installation of a wizard version should not differ too much from the current installation. The Word 2003 add-ons used in STD are installed in a similar fashion.

However, the less we put into the template (additional functionality, metadata wizard, etc.) the easier it will be for people to install it, and the simpler it will be to port it to another editing tool like for example Openoffice.

Also, the rationale for creating a basic version (cf the project specs) which will not require any installation (as it contains only the correct styles and no additional functionality) is that people are free to choose to use the version which they prefer.

- the ability of the XML files to be used for online publishing;
- the integrity of tables, figures and mathematical equations; and

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— communications to the "international" departments of ISO member bodies concerning the status of the project.

The following condensed report summarizes our findings and observations up to 2009-01-09.

For replies to the more fundamental issues raised, see reply "[BSI reply.doc](#)".

Yours sincerely

Mr A Robinson

E-Publishing Director, BSI

XML authoring/ metadata template project: consolidated feedback following London 5 Dec meeting and related responses

THE ISO/TEI WORD TEMPLATE

1 Contextual and strategic considerations

1.1 Status and aim of the project

The project is described as a “proof of concept” yet in the November 2008 issue of ISO Focus magazine it is stated that “in the next few months [the system] will be tested by the project team and developed further before being released to the member bodies”.

It is generally held good practice in software engineering not to extend “proof of concept” projects into released software in a single step, as the necessarily provisional and incomplete nature of the former tends to compromise the quality of the latter.

If the project is a “proof of concept” BSI needs assurance that the developed prototype will not be re-labelled as release quality software unless it has been quality assured as such.

For replies to the more fundamental issues raised, see reply "[BSI reply.doc](#)".

1.2 Proof of concept

If the project is a “proof of concept” it is not clear what concept is being proved.

The ability to generate XML content using desktop word processing software has been common practice within the publishing industry for at least the last decade, producing content at least as demanding as that of International Standards. It should be noted only a handful of such systems have proved to be economically viable in comparison to using low-cost labour in emerging economies for production. Since modern word processors save their content as XML by default there is no need to prove the concept that Word can be used to produce XML.

It is correct, that Word stores content in XML. However, Word optimizes its XML to describe the document's layout (e.g. with respect to a paragraph, where it is on a page, its font size, colour, etc.) rather than the semantic meaning (e.g. this sentence is a requirement). The proof-of-concept template was intended to show that it is possible to transform Word's non-semantic XML into a higher-level XML that captures the content's semantic and can then be used as the basis for additional transformations, tests, etc.

We request some clarification on what concept was being proved – what was not known before the project started which is now known as a result of it?

For replies to the more fundamental issues raised, see reply "[BSI reply.doc](#)".

1.3 Project success criteria

Related to the above, it is not clear what criteria are being used to assess whether the project result is acceptable or not.

Thus a possible practical test of the system would be to have two operators independently use the template to mark up a standard document, and then to assess the produced XML against the above criteria.

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This is something that could be tested during the testing of the prototype.

We request some clarification of what the acceptance criteria for the project deliverables are. In particular it would be useful to have a clearly described success scenario, and a failure scenario, against which the project could be compared.

No such criteria were developed to date within this project, although we think it is a good idea. Below are some initial Success scenario suggestions to get the ball rolling. All project members are invited to indicate their views please.

Success scenario:

S1 Ease of replacement within the ISO system of STD template by XML authoring template, requiring minimal retraining of the document authors (e.g. secretaries) already using STD.

S2 Ability to construct a table of contents/table of figures etc. from the XML.

S3 Ability to generate easily, and with no loss of data, content extractions (e.g. abstracts, normative references, terms and definitions, etc.) from documents created with the XML authoring template.

S4 Ability to roundtrip (DOC-XML-DOC) the document content within the limits agreed for that functionality by the ITSIG XML template authoring group

S5 Ability to link different standards ... BSI to complete this success scenario?

S6 Richer metadata ... BSI to complete this success scenario?

S7 Easier "slicing and dicing" of content ... BSI to complete this success scenario?

1.4 Platform choice

The supplied template requires Microsoft® Word™ 2007 running on the Microsoft® Windows™ operating system.

We may note that the Macintosh Word 2008 is an equally suitable platform.

BSI would require adoption of this particular word-processing software throughout.

It should be generally noted that this choice of platform may be sensitive as BSI (and many other NSBs) currently has no plans to move to Word 2007. It also effectively excludes users of Macintosh and Unix/Linux systems. It is unclear how feasible such a roll-out would be internationally, particularly in light of any aims to embrace members from emerging economies which use non-Microsoft platforms.

In accordance with 2.5 of the document *Specifications for a Word processor document template (XML template) for drafting documents*:

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"The target software for this template is not yet decided. Two word processors will be evaluated: Microsoft Word 2007 (aka Office 12) ... and ... Open Office.Org Writer 2.0."

and from a practical perspective it was decided to create the proof-of concept template using Word (as that was the text processor used by the NSBs involved in the project at the time) and to work on the Open Office version afterwards.

The London meeting reiterated the need to prepare an OpenOffice version. No request has been received to date regarding the need to cover both Macintosh and Unix/Linux systems. We should maybe ask ITSIG as to whether this is needed.

Also, the possibility of using earlier versions of MS-Word (e.g. MS-Word 2003) was rejected in the project definition phase, because there was consensus that this version lacks the capabilities to generate natively XML of acceptable quality. Any re-discussion of this point would alter the scope of the project.

As far as we are aware, we do not have statistics showing the use of the STD template on different platforms/software but we do know that at present we at the ISO/CS receive the vast majority of documents in revisable format in Word.

It is worth recalling here that the less we put into the template (e.g. metadata wizard) the easier it will be to support additional formats as we then only have to provide for the additional transformation from the new format to TEI and back instead of also having to maintain an add-on for the extra functionality.

There appear to be three ways forward that we need to discuss.

1. Have two distinct sub-projects working in tandem to make everything work in OOXML and in ODF. This is obviously a maintenance nightmare. In an ideal world one might derive one from the other, but it is generally recognized that this would probably not work.
2. Standardize on OOXML (the Microsoft language), and expect OpenOffice to implement OOXML fully. At present, the ability of OO (3.0.1) to read/write OOXML is not good enough. We cannot rely on this ever being perfect.
3. Standardize on ODF (the OpenOffice language) and expect Microsoft to fully implement that. They have said that they will do so, but we are unlikely to see that 100% working before the end of 2009, and it is possible that they may change their minds or not fully implement it. This is a plausible way forward, but we cannot do it today.

1.5 Format choice

The system is predicated on the format saved by Microsoft® Word™ 2007, which is Ecma 376 (1st Edition).

It should be noted that Microsoft will shortly be supporting ODF (ISO/IEC 26300) with Word 2007 Service Pack 2, and that the format of the next version of Word (in "Office 14") will change to become ISO/IEC 29500. The template would need to be re-engineered to support such changes. Ref <http://www.microsoft.com/Presspass/press/2008/may08/05-21ExpandedFormatsPR.mspx> \

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As noted above, at present this remains in the realm of press releases and non-binding promises.

The XML created is a customised mixture of structures drawn from the TEI grammars, and Ecma 376 (1st Edition). This format is not used anywhere else in commercial publishing to our knowledge.

The use of embedded OOXML was intended as a demonstration of one way of embedding “black box graphics” and preserving some notion of processing-instructions. It is not an essential component. The XML is intended to be a conformant TEI customization.

Were the following XML formats considered, all of which have better tool support and some history of successful deployment?

- One of the NLM models (<http://dtd.nlm.nih.gov/>)
- DocBook (<http://www.docbook.org/>)
- XHTML (<http://www.w3.org/TR/xhtml1/>)

All might need some degree of customisation to be usable for standards documents. The NLM models already have a Free and Open Source template available for Word 2007; DocBook is widely supported by free and commercial tools; XHTML is of course the format of the web but may be enriched to target both web and page-based production routes. We wonder why a TEI-based solution was selected and considered appropriate.

None of these formats has any coverage in the area of serious terminology or markup of other schemata, nor do they offer such a coherent customization system. We'd suggest that XHTML cannot be regarded as a serious contender, as it would require much customization, which it is not intended for.

We did ask for proposals and sent information to a number of groups with significant interests in XML, asking them to refer to us to qualified consultants interested in bidding. We had preliminary contacts with about 6-7 organizations and potential consultants (including individuals with knowledge about the formats indicated in the BSI comment). However, in the end, only two decided to bid.

TEI-based solutions have been applied successfully by a large variety of users, including institutions (some of them very prestigious) such as universities, libraries, archives, Cambridge University Press, etc.

The choice of TEI, as well as the approach followed to date, allows for the use a variety of writing environments and not only the use of the XML authoring template. (The core component of this toolkit is an archival XML schema built using the Text Encoding Initiative (TEI) framework, accompanied by a suite of XSLT transformations to enable ISO documents to be converted to and from other systems.) And of course it would also be possible for document authors to edit directly in XML.

A TEI-based solution also has other facets which may well be useful in the longer term such as the following.

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- Proper open source licence, with visible development on Sourceforge
- Architecture allowing expansion and integration with other systems
- Self documenting, each release fully validated, delivered using standard mechanisms
- Publicly available processing tools managed together with the Guidelines
- Active developer community, wiki, etc. Test files, exemplars, regular updates...

As regards Docbook and NLM we did not receive any bids based on these formats.

1.6 Onward development and support requirement

In our experience the success (or not) of Word-based publishing workflow depends almost entirely on the quality of the supporting software and documentation supplied. Furthermore, it is necessary to have a support desk to handle the inevitable problems which will arise.

We do not agree with the first line; a Word-based publishing workflow essentially depends on the quality/rightness of the content.

We request some clarification on the supporting material and support services it is envisaged would be supplied around a Word template, bearing in mind the cost of developing these is typically at least an order of magnitude greater than the cost of developing the core technology.

The supporting material envisaged would be similar to that provided for the current STD template:

- user manual
- helpdesk
- training

The proposal to decouple all the metadata handling to a separate web service decreases the complexity of the Word template itself although supporting material would be required to explain the use of the web service. Meanwhile, this would imply the need for a different set of supporting materials rather than an extra set of supporting materials.

1.7 Assessment of fit with BSI content objectives

Among its aims for XML content BSI has articulated the following requirements:

- Enhanced linkability
- Richer metadata
- Easier “slicing and dicing” of content

It is entirely possible that such objectives may be supported by a Word-based XML workflow. However, BSI would need to have assurance that the template-produced content was both sufficiently rich and consistent for its purposes. The current deliverables are insufficiently complete to provide such assurances (noting particularly the need for supporting software, documentation, etc. described above).

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Noted. The proof-of-concept was not intended to respond to such a need. Such needs should be addressed in the prototype.

In particular we should like the XML to be more fully defined than just by the current schema (a standards-like document is necessary; this is how XML formats are more properly defined), and would insist that content is only supplied to it which conforms to that complete definition. As it is, it is hard to see what quality control mechanisms would ensure that ISO only supplied “correct” content to its NSBs who would, as things stand, be at risk of receiving data that was either unusable or very expensive to process in its XML form.

The XML is defined by the TEI customization, from which documentation and schemas are derived. The documentation is a subset of the TEI, which contains prose, examples, etc; more appropriate examples, and extended examples, may well be needed. The schema is fairly strict, and includes Schematron rules as well as RELAX NG content models. Wherever possible, rules are expressed in Schematron for formal checking – more can be added as needed. If the XML passes validation, it will be “correct”. We cannot, of course, ever ensure that the content is not simply nonsense, or that the author has not used running prose to cover content which should be structural: that is what human editors must cover.

2 Technical assessment

2.1 Installation

The supplied setup.exe installation runs smoothly. However, the installed template then fails to load and emits an error message. The OUCS consulting team confirmed it is necessary for any system using this template to have installed:

- The .NET Framework v 3.5
- The Visual Studio Tools for Office Runtime v 3

This information was in fact first supplied by mail on 2008-11-11 by the ISO/CS, and reconfirmed by ISO/CS on 2009-01-05.

Furthermore, the requirement for .NET and Visual Studio Tools is not something special we have added; it is the normal way to write these addons to Word. This is part of the evolution: Vista base installations provide .Net framework 3.0, Windows 7 will certainly provide .Net framework 4.0 and redistributable version for XP, and Vista.

2.2 Architecture

The proposed solution uses a remote server to perform a variety of content tasks. This has the advantage of encapsulating all this complex functionality in a single location which is not then ISO's (or the members') responsibility to maintain and host. On the other hand, this also offers a single critical point of failure for the system and requires that users working with content need appropriate internet access.

The proposition is that ISO maintains and hosts the server for the use of the template within the ISO system. Discussions regarding the maintenance/hosting of members' content (i.e. the SDO's content) are premature as this architecture has not yet been validated although the viewpoint of the members regarding this architecture has been sought.

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Note also that authors would only have to access the provided web services at certain stages in a standard's development. (These have yet to be defined and agreed, and may well differ depending on the SDO.) In between, for the actual content work, authors do not need the web services and can work offline. This was a requirement in the original specs.

2.3 Validity

Using the exemplar content provided in the template it was possible to produce XML output from a Word 2007 document using the web service.

The validation service reported 21 errors when a file was validated.

BSI had been advised that existing templated Word content would work with the new template services. To test this, the Word content for draft ISO 28620 was submitted to the validation service. 34 errors were reported.

Building up a good test suite of documents is an ongoing task. Adding ISO 28620 to the suite would be a good idea.

It is to be expected that all existing BSI content would need to be heavily modified if it is to be the source of reliable XML through Word-based XML workflows.

It is agreed that we can only expect to receive correct XML from a Word document that is correctly marked up in the first place.

BSI expects to be shown how the system can produce valid XML documents given a variety of representative kinds of "real world" input.

Such testing should form part of the prototype phase.

Also note that the system is not designed to produce valid XML documents from any input; what we may expect is that a document which everyone agrees has used the Word styles correctly will translate to a valid higher-level XML.

2.4 Content quality

A cursory inspection of the generated XML reveals some faults and undesirable features:

- Introduced spurious whitespace (for example "Main element" becomes "Main element" in the XML)

This seems like a straightforward bug which can be tracked down.

- Unmerged contiguous structures (e.g. two sibling <hi> elements of the same type have split the copyright notice)

We agree that this is undesirable, and should be fixed.

- Meaningless structures corresponding to Word features; e.g. for following markup essentially record nothing more than a page number in a footer:

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```
<fw xml:id="rld14" type="footer">

  <p rend="Footer">

    <seg> </seg>

    <seg> </seg>

    <seg> </seg>

    <c rend="ptab" type="center">      </c>

    <c rend="ptab" type="right"> </c>

    <teidocx:dynamicContent type="pagenumber"/>

  </p>

</fw>
```

While such things are to be expected in a “proof of concept” they would of course need to be addressed in any production version.

Agreed. This was put in there as a placeholder pending a decision on how to handle it better.

We request some clarification as to how far the current XML is adrift of the quality ISO expects, and what project plans exist for ensuring any production version of the software resolves all such issues.

As part of the project prototyping phase and until the project members agree that we need to go no further, we need to review the schema definition, and where possible add in more and more constraints so that undesirable features are caught at the validation stage.

2.5 Difficult content

The approach taken in the proof of concept is to convert only Word structures which present less demanding development challenges. More difficult content (especially tables and mathematics) remain largely unconverted and appear in the TEI XML as native Ecma 376 structures.

For the proof-of-concept template phase, this was intentional. In theory we could "standardize" the table model used in the template, restrain the table models to 5 or 10 possibilities and refuse exotic tables but in practice this would probably not be acceptable. this is a subject for discussion and agreement.

In any production version of the software it is necessary that the Ecma 376 content be much more fully converted into semantic, uncluttered markup more in line with best practice seen elsewhere (for example in much academic TEI content). Developing such conversions is

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resource intensive, but possible, e.g. workflows which convert Word tables to (standard) OASIS Exchange format.

Moving to OASIS tables was discussed at the London meeting. For the first phase, we tried to preserve all Word tables as they were. For mathematics, see above in the reply to AFNOR comments.

2.6 Leveraged models

As noted above, the table model in the converted content is a mixture of TEI and Ecma 376 models. This model would be unique to ISO and hard to process. It is highly recommended this is avoided and one of the standard table models adopted (e.g. XHTML or the OASIS Exchange Table Model).

It was agreed at the London 5 Dec meeting that CALS ETM was the preferred table format.

cf Action 13a — Check whether TEI can do everything that CALS ETM can, check TEI to CALS ETM conversion, and report back to project group: **consultants**

Mathematics is marked-up with the Ecma 376 oMath model. It would be better marked-up using MathML.

This subject has not yet been fully addressed. Here is an extract from the minutes of the London Dec 5 meeting:

4.10 Mathematics: ISO/CS reported that they had tested the equation editor available in Word 2007. Given the fact that the equation editor is not fully configurable and is not user friendly, the ISO/CS came to the same conclusion as NEN and many other publishing houses — this equation editor is not suitable for our needs. It seems we need to continue using MathType. This subject will need to be discussed further with respect to its impact on the workflow in the next phase.

In ISO as a general principle “good standards build on other standards”. Such a principle might also be usefully applied to this project.

It is confirmed that this principle has been applied.

2.7 Human usability

The validation reports relate to the XML document being created, yet for users of word they will be unintelligible. A question remains as to how users relate faults in the output document to faults in how they have created their Word document (some of our clients have a bespoke layer in the template which aims to guide the user and prevent such faults).

One of the possibilities is to perform a pass over the Word document which identifies likely problems, and rewrites the Word document with embedded comments; this was demonstrated at the London meeting. This would primarily be looking for missing mandatory content, or use of Word styles which are not supported. While not as slick as wizards within Word, this architure is more general and extensible.

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DIN

Hello Jo, hello Holger,

here's the promised brief feedback:

1. "Annette Preissner" <annette.preissner@din.de> will participate for DIN at the terminology work
2. "Andreas Rygielski" <andy.rygielski@dinsoftware.de> will participate for DIN at the metadata work
3. Metadata wizard

We need to wait for Mr. Ulrich Philipp returning from vacation to finally answer the question whether the metadata wizard is dispensable.

At this time we are not sure which importance these dialogues have within some environments like external committees or editors, especially at early stages of the process.

However, we already can confirm that the metadata entered within Word plays no role for the printing of the title pages, and that these information are ambiguous and superfluous at the final stages.

Noted. Final reply awaited.

4. XML Tables

I've discussed TEI tables as alternative but we have not found that common XML editors or the major industrial "techdoc" applications support TEI tables by default, i.e., as indicated on the meeting we prefer that the XML output files contain tables in the

XML Exchange Table Model DTD [OASIS 9901:1999] <http://www.oasis-open.org/specs/tablemodels.php>

Noted.

Related action items:

Action 13a — Check whether TEI can do everything that CALS ETM can, check TEI to CALS ETM conversion, and report back to project group: **consultants**

Action 13b — If the results of the checks are positive, check whether they agree to work with the TEI model: **all project members**

5. MathML

At this time we do not use MathType within the production environment.

When MathType is used, are you able to provide DOCX or XML files which are fully editable for external authors which may have not a license of MathType, or is there no way back once the formulae are converted to MathType?

Mathtype doesn't integrate itself "properly" into the OOXML structure of Word 2007; it basically embeds an OLE object into the docx document so that only Mathtype can edit/convert it.

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Mathtype is a license-based software but if you don't buy it you can still use it after the trial period to edit/modify existing equations (see the end of the page <http://www.dessci.com/en/support/mathtype/tsn/tsn50.htm>). Mathtype can provide MathML content only on export to XHTML and on copy/paste; it can also translate its equations to LaTeX.

Design Science (the Mathtype producer) provides an API that could be integrated in the Word template to generate proper MathML/LaTeX inside the document but this would add complexity to the template. It may be appropriate only to consider using such a translation to provide XML files or translate XML back to docx by calling services. This solution would free the template of any "unnecessary" complexity.

Please let me know if you have remaining notes or questions.

Best regards

Andreas, DIN

NEN feedback

To : Jo Collins, Joanne Goodwin
Cc :
From : Jos vd Heijden
Date : dinsdag 21 april 2009
Subject : Webservices

During the London meeting on december 5th it was suggested to develop a webservices application to maintain the metadata. These webservices should replace the metadata wizard now built as a part of the template. If the webservices are built, it would be sufficient for the template to contain 3 elements of metadata:

- SDO
- Projectnumber
- Language

According to NEN 2 elements should be added to make each document unique identified:

- Stage code
- Creation date & time

These 5 elements together can identify a unique instance of the metadata via the webservices.

Agreed.

NEN has discussed this option internally and has come up with the following (R)emarks (C)hoices and (Q)uestions.

C NEN is of the opinion that webservices is the better solution for the metadata because:

- the template will be less complex;
- the chance of making mistakes will be a lot less;
- the SDO's don't have to develop a metadata / bibliographic database themselves;
- the exchange of metadata between SDO's will be much easier.

Agree.

R In our opinion the 5 suggested metadata elements in the document are sufficient to identify the correct additional metadata;

Agree.

Q Will there be one database / webservice to be used by all SDO's together or

Q Will there be one webservice which interfaces with the different SDO-databases or

Q Will each SDO have its own webservice based on a common developed application?

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This depends on the level of customization SDOs want to perform. If they are happy to use a standardized set of tools, then a central webservice might be sufficient. If they need a certain level of customization or want to add additional tools or transformations then the easiest solution is probably for the SDO to set up their own webservice based on the standard webservice.

Q If each SDO has its own database will they be able to define their own metadata?

From the production perspective as long as this does not "interfere" with the functioning of the template we have no problem with this.

R We require that each SDO guarantees that the data will be updated and up-to-date.

Agree but will need to be made explicit.

Q Will other SDO's get access to the webservices of a certain SDO for instance to read the specific metadata?

This should be the subject of discussion and decision.

Q Who will be responsible for maintaining the webservices and at what cost?

This should be the subject of discussion and decision.

R Besides this webservice NEN wants to have a procedure developed upon Word 2003. During the meeting the procedure via Word 2007 was suggested (Word2003 → Word2007 → Word2003) but still Word 2007 is required. There are other known solutions with Word 2003 for instance using the tools DownCast and UpCast of infinity-loop (www.infinity-loop.de).

Setting up web services to convert 2003 to and from 2007, using 2007 itself, is technically possible although this is something beyond the current scope of this project.

Q Is it possible to do some research on this?

Yes but again this is something beyond the current scope of this project.

Dear Joanna,

At the meeting on the 5th of December the question of consolidated standards came up. NEN indicated that if the standard was consolidated without a separate amendment or correction, it would be necessary to be able to identify the elements of the amendment/ correction in order, if required to produce a separate XML/ document. Further to this we have identified what would be necessary to make this possible and have also a question regarding extraction of the information.

Tagging consolidation text in xml

- Text fragments from the amendment/corrections must be tagged, there can of course be multi amendments and corrections to a standard

Agreed

- All the different amendment/corrections to a standard must be identified by attributes in the tag

Do you mean something along the lines of the following:

xxxxxxx <change status="Amd" version="1"> ... </change> xxxx <change status="Cor" version="2"> ... </change> xxxxx ...

If so, agree

- It must of course also be clear if it is an amendment or a correction

Agreed

- Based on the NEN-EN 1:1998/A1:2007 the following instruction types should be identified, this list is not exhaustive, but is exemplary:

- To replace Clause 1 with the following:
- To add the following:
- Add the following new definitions:
- Add the following text:
- Add the following text at the end of the subclause:
- Replace the text of the subclause with:
- Replace the title of Clause 5 as follows:
- Add as 3rd para:
- Add as last para:
- Delete the whole subclause.
- Delete 5.13 and replace it by following new subclause 5.12:

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- Replace Figure B.3a with the following:
- Add the following new clause:

Does it need to be this complex? We obviously need add and delete but a replacement can be represented as an addition and a deletion linked to the same content within an XML document. And we know "where" the change occurs because of its position in the XML structure. Accordingly, I would have thought only two instruction types (or change types) were necessary:

<change type="**add**" status="..." version="..."> and
 <change type="**delete**" status="..." version="...">

- These instructions must be included as attributes in the tag

Agreed

Q. Is it possible to extract the amendment/corrections by XLST

If the amendments/corrections are properly marked up in the XML then it is certainly possible to extract them via XSLT.

We retested the XML toolset. Unfortunately we found the following bugs and (the usage of) some functions/ fields were unclear.

1. Word and Wizard

a. Metadata wizard

When using the metadata wizard the fields TCTitle and SCTitle are not transferred to the Word document. However filling in these two fields in the Word document itself results in transferring the contents to the wizard.

So it appears that for these two fields updating works only 1-way: from the Word document to the wizard but not vice versa as with the other fields.

Problem noted thanks. If the metadata wizard is maintained in its current form this will need to be rectified.

b. The drop-down boxes in the Word document and in the wizard are not the same.. In the wizard there is an option list but not in the Word document..

Whether we want to address this problem or not will depend on the decision to maintain the wizard in the template or not. That aside, this sounds like a straightforward bug that can be fixed easily.

c. In the Word document it is not clear when the element "sub clause without title" should be used. In the pop-up box you have to key in numbers and points. But in our opinion numbered titles are better managed with the element "sub clause with title".

The use of a Subclause with a title or a Subclause without a title is a drafting issue, and is covered in the ISO/IEC Directives, Part 2, 2004, 5.2.3. Only Subclauses with titles may be listed in a Table of contents; Subclauses without titles shall not be listed in a Table of contents. My guess is that this is why two different styles are needed. Note that the functionality of the XML template matches that of the current STD template.

d. Using shift-tab in the Word document results in a normal tab. We expected a backspace tab.

SJ: Never heard about a backspace tab before too!

Agreed but this is a design choice made by Microsoft for Word 2007 and is not a "feature".

e. How the element "skip numbering" should be used is unclear.

Presume that this comment refers to the "List" element in the "Insert element" dropdown list. If so, this function permits the introduction of a 2nd or subsequent unnumbered paragraph within a particular list item. For example, the paragraphs highlighted in blue below would be inserted using this function:

a) XXXXXXXX¶

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Xxxxx xxxxxx¶

Xxxxx xxxxxx¶

b) Xxxxxx¶

The functionality of the XML template matches that of the current STD template.

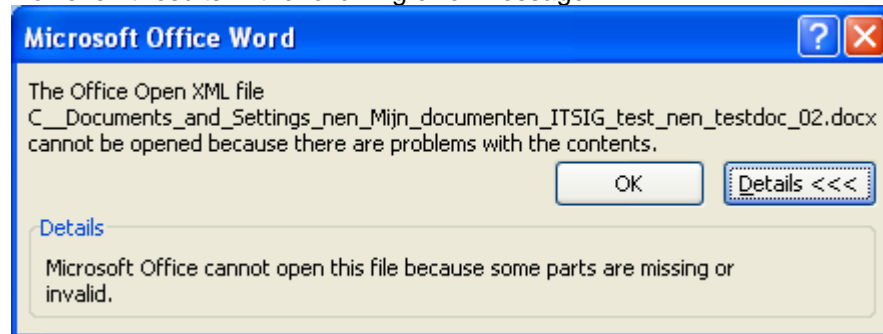
- f. It is not clear how to switch off the Mark-up function of for instance “Requirements”, “Permission”? Should it be used by selecting a piece of text and then clicking the right mark-up?? If we do this, it seems to work well.

Yes that is how it was designed to work.

2. The function check docx in the online menu.

We expected this function to check whether we used the right styles and markup.

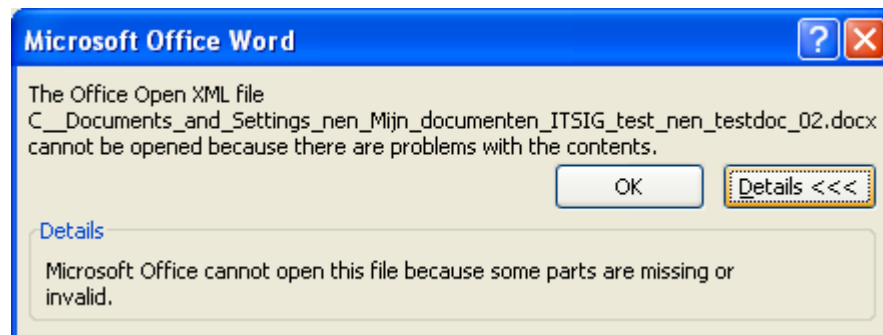
- a. However it results in the following error message:



Clicking OK brings up the next pop-up:



clicking YES shows the first pop-up box again:



This seems to be a bug in the transformation that should be fixed. Can you send us the document that you used for testing?

3. Converting Word to XML

- a. When we create a nested unordered list using the tab key in Word it doesn't result in a nested unordered list in XML. An ordered list however, also created using the tab key does result in a nested ordered list in XML.

In our opinion this difference in processing confuses the user.

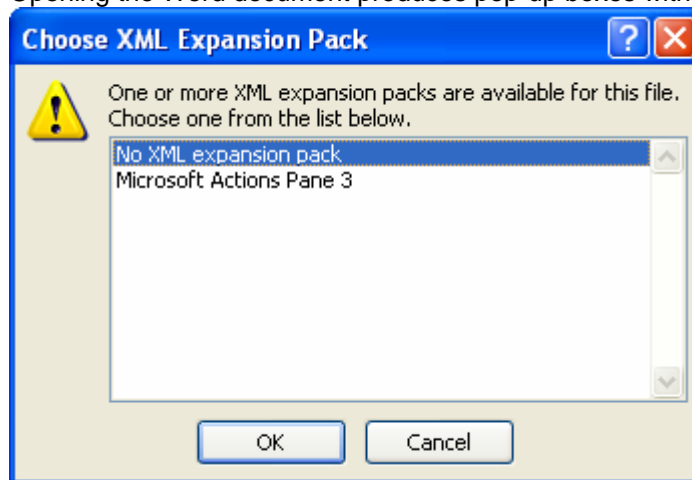
Our guess would be that the resulting list in Word did not use the correct list styles and was therefore not properly transformed to TEI. Can you send us the document that you used for testing?

- b. The mark-up “permission” is not processed to XML. All other types of Mark-up are.

This is a straightforward bug which we must correct.

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- c. The table is still in Word-xml-format. We prefer Cals or XHTML as spoken about in London.
Noted — this action item is still open.
Note that the current proof-of-concept template has not been altered since before the London meeting.
4. Re-opening Word document
 - a. After converting the Word document into XML and subsequently re-opening the Word document only the Mark-up type “requirements” is visible and then only when a complete word is marked up as a “requirement”. When we mark-up a part of a word as a “requirement” this mark-up is also no longer visible.
 But, although the mark-up is not visible, it still exists in Word, when converted again to XML, the text is processed.
This surprises us considerably, and we will have to investigate that as a bug.
5. Roundtrip from XML to Word.
 - a. Opening the Word document produces pop-up boxes with error messages:



- b. The template is missing from the Word document. The mark-up is missing, as a consequence some text is in different colours, The table footnote is right-aligned instead of left aligned.
Can you send us the document that you used for testing so that we can investigate?
- c. Converting to HTML.
 We also have tested the rendering of the XML file into HTML.
- d. Is it the intention that the Word document can be directly translated into HTML.? This does not seem desirable. We expected the XML file to be converted to (X)HTML using CSS for styling. Is this assumption correct? If so, are you planning to use (X)HTML and CSS??
The conversion to HTML was purely a demonstration. We agree that using XHTML and CSS would be better, and in fact this is exactly what is happening behind the scenes. The Word document is first transformed into TEI XML which is then transformed into XHTML.
- e. Some styling is not very attractive: requirements, [Note], [Page], Table and Formulas are not styled at all.
At present, no attempt has been made to make the HTML attractive. Meanwhile, we agree that at some point we will need to create a CSS to improve the presentation.

Our conclusion: We're on the right track but the problems and questions mentioned above indicate that still there is some way to go both with the software itself but also with the user support .to make it fully operational.

Noted and agreed

A user manual would be very welcome.

It was the intent to create a user manual for the prototype

There also the newly defined requirements for use in Word 2003, Open Office etc.

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Although a requirement for Word 2003 is technically possible, this is something beyond the current scope of this project. For OpenOffice, see the more detailed reply to BSI.

We've enjoyed testing and are looking forward to testing the next release.
Good.

Kind regards,

NEN



XML authoring/metadata template project meeting, Paris, 2009-05-26/27

1 Participants

AFNOR	Pierre Bobot
	Yann Trocheris
	Stéphane Delysse
	Rémy Galibert
BSI	Peter McKay
	Jenny Sherman
CEN	Jean-Pierre Breedstraet
	Stefan Joannin
DIN	Claudia Altmann
	Andy Rygielski
	Andreas Wernicke
ISO/CS	Joanna Goodwin
	Serge Juillerat
ITU	Mitsuru Yamada
NEN	Jo Collins
	Jos van de Heijden
SCC	Zbigniew Ignatowicz
SNV	Ruth Schneider
UNI	Lisa Inversini
Consultant	Sebastian Rahtz

The consultant and the project team members introduced themselves and thanked AFNOR for hosting the meeting.

2 Project metadata

Following the London meeting, the option selected by the majority of project team members was option B: to restrict the metadata to 5 elements which are to be stored in the Word document properties:

- SDO
- project ID
- language
- stage code
- date

Agreement was reached that it would be useful to add fixed text to the Foreword generated when a document based on the template is first opened to say that

- the boilerplate will be added/updated when connecting to the SDO web service;
- the revision data will be provided by the SDO on the basis of the data provided by the committee secretary.

Action 1: ISO/CS to add fixed text to the Foreword generated when a document based on the template is first opened.

Other than this text, the Foreword will be blank until the time when the document is first uploaded and cleaned, when the metadata will be updated.

The SDO has to run a copy of the web service which has to know how to access their local database and generate a standard XML representation of the metadata header.

On the basis of these 5 metadata elements, the web service will deliver back the rest of the project metadata and related metadata (e.g. normative references), merge into XML, and rewrite the Word file. (It was noted that Upload/download is not a "web service" technically.)

The local database may add additional metadata fields; these will be mapped to the Word template by name.

For example, an SDO which uses a "nextRevisionDate" field will have a) to specify where in the Word document it is to go, by changing the template file, and b) to add an extra field to the metadata header. The mapping will be by name of field. An SDO can also add extra validation to the schema, by means of local Schematron rules. The initially empty set of rules can be extended locally to cover local business constraints (such as mandating a "nextRevisionDate"). We need to add an extra Schematron file to the NVDL sequence of validations.

Action 2: Consultants to add an extra Schematron file to the NVDL sequence of validations.

ISO will provide for a standard implementation for the 5 metadata elements.

Action 3: ISO/CS and consultants to provide for a standard implementation for the 5 metadata elements.

3 Revised ISONET draft

The proposal "ISO XML metadata" (distributed by Holger Apel) to use FRBR had not been received by everyone, and so it could not be studied in detail. Meanwhile, the meeting agreed that the proposal seemed sensible, although this would need to be confirmed once people had had the chance to study the document in depth.

The following comments were made.

- a) NEN pointed out that since the concepts represented are rather abstract, it would be useful to provide many examples.
- b) The means of handling special characters in metadata, for example in titles, needs to be added to the draft (e.g. would the special characters permitted be the same as for the document or would they be limited to Unicode, 8-bit ?).
- c) The "WORK" level would need to be preceded by an "SDO" level.
- d) How to manage SDOs endorsing other SDO's documents will need to be clarified: e.g : EN ISO 999 or DIN EN ISO 999.

It was noted that this proposal would replace the TEI header entirely, and would need round-trip conversion to/from the TEI header.

Question noted by Sebastian: Can it be used to hold the boilerplate text of the Foreword?

Holger Apel confirmed that this XML will eventually replace the ISONET definition (CPSG is only concerned in as much as the members use our ISONET extraction to feed their webstores with the ISO standards data).

Regarding the section marked "To be completed" it was clarified that we need

- a) to agree on the overall structure and principles of the XML format,
- b) to define the attributes which it should contain and see if ISO/CS has them available, and
- c) to provide the ISO data in the new XML format

Action 4: All project members to provide feedback regarding the revised ISONET draft.

Action 5: Project team members agreed to check the draft vs Dublin Core and to feed back any comments.

4 DTD or schema

4.1 Structure

BSI shared their draft schema for publishing: [BSI draft schema](#), which is a mixture of Docbook and XHTML, with MathML embedded.

AFNOR schema: AFNOR provided their schema for publishing since the meeting. Now added to project site here: <http://isotc.iso.org/livelink/livelink?func=ll&objId=8198049&objAction=browse&sort=name>

It was recalled that the current TEIISO schema (available on the [TEI @ ISO project website](#)) needs to be enriched to cater for

- a) the markup of figures and tables (corresponding paragraph styles need to be added to the template);
- b) navigation (which requires that headings are marked up correctly and that hyperlinks are marked up ... both internal and external references Xrefs in the template);
- c) terminology once the draft ISO/DIS 10241-1 had been released as a second DIS;
- d) special
- e) more specials?
- f) class attribute

DIN stated that from the editorial point of view it would represent added value if the decimal and thousand separators could be identified and selected dynamically like it can be done e.g. within the options of today's operation systems. However, this would need

- to be widely automated in order to be covered within acceptable costs and time,
- to be finally checked and corrected by humans in order to identify exceptions and fixed uses of separators.

For example, in some standards the different separators may be shown in examples and need therefore to be protected as 'literal text'. Although there is no current experience, it is likely that a considerable effort will be necessary to achieve the necessary very low error rate of the separator markup.

It was agreed that it would be useful to have a common schema or DTD for authoring/exchange amongst all the SDOs. Furthermore, if there is any commonality amongst the SDOs regarding their needs for publishing, such needs could usefully be added to the common authoring/exchange schema or DTD.

Two related action items were agreed.

Action 6: All project team members to validate the current TEI/ISO schema (available on the [TEI @ ISO project website](#)), and in particular to take a position with regard to the use of character styles in the template.

Action 7: All project team members to share any extra needs for publishing (following which we will see whether there is any commonality in the needs).

Once the schema or DTD has been validated, we will need to discuss how rigid/sloppy validation process is going to be.

4.2 Figures

BSI explained their experience with using EPS - the graphics are fuzzy. They therefore took the decision to use dotnet code - scripting to create low resolution web images.

It was agreed that the best formats are EPS and TIFF. The consultant confirmed that in the current setup, TIFF is preserved as TIFF and is not converted to PNG. SVG is a nice language but unfortunately Word doesn't support SVG.

The current rules are that figures should be linked not embedded. But does that matter and/or make sense? Embedded graphics are stored separately anyway in a directory in the zip. They are not normally converted internally, except from EPS to PDF. Embedding by link is problematic, because the file name on disk is what is stored.

Action 8: Serge to investigate the rules re packaging of graphics with docx and to provide a recommendation back to the group?

Whatever is decided for treating/linking graphics will need to be added to the user documentation.

We need to talk about the use of PNG, dotnet etc. in 2010 when we talk about rendering for XHTML etc. For now don't do anything.

4.3 Tables

The use of CALS ETM was confirmed. It was agreed that tables would be converted where possible. If a table cannot be converted, there are three options:

- a) conversion of such tables to TIFF, JPEG or SVG;
- b) downgrading of such tables to CALS;
- c) leave such tables as a Word table (i.e. a Word island).

ISO/CS has produced a set of typical tables found in standards which will be converted to CALS ETM. Those that convert properly will become part of a recommended table models set; those that do not convert properly will be recommended as not acceptable and will be treated in one of the ways mentioned above.

For the prototype testing phase, approach c) will be taken [leave such tables as a Word table (i.e. a Word island)]. The utility of this approach will be tested as part of the prototype testing phase. Testers are requested to point out in testing results if they disagree with the approach taken and, if so, to state the approach that they prefer (and not just say that they disagree with the approach taken without proposing a viable alternative).

To discourage the use of drawing functions in tables, the validation should produce an error.

Action 9: ISO/CS and consultants to implement CALS ETM and the above approach for tables in the roundtrip and to alter the validation to produce an error when drawing functions have been used in tables.

4.4 Terminology

There are no objections to basing the schema or DTD and the exchange format on ISO 10241-1 ([ISO/DIS 10241-1.2 current working draft](#)) and [ISO 30042](#) (TBX) respectively.

Any comments shall be made at the latest during the prototype testing phase.

Action 10: ISO/CS and consultants to add terminology to the template and schema/DTD.

4.5 Extension of the schema for the management of consolidated documents (i.e. merging of mother document plus corrigenda and amendments)

The comments made in the document [XML template consolidated feedback and response NEN tech-1](#) and the draft schema from AFNOR (http://isotc.iso.org/livelink/livelink/8138997/AFNOR_schema_-_Consolidated_standards.xml?func=doc.Fetch&nodeid=8138997) were discussed. Both proposals covered many of the same needs although they use different terminology (e.g. "archive" vs "change type=delete"). It was agreed to extend the AFNOR DTD to cover corrigenda as well as amendments, and to adapt the terminology as follows:

```
<change type="add" status="..." version="...">
```

```
<change type="delete" status="..." version="...">
```

```
status= Cor|Amd
```

```
version=0, 1, 2, etc., corresponding to the amendment number, where 0 is the original text (the base standard)
```

Action 11: Consultants to add this to the schema/DTD and to see how to include in a primitive way in template and test in the prototype phase.

4.6 Extension to cover additional markup needs: actions necessary in order to take into consideration feedback end 2009 from the CPSG regarding customer expectations for the use of XML-structured content

Action 12: All project members to check with their CPSG representative to ensure that they understand so that the right questions are raised at the CPSG meeting.

4.7 Web services

For the prototype testing, it was decided that the following changes are necessary to the services:

- a) combine "Validate document (Word or XML)" and "Check docx";
- b) rename "Convert Word to TEI-archive and download" as "Convert Word to XML and download";
- c) do not include
 - "Convert Word to XML and download"
 - Display as HTML (x2)
 - Generate ATOM RSS

The ISO services will be made available as well as the code to allow the SDOs to look into the needs for customization: this needs documentation of the specification of javalib.

AFNOR noted that they will use dotnet or another technology.

For the prototype testing, it is necessary to validate during the same test period both

- a) the use of the services from the user perspective and
- b) the IT approach and ease of customization.

Action 13: Alter the services as specified and make the code available for the prototype tests.

5 Front office

5.1 Standard tools available

It was agreed that this was no longer an issue and could be deleted as an action item.

5.2 Selection of maths editor for Word 2007

DIN noted that they do not use MathType.

Given that the native Word 2007 maths equation editor can convert to MathML, it was decided for the prototype to stick with native Word maths, and to convert to/from MathML. **Need to turn that on and off again.**

Action 14: ISO/CS to investigate the native Word 2007 maths editor to determine its limits of use vs MathType and the possible consequences on production of its use, and to report back any pertinent information to the project team.

5.3 Selection of font

Printouts showing the fonts DejaVu, Century and Styx were distributed. Since fonts are a publishing issue, it was decided not to pursue this subject for now and to use in the prototype the default Word 2007 font (Calibri).

Meanwhile, ISO/CS said that they would take advantage of the introduction of the XML template to change their publishing font to one that was fit-for-purpose and in which it was possible to differentiate between lower case vee/lower case nu, i/iota, etc.

For the XML template, it was noted that if we choose a font that needs to be installed, we will need to look at the licensing issues. It was noted that OpenType is not a problem.

Given that the DIN fonts for certain maths characters are used at the ISO/CS, it is necessary to look also at the embedding of these DIN fonts. It will be necessary to provide information stating that the fonts are the property of DIN but may be used free of charge provided that the source is stated.

Action 15: ISO/CS to look into the embedding of DIN fonts (and providing the necessary information that the fonts are the property of DIN but may be used free of charge provided that the source is stated).

5.4 Workflow

It was agreed that

- a) it was premature to make decisions at this point regarding the points within the process at which the use of web services are obligatory for the ISO standardization system (also, they may well differ depending on the SDO);

- b) we should look at what is provided in the prototype and think about what is necessary with respect to the workflow, and provide feedback with the test results.

Any decisions regarding the points within the process at which the use of web services are obligatory for the ISO standardization system will need to be taken afterwards and will probably need to be approved by the TMB. It was noted that most SDOs represented on the project team are also represented on the TMB.

CEN stated that it was satisfied with this approach.

5.5 Parsing of output

It was agreed that we should look at whether we can parse validation errors and use them to annotate either the Word version of the document or an HTML rendering of it.

Can you add error types without having to program it. Constraint is express.

Highlighting the presence in the Word file of a style that we don't support is useful. For error reporting, we should consider the use of bilingual fixed texts, e.g. xxxxx style not permitted here/pas permis ici.

Should we have a separate service to show errors in structure in an XHTML file (merge XML file plus parsing errors)?

Action 16: Consultants to cost the setting up of a service to show errors in structure in an XHTML file: if feasible set up as service for the prototype testing; if not, inform group.

5.6 Versioning

In the versioning, we need to identify the “SDO variant” in a “human readable” manner so that the particular SDO variant (template and services) that have been used to create any particular document instance can be derived at a glance. It is also necessary to record “who” carried out the latest change.

For all SDO variants of the template, we need to cater for versioning of

- a) the schema/DTD,
- b) the style sheets,
- c) the template,
- d) the customization,
- e) the boilerplate texts,
- f) the SDO add-ons, and
- g) the various services/tools.

We need to track version number of template and stylesheet processing (separately) in the XML (extra <idno>?) and in the Word, by using document properties. This is done by adding <property> elements in docProps/custom.xml.

It will also be necessary to document the procedure to be followed for

- making updates, and
- informing users.

Action 17: Set up versioning in conformity with the above for the prototype.

Action 18: Create a draft procedure for making updates and informing users for deployment with the prototype.

5.7 Installation procedure

It was noted that STD needs Admin rights to install it. It was agreed that our aim should be that the XML template does not need any extra rights, and this should be communicated when the times comes to deploy the XML template.

Installation of the proof-of-concept version of the XML template on Vista does not pose a problem since dotnet is provided by default.

Meanwhile, installation of the template is a problem on XP as dotnet needs to be installed.

For the proof-of-concept version of the XML template there is also a need to install Visiostudio. We will see whether with the removal of the metadata wizard, the need for the runtime library add-on can be eliminated.

It was noted that these programs could be packaged with the template but users would need Administrator permissions to install the template (meanwhile, as noted above, STD also needs Administrator permissions to install it).

We need to change all "dotnet" to ".Net framework".

AFNOR requested that we provide an installation package (MSI) for ease of deployment. ISO/CS will have to investigate Microsoft framework to deliver the best/easiest package for installation/deployment.

Action 19: Serge 1) to look at the use of trust certificates, 2) to see whether with the removal of the metadata wizard the need for the runtime library add-on can be eliminated and 3) to investigate Microsoft framework to deliver the best/easiest package for installation/deployment.

It was agreed that it would be useful to separate the paragraph and character styles on different menus to avoid the use of the character styles inadvertently by inexperienced users. The two ribbons could be labelled

- "Standards menu" containing the elements (i.e. the paragraph styles), and
- "Extended standards menu" containing the character styles.

JG would need to look into whether separate menus for different standardization tracks were necessary, e.g. "ISO elements menu" - "ISO extended menu", "CEN elements menu" - "CEN extended menu" –meanwhile, a common solution is to be sought if possible.

Action 20: Alter the template ribbons as specified above.

5.8 Various action items related to the template

It is necessary to incorporate in the prototype, the following changes and additions.

Action 21: JG and SJ to carry out the following:

- *implement the new presentation for figures*
- *add the extra styles needed for figures and tables*
- *look at the comments from Franck re extra styles*
- *take into consideration the changes in the ISO/IEC Directives for cross-references*
- *take into consideration the changes in the ISO/IEC Directives in the Help text*

6 Testing of the prototype (all)

6.1 Supporting material for testing of the prototype

It was agreed that the supporting material would be similar to that provided for the current STD template:

- user manual;
- helpdesk;

with the addition of

- rules for use of the services.

6.2 Needs for testing to determine whether the success factors have been satisfied

6.2.1 General requirements

It was agreed that in the ISO prototype we would cater for en and fr, plus ru if GOST R wished to provide the necessary input. The SDOs would add their language when the template is extended.

The following SDOs (present at the meeting when this subject was discussed) committed to testing the prototype:

- AFNOR
- BSI
- DIN
- ISO/CS
- NEN
- UNI

Action 22: SDOs who are part of the project team but were not present at the meeting when this subject was discussed are requested to confirm their commitment to testing.

All SDO testers will test all scenarios.

To ensure maximum coverage of testing on different language versions of Word + Windows, the following was agreed:

- AFNOR will test on French versions of Word + Windows
- UNI on Italian versions
- DIN on German versions

NEN will check out whether practicality dictates that they test on Dutch or English versions.

Action 23: JG to check with GOST R (for Russian versions), ITU (for Japanese versions), and NSAI (for ?? versions).

6.2.2 Specific tests

All test results shall be added to a commenting template which will be set up in the Prototype folder.

Action 24: JG to create and add to Prototype folder - commenting template.

Action 25: JG to get Kirsi to create to e-mail groups: P and O members

Test	Testers	Description of test
Test 1	BSI	Two operators independently use the template to mark up a standard document, and then to assess the produced XML against the success criteria.
Test 2	All	Peter McKay will check the meaning of the BSI comment 'Variety of representative kinds of "real world" input.' and will report back to the project team as necessary. Internal compositor (i.e. expert user) and an external project editor, give them the template and the necessary instructions, and gather their feedback. Each tester shall do at least one of each, and optionally more.
Test 3	All	Test the two files (or more) files created in Test 2 on the corresponding services: - if errors, look first to see whether the cause is an error in the test file, and if so correct; - if not, note as an error. Evaluate the use of the services from the user perspective. (See also Test 8.)
Test 4	All	Ability to roundtrip: test whether what get back is identical to what sent - use the compare function (note that in Word 2007, this is in the Developer tab)
Test 5	All	Linking within document: need character styles for norm ref and inf ref - cf STD xref
Test 6	All	Linking to external document: allow use of http: to Google, Wikipedia, etc.
Test 7	All	Test through running of service to extract TOC etc.
Test 8	All	Test the reliability of the service to markup the decimal and thousand separators. Decide whether this facility should be retained for the version of the template to be rolled out. (For example, in some standards the different separators may be shown in examples and need therefore to be protected as 'literal text'. Although there is no current experience, it is likely that a considerable effort will be necessary to achieve the necessary very low error rate of the separator markup.)
Test 9	All	Test installation procedure
Test 10	All	Test the utility of the approach whereby complex tables are left as a Word table (i.e. a Word island). Produce an error if drawing functions are used. Testers are requested to point out in testing results if they disagree with the approach taken and, if so, to state the approach what they prefer (and not just say that they disagree with the approach taken without proposing a viable alternative).
Test 11	All	Use of ISO 10241-1 and TBX: Any comments shall be made at the latest during the prototype testing phase.
Test 12	All	Management of consolidated documents (i.e. merging of mother document plus corrigenda and amendments): test how this has been implemented and provide any comments.
Test 13	All	Services: look into the IT approach and ease of customization
Test 14	All	Look at what is provided in the prototype and think about what is necessary with respect to the workflow, and provide feedback
Test 15	All	To provide details of any extra styles needed.
Test 16	JG	Test the manual version of the template on Open Office and to report the findings

To address in the future: compound document where file too large to be managed as a single file.

7 Planning of any necessary changes for AFNOR to make in STD

It was noted that AFNOR had agreed to add any extra styles for marking up figures and tables to STD.

Action 26: JG to communicate to AFNOR which styles will need to be added.

8 OpenOffice

AFNOR noted that the use of OpenOffice by them in 2010 was under discussion.

9 AOB

ISO/CS noted that they intended to take the opportunity of the introduction of the XML template to replace the use of (E), (F) and (R) in the reference numbers by the corresponding alpha-2 codes (en), (fr) and (ru).

Action 27: JG to add "Replies" document to AFNOR meeting folder.

10 Summary of action items sorted per deadline

The deadline for the following action items is **3 July 2009**.

Action 4: All project members to provide feedback regarding the revised ISONET draft.

Action 5: Project team members to check the revised ISONET draft vs Dublin Core and to feed back any comments.

Action 6: All project team members to validate the current TEI/ISO schema (available on the [TEI @ ISO project website](#)), and in particular to take a position with regard to the use of character styles in the template.

Action 7: All project team members to share any extra needs for publishing (following which we will see whether there is any commonality in the needs).

Action 8: Serge to investigate the rules re packaging of graphics with docx and to provide a recommendation back to the group?

Action 12: All project members to check with their CPSG representative to ensure that they understand so that the right questions are raised at the CPSG meeting.

Action 16: Consultants to cost the setting up of a service to show errors in structure in an XHTML file: if feasible set up as service for the prototype testing; if not, inform group.

Action 22: SDOs who are part of the project team but were not present at the meeting when this subject was discussed are requested to confirm their commitment to testing.

Action 23: JG to check with GOST R (for Russian versions), ITU (for Japanese versions), and NSAI (for ?? versions).

Action 24: JG to create and add to Prototype folder - commenting template.

Action 25: JG to get Kirsii to create to e-mail groups: P and O members

Action 27: JG to add "Replies" document to AFNOR meeting folder.

The deadline for the following action items is **15 October 2009**:

O:\tools\ISO Templates\XML template\Meetings\AFNOR 2009\Minutes\Minutes meeting 2009-05-26.doc

Action 1: ISO/CS to add fixed text to the Foreword generated when a document based on the template is first opened.

Action 2: Consultants to add an extra Schematron file to the NVDL sequence of validations.

Action 3: ISO/CS and consultants to provide for a standard implementation for the 5 metadata elements.

Action 9: ISO/CS and consultants to implement CALS ETM and the agreed approach for tables in the roundtrip and to alter the validation to produce an error when drawing functions have been used in tables.

Action 10: ISO/CS and consultants to add terminology to the template and schema/DTD.

Action 11: Consultants to add the markup of corrigenda/amendments to the schema/DTD and to see how to include in a primitive way in template and test in the prototype phase.

Action 13: Alter the services as specified and make the code available for the prototype tests.

Action 14: ISO/CS to investigate the native Word 2007 maths editor to determine its limits of use vs MathType and the possible consequences on production of its use, and to report back any pertinent information to the project team.

Action 15: ISO/CS to look into the embedding of DIN fonts (and providing the necessary information that the fonts are the property of DIN but may be used free of charge provided that the source is stated).

Action 17: ISO/CS and consultants to set up versioning in conformity with the above for the prototype.

Action 18: ISO/CS to create a draft procedure for making updates and informing users for deployment with the prototype.

Action 19: Serge 1) to look at the use of trust certificates, 2) to see whether with the removal of the metadata wizard the need for the runtime library add-on can be eliminated and 3) to investigate in Microsoft framework to deliver the best/easiest package for installation/deployment.

Action 20: JG and SJ to alter the template ribbons as specified.

Action 21: JG and SJ to carry out the following:

- *implement the new presentation for figures*
- *add the extra styles needed for figures and tables*
- *look at the comments from Franck re extra styles*
- *take into consideration the changes in the ISO/IEC Directives for cross-references*
- *take into consideration the changes in the ISO/IEC Directives in the Help text*

Action 26: JG to communicate to AFNOR which styles will need to be added.

Annex A: Informal meeting 2009-05-27 to share publishing needs

Attendees:

AFNOR	Pierre Bobot
	Yan Trocheris
	Stéphane Delysse
BSI	Peter McKay
	Jenny Sherman
DIN	Andreas Wernicke
ISO/CS	Joanna Goodwin
	Serge Juillerat
NEN	Jo Collins
	Jos van de Heijden
UNI	Lisa Inversini
Consultant	Sebastian Rahtz

AFNOR, BSI, DIN and NEN shared their experiences and visions regarding publishing needs. It was proposed to hold a further meeting to investigate any commonalities in publishing needs in the week of 22 June, possibly at the ISO/CS.

Action JG: To see with ISO SG and ITSIG secretary, and to organize meeting if confirmed.

Network Working Group
Request for Comments: 5141
Category: Informational

J. Goodwin
H. Apel
ISO
March 2008

A Uniform Resource Name (URN) Namespace for
the International Organization for Standardization (ISO)

Status of This Memo

This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

Abstract

This document describes a Uniform Resource Name Namespace Identification (URN NID) for the International Organization for Standardization (ISO). This URN NID is intended for use for the identification of persistent resources published by the ISO standards body (including documents, document metadata, extracted resources such as standard schemata and standard value sets, and other resources).

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1. Introduction

The International Organization for Standardization (ISO) was created by international agreement in 1947. ISO is a network of the national standards institutes of many countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. ISO acts as a bridging organization in which a consensus can be reached on solutions that meet both the requirements of business and the broader needs of society, such as the needs of stakeholder groups like consumers and users.

Further information is provided at <http://www.iso.org/iso/about.htm>.

The core mission of ISO is to develop technical standards constituting technical agreements that provide the framework for compatible technology worldwide. ISO standards contribute to making the development, manufacturing, and supply of products and services more efficient, safer, and cleaner. They make trade between countries easier and fairer.

Every participating ISO member institute (full members) has the right to take part in the development of any standard that it judges to be important to its country's economy. No matter what the size or strength of that economy, each participating member in ISO has one vote. ISO's activities are thus carried out in a democratic framework where each country is on an equal footing to influence the direction of ISO's work at the strategic level, as well as the technical content of its individual standards. Although the ISO standards are voluntary, the fact that they are developed in response to market demand, and are based on consensus among the interested parties, ensures widespread applicability of the standards. Consensus, like technology, evolves and ISO takes account of both evolving technology and evolving interests by requiring a review of its standards at least every five years to decide whether they should be maintained, updated, or withdrawn.

ISO publishes International Standards and other technical specifications that are cited in the definitions of required or expected practices in many industries in many nations. These specifications contain dictionaries of standard terms, catalogues of reference values, definitions of formal languages, formal schemata for information capture and exchange, specifications for standard practices, and other information resources of general use to international trade and industry. ISO wishes to create and manage globally unique, persistent, location-independent identifiers for these resources.

This specification defines the syntax for URNs that identify documents developed by the International Organization for Standardization (ISO) in accordance with the standards development procedures defined in the ISO/IEC Directives, Part 1 [ISODIR-1] and the ISO supplement [ISODIR-S] and processed by the ISO Central Secretariat. The syntax extends to identify document metadata and resources related to these documents or otherwise associated with them. It does not extend to products derived from these documents and published by ISO (e.g., handbooks, compendia) or documents at or below the Technical Committee level. Revisions of this specification may define syntax for URNs in this namespace that identify other ISO objects, when the ISO community defines a requirement for such identifiers.

2. Specification Template

2.1. Namespace ID

"iso"

2.2. Registration Information

Version 2.1
Date: 2007-12-13

2.3. Declared Registrant of the Namespace

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ISO Central Secretariat
International Organization for Standardization (ISO)
Case Postale 56
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Switzerland

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2.4. Declaration of Structure

2.4.1. Definition

The Namespace Specific Strings (NSSs) of all URNs assigned by ISO will conform to the syntax defined in Section 2.2 of [RFC2141].

The NSS has the following ABNF [RFC5234] specification:

NSS = std-nss

All URNs conforming to this specification begin the NSS with the prefix "std:" to denote the restriction to documents developed by the ISO standards development procedures as defined in the ISO/IEC Directives, Part 1 [ISODIR-1] and the ISO Supplement [ISODIR-S]. Prefixes that identify ISO objects of other kinds may be defined in future revisions of this specification.

std-nss = "std:" docidentifier *supplement *docelement
[addition]

The prefix "std:" distinguishes an <std-nss>. An <std-nss> identifies the ISO document that is designated by the <docidentifier>, as extended or modified by any identified <supplement>. (An <std-nss> that identifies all parts of a multipart ISO document is a special case as described under the

element <partnumber>.) If the <std-nss> contains an <addition> element, the NSS identifies a resource extracted from the ISO document or otherwise associated with it (see below).

```
docidentifier = originator [":" type] ":" docnumber [":" partnumber]
               [":" status] ":" edition
               [":" docversion] [":" language]
```

<docidentifier> provides the complete identification of an ISO document. Each of its component elements is described below.

```
originator    = "iso" / "iso-iec" / "iso-cie" / "iso-astm" /
               "iso-ieee" / "iec"
```

<originator> is the organization (usually an international body) from which a document emanates.

Current values:

iso = International Organization for Standardization

iec = International Electrotechnical Commission (IEC), or
Commission Electrotechnique Internationale

iso-iec = jointly developed by ISO and IEC

iso-cie = jointly developed by ISO and the Commission
Internationale d'Eclairage (CIE)

iso-astm = jointly developed by ISO and the American Society for
Testing and Materials (ASTM) International

iso-ieee = jointly developed by ISO and the Institute for
Electrical and Electronics Engineers (IEEE)

Revisions of this specification may define additional values.

```
type          = "data" / "guide" / "isp" / "iwa" /
               "pas" / "r" / "tr" / "ts" / "tta"
```

<type> designates the ISO deliverable type. If the <type> element is not present, the classification is "international standard". Other current values:

data = Data (document type no longer published)

guide = Guide

isp = International Standardized Profile
iwa = International Workshop Agreement
pas = Publicly Available Specification
r = Recommendation (document type no longer published)
tr = Technical Report
ts = Technical Specification
tta = Technology Trends Assessment

docnumber = DIGITS

<docnumber> is the reference number assigned to the document by ISO and/or IEC. An ISO document may comprise a single document, or two or more separate parts each of which is identified by <partnumber>.

partnumber = "-" 1*(DIGIT / ALPHA / "-")

<partnumber> is the reference number that identifies a part of a multipart standard.

Where it is required to refer to a multipart ISO document in its entirety, this can be designated by omitting the <partnumber> element. However, this precludes the possibility of using any further elements except <addition>.

NOTE: The option to refer to a multipart ISO document by omitting the <partnumber> element has been included to align with the provision in the ISO/IEC Directives, Part 2, 2004 [ISODIR-2] subclause 6.2.2 of making an undated reference to all parts of an ISO document. It is only permissible to use this option where the URN is referring to a multipart ISO document in its entirety. Since the use of this option precludes the designation of the elements <status> and <edition>, it is implicit that the URN needs to remain valid irrespective of any future changes to the multipart document (see the rules for undated references given in the ISO/IEC Directives, Part 2, 2004 [ISODIR-2] subclause 6.6.7.5.2). This shall be taken into consideration in the use (and maintenance) of any URN specification employing this option.

NOTE: In the case where the multipart document comprises different types of ISO deliverable, the <type> of the core part (usually part 1) applies. See the example "Reference to a resource related to all parts of a multipart document".

Except for the case where it is required to refer to a multipart document in its entirety, the element <partnumber> is required if the identified resource is a part of an ISO document. Otherwise, this element is not used.

status = ("draft" / "cancelled") / stage

<status> indicates the publication status of the document. When the <status> element is not present, the NSS refers to a published document. Other values:

draft = document that has not yet been accepted for publication by international ballot

cancelled = document that has been deleted or withdrawn

stage = "stage-" stagecode ["." iteration]

<stage> indicates the stage code and iteration of the document.

stagecode = DIGIT DIGIT "." DIGIT DIGIT

<stagecode> is the harmonized stage code in accordance with ISO Guide 69:1999, "Harmonized Stage Code system (Edition 2) -- Principles and guidelines for use" [ISOGUIDE69].

iteration = "v" DIGITS

<iteration> is a sequential number that refers to a specific iteration of the project's lifecycle through the designated stage.

If no <iteration> is specified, the reference is to the highest iteration available for the specified stagecode.

NOTE: In the ISO Central Secretariat project management database, the <iteration> is referred to as the "project version".

edition = "ed-" DIGITS

<edition> designates a specific edition of the document. (DIGITS is the (sequential) edition number.) If no <edition> is specified, the NSS refers to the latest edition.

docversion = "v" (simpleversion / isoversion)

simpleversion = DIGITS

<docversion> designates the version number of a document's <edition>. It is altered by correction (corrected version; Technical Corrigendum) or amendment (Amendment; Addendum) and is distinct from a revision, which changes the edition number.

In the <simpleversion>, the first version published is 1, and each subsequent correction or amendment increases the version number by 1.

If no <docversion> is specified, the reference is to the highest version number available for the denoted <edition>.

Current values of <simpleversion>:

1 - first version published

2 - corrected version published

isoversion = baseversion *includedsuppl

baseversion = DIGITS

includedsuppl = "-" suppltype supplnumber ["." supplversion]

An <isoversion> can be linked to a simpleversion by defining an existing simpleversion as baseversion and listing all the <supplement> elements (corrections and amendments) incorporated into that version.

Examples for the <isoversion> (internal ISO version) scheme:

1 = first version of standard

1-amd1.v1 = first version of standard incorporating first version of Amendment 1

1-amd1.v1-amd2.v1 = first version of standard incorporating first version of Amendment 1 and first version of Amendment 2

1-amd1.v2-amd2.v1-amd3 = first version of standard incorporating corrected version of Amendment 1, first version of Amendment 2, and highest version of Amendment 3

1-cor3 = first version of standard incorporating highest version of Technical Corrigendum 3

1-amd1-cor3 = first version of standard incorporating highest version of Amendment 1 and highest version of Technical Corrigendum 3

language = monolingual / bilingual / trilingual

monolingual = "en" / "fr" / "ru" / "es" / "ar"

bilingual = "en,fr" / "en,ru" / "fr,ru"

trilingual = "en,fr,ru"

<language> designates the official ISO language(s), or the language of an official translation, in which the document (object) is processed and published by ISO (excluding languages that constitute only specific elements of the content). The value is one or more alpha-2 codes, each of which designates a language, as specified in ISO 639-1 [ISO639-1]. If no language element is specified, <en> is assumed.

NOTE: Although [ISO639-1] recommends that language codes be written in lowercase, this ABNF definition allows the use of uppercase language codes because in ABNF [RFC5234], terminal symbols defined as literal strings are explicitly case-insensitive. This case distinction does not carry any meaning (see Section 2.9) and it is recommended to use language codes in lowercase. For additional information about the usage of language tags in information objects, see [RFC4646].

supplement = ":" suppltype ":" supplnumber
[":" supplversion] [":" language]

suppltype = "amd" / "cor" / "add"

supplnumber = DIGITS

supplversion = "v" DIGITS

<supplement> designates a technical alteration of or addition to an ISO standard that does not result in a new <edition> or <version>. Each <supplement> may be one of the three types, designated by <suppltype>:

amd = Amendment -- a document that alters and/or adds to previously agreed upon technical provisions in an existing ISO document; an amendment is subject to acceptance by ballot in accordance with the ISO/IEC Directives, Part 1, 2004 [ISODIR-1] subclause 2.10.3

cor = Technical Corrigendum -- a document that corrects a technical error or ambiguity, or updates the ISO document in such a way that the modification has no effect on the technical normative elements; a Technical Corrigendum is not balloted -- see the ISO/IEC Directives, Part 1, 2004 [ISODIR-1] subclause 2.10.2

add = Addendum -- (document type no longer published) Addenda were documents that changed (by correction, addition, or deletion) the technical requirements of an ISO document; an addendum was subject to acceptance by ballot in accordance with the ISO/IEC Directives, Part 1. (Addenda are included in this RFC because some of them are still valid.)

Supplements are numbered consecutively per ISO document, and within each supplement type.

<supplnumber> identifies the number of the supplement.

<supplversion> designates the version of a published supplement. At present, only two versions are used in practice: when a supplement is published, it is version 1. If that supplement is subsequently corrected by issuing a corrected version, as designated by the term "Corrected" on the cover page together with a date, the corrected version is version 2.

The language of a supplement can be different from that of the document. For example, a supplement may apply to only one of the languages of a bilingual document. For such cases, the language of a supplement can be identified using the <language> element defined above. The interpretation is the same, except that it applies only to the supplement.

```
docelement      = ":" ( "clause" / "figure" / "table" / "term" ) ":"
                  elementnumber / elementrange
                  *( "," elementnumber / elementrange )
```

```
elementnumber = ( ALPHA / DIGITS ) *( "." DIGITS )
```

```
elementrange  = elementnumber "-" elementnumber
```

<docelement> identifies one or more numbered subdivisions of a document. Types of numbered subdivision are specified in the ISO/IEC Directives, Part 2 [ISODIR-2]. This RFC currently specifies forms for reference to clauses, figures, tables, and terms only. It does not provide for reference to subfigures. Revisions of this specification may define additional values.

<clause> represents the selection of one or more clauses or subclauses of the document. <figure> represents the selection of one or more figures of the document. <table> represents the selection of one or more tables of the document. <term> represents the selection of one or more terms of the document.

<elementnumber> designates a numbered subdivision in a document, where the type of subdivision is identified by the literal "clause", "figure", "table", or "term". When the first character of <elementnumber> is a digit, the reference is to the subdivision designated by that digit string and by any additional digit strings separated by periods. When the first character of <elementnumber> is alphabetical, the reference is to the corresponding Annex, and to the subdivisions designated by additional digit strings.

The form <elementnumber> HYPHEN <elementnumber> designates a range of subdivisions, and the form <elementnumber> COMMA <elementnumber> designates a list. A list can contain ranges.

addition = techdefined / isodefined

techdefined = ":tech" *techelement

techelement = <unspecified>

isodefined = <unspecified>

<addition> is an additional element of the NSS intended to identify a representation of an ISO document, an extract from an ISO document, or some related information set, as a resource in its own right.

<techdefined> represents an associated or embedded resource defined by the committee that develops or maintains the identified document. All such <addition> elements begin with the prefix ":tech".

<isodefined> represents associated or embedded resources defined by the ISO Central Secretariat. The definition of an <addition> element beginning with any symbol other than <tech> is reserved to the ISO Central Secretariat.

The syntax of the <addition> element is not specified in this RFC. Specific syntax for this element will be specified as needed by the ISO Central Secretariat, or by the individual committee that has the responsibility for developing or maintaining the identified document. It is necessary that these definitions comply with the rules for lexical equivalence specified in Section 2.9 and take into account the process for identifier resolution as discussed in Section 2.8.

DIGITS = DIGIT *DIGIT

DIGIT = %x30-39 ; 0-9

ALPHA = %x41-5A / %x61-7A ; A-Z / a-z

Basics of the ABNF notation used :

" " literals (terminal character strings); terms not in quotes are non-terminals

/ alternatives

[] indicates an optional rule

() indicates a sequence group, used as a single alternative or as a single repeating group

<a>* indicates that the following term or group can repeat at least <a> and at most times; default values are 0 and infinity, respectively

; comment

2.4.2. Examples

- o Language handling:

urn:iso:std:iso:9999:-1:ed-1:en
refers to the 1st edition of ISO 9999-1, in English

urn:iso:std:iso:9999:-1:ed-1:en,fr
refers to the 1st edition of ISO 9999-1, in English/French
(bilingual document)

- o Originators/document type:

urn:iso:std:iso-iec:tr:9999:-1:ed-1:en
refers to the 1st edition of ISO/IEC TR 9999-1, in English

- o Status:

urn:iso:std:iso-iec:9075:-3:cancelled:ed-2:en
urn:iso:std:iso-iec:9075:-3:stage-95.99:ed-2:en
both refer to the cancelled 2nd edition of ISO/IEC 9075-3, in English

urn:iso:std:iso-iec:9075:-3:draft:ed-4:en
urn:iso:std:iso-iec:9075:-3:stage-30.60:ed-4:en
both refer to the draft 4th edition of ISO/IEC 9075-3, in English

urn:iso:std:iso:128:-20:en
urn:iso:std:iso:128:-20:stage-90.20:ed-1:en
both refer to the published (90.20 = under 2nd periodic review)
1st edition of ISO 128-20, in English

urn:iso:std:iso:128:-71:cancelled:ed-1:en
urn:iso:std:iso:128:-71:stage-30.98.v2:ed-1:en
both refer to the cancelled (30.98 = project deleted) 1st edition
of ISO 128-71, in English; the second example refers specifically
to the 2nd iteration (projectversion) at stage 30

- o Non-numeric part number:

urn:iso:std:iso:9999:-A02:ed-1:en
refers to the 1st edition of ISO 9999-A02, in English

- o Reference to a resource related to all parts of a multipart document:

urn:iso:std:iso:20022:tech:xsd:camt.001.001.01
refers to a "techdefined" resource (i.e., a resource defined by
the committee that develops or maintains the identified document)
associated with ISO 20022 in its entirety; in this example, the
techdefined part comprises ":xsd:camt.001.001.01"

NOTE: At the time of drafting of this schema, ISO 20022 comprises
5 parts: parts 1 and 2 are International Standards; parts 3 to 5
are Technical Specifications. Therefore, the <doctype>
"international standard" is used in the URN.

- o Docversion handling:

urn:iso:std:iso:9999:-1:ed-1:v2:en

refers to the corrected English version of the 1st edition of ISO 9999-1

urn:iso:std:iso:9999:-1:ed-1:v1-amd1:en

refers to the version comprising the 1st edition of ISO 9999-1, incorporating the latest version of Amendment 1, in English

urn:iso:std:iso:9999:-1:ed-1:v1:en,fr:amd:1:v2:en

refers to the 2nd version of Amendment 1, in English, which amends the 1st version of edition 1 of ISO 9999-1, in English/French (bilingual document)

urn:iso:std:iso:9999:-1:ed-1:v1-amd1.v1:en,fr:amd:2:v2:en
(isoversion scheme)

refers to the corrected version of Amendment 2, in English, which amends the document comprising the 1st version of edition 1 of ISO 9999-1 incorporating the 1st version of Amendment 1, in English/French (bilingual document)

urn:iso:std:iso:5817:ed-2:v2:en:cor:1:en

refers to the 1st version of Technical Corrigendum 1, in English, which amends the corrected version of edition 2 of ISO 5817, in English

- o Supplement handling:

urn:iso:std:iso:9999:-1:ed-2:en:amd:1

refers to Amendment 1 to the 2nd edition of ISO 9999-1, in English

urn:iso:std:iso:9999:-1:ed-2:en:amd:1:v2

refers to the corrected version of Amendment 1 to the 2nd edition of ISO 9999-1, in English

urn:iso:std:iso:9999:1:ed-2:en,fr:amd:2:en

refers to Amendment 2 in English to the 2nd edition of ISO 9999-1, in English/French (bilingual document)

urn:iso:std:iso:9999:-1:ed-2:en:amd:1:cor:1

refers to Corrigendum 1 to Amendment 1 to the 2nd edition of ISO 9999-1, in English

- o Docelement handling:

urn:iso:std:iso:105:-c12:ed-1:en:clause:a.1,a.2

urn:iso:std:iso:105:-c12:ed-1:en:clause:a.1-a.2

both refer to clauses A.1 and A.2 in the 1st edition of ISO 105-C12, in English

urn:iso:std:iso:9999:-1:ed-1:v1-

amd1.v1:en,fr:amd:2:v2:en:clause:3.1,a.2-b.9 (isoversion scheme)
refers to (sub)clauses 3.1 and A.2 to B.9 in the corrected version of Amendment 2, in English, which amends the document comprising the 1st version of edition 1 of ISO 9999-1 incorporating the 1st version of Amendment 1, in English/French (bilingual document)

urn:iso:std:iso:9999:-1:ed-2:en:amd:1:term:3.2,3.3,3.4.1-3.4.4,3.12

refers to the terms 3.2, 3.3, 3.4.1 to 3.4.4, and 3.12 in Amendment 1 to the 2nd edition of ISO 9999-1, in English

2.5. Relevant Ancillary Documentation

ISO/IEC Directives, Part 1 [ISODIR-1] and Part 2 [ISODIR-2], and ISO supplement [ISODIR-S].

2.6. Identifier Uniqueness Considerations

Assignment of URNs for documents in the requested namespace will be managed by the ISO Central Secretariat, which will ensure that the assigned URNs are consistent with the ISO Directives for unique identification of ISO documents.

Assignment of URNs for Technical Committee resources related to ISO documents will be managed by the Technical Committees developing or maintaining those documents. As indicated above, each such URN will extend the URN for the containing document via the element <addition>. The responsibility of the Technical Committee will therefore be to ensure the uniqueness of the techdefined <addition> element that constitutes the identifier for the resource within the document namespace, and thus the uniqueness of the overall resource identifier within the requested namespace.

2.7. Identifier Persistence Considerations

Assigned URNs will not be reused and will remain valid beyond the lifecycle of the referenced resources. However, it should be noted that although the URNs remain valid, the status of the referenced resource may change.

2.8. Process for Identifier Resolution

Resolving document identifiers:

This schema has been developed with the intent that a URN identifying an ISO document can be transformed to a valid http URI by replacing the requested URN namespace prefix ("iso") and the "std:" prefix with the domain name "standards.iso.org", replacing all occurrences of ":" within the identifier with "/", and converting characters to lowercase. (ISO is planning to develop a website implementation to support these URIs.)

Examples:

urn:iso:std:iso:9999:-1:ed-1:en: corresponds to
http://standards.iso.org/iso/9999/-1/ed-1/en/

urn:iso:std:iso-iec:tr:9999:-1:ed-1:en: corresponds to
http://standards.iso.org/iso-iec/tr/9999/-1/ed-1/en/

urn:iso:std:iso:9999:-1:ed-2:en,fr:amd:2: corresponds to
http://standards.iso.org/iso/9999/-1/ed-2/en,fr/amd/2/

Resolving identifiers for <addition> resources:

For URNs in the requested namespace that refer to additional resources related to ISO documents, the ISO Central Secretariat will specify the resolution procedure at the time it defines the syntax for the corresponding <addition> to the <std-nss>. In most cases, those resources will be maintained on an ISO website, as extensions to the http URIs described above.

2.9. Rules for Lexical Equivalence

URNs are lexically equivalent if they are octet-by-octet equal after the following preprocessing:

1. normalize the case of the leading "urn:" token
2. normalize the case of the NID
3. normalize the case of any %-escaping
4. normalize the case of all elements

Further information is specified in [RFC2141], Section 5.

2.10. Conformance with URN Syntax

No special considerations.

2.11. Validation Mechanism

None specified.

2.12. Scope

Global.

3. Namespace Considerations

The ISO-specific requirements are as follows:

- o globally unique, persistent identifiers
- o location-independent identifiers
- o human-interpretable identifiers
- o a scheme applicable to paper documents as well as machine-readable documents
- o a scheme applicable to conceptual documents and explicit forms of documents
- o a scheme applicable to resources extracted from documents
- o a scheme applicable to "metadata" associated with documents
- o a scheme in which the identifier assignment is managed by the ISO Central Secretariat

Location-independence: Because the publication of ISO standards is a complex arrangement involving multiple development organizations and national standards institutes, a given ISO document may be available in a number of forms from a number of sources. This makes it important to have a document identifier that is global in scope, widely and uniformly used, and independent of the text source used by any given reference.

Human-interpretable: Many, perhaps most, references to documents appear in text generated by human authors. It is important that an author familiar with the scheme be able to generate a correct URN for a document for which the author has the ISO reference (or document identifier). Conversely, it is important that a reader unfamiliar

with the scheme be able to identify the URN as a reference to an ISO document, particularly an ISO standard, and also to recognize identifiers for forms, languages, or metadata sets.

Paper documents: Older ISO standards that are commonly used as industrial references exist only in paper form or in earlier machine-readable forms that are not commonly used on the Internet. It is important to have a document identifier scheme that extends to these resources as well. (In fact, many of these have been converted to Internet forms, and others are being converted, but it is important that the identifier be independent of the form in which the document can be obtained at any given time.)

Conceptual documents vs. representation forms: Because ISO documents are regularly maintained and re-published in multiple forms, it is important to have document identifiers that denote the conceptual document, without regard to publication form. At the same time, it is necessary for certain types of use to be able to refer to specific editions, or specific publication forms (for example, editions in different languages, or to PDF or HTML versions). This URN specification allows for the identification of these different types of use in the <isdefined> part of the <addition> element.

Document extracts: ISO standards may contain formal specifications in machine-processable languages, or formal specifications that also have representations in machine-processable languages. It is useful to be able to extract these specifications in machine-processable form as separate resources, and therefore it is necessary to give these "extracted resources" global identifiers derived from the document identifier using a consistent identification scheme.

Document metadata: Certain uses of documents and document text, primarily bibliographic, also extract information from the documents, and that information, commonly called "metadata", is organized in machine-readable forms conforming to other standards. These metadata sets then become resources in their own right. It is important to give them URN identifiers consistent with the document identification scheme.

4. Community Considerations

The ISO community is broad in two dimensions. In one dimension, its documents are developed and used in a large variety of industries and professions: natural sciences, manufacturing, construction, transportation, information technology, social sciences, etc. In the other dimension, it is a community of expert developers, standards

managers, publishers, professional users, and consumers. And Internet information technologies are a part of common professional practice in all of these areas in both dimensions.

ISO standards are cited in business agreements, in professional publications, in product descriptions, and in standards development and publication activities. When these citations appear in electronic form, the references must be unambiguous.

The information technology community is itself very active in the development and use of standards, and many ISO publications are developed by and for that community. When an Internet information exchange uses a form specified in an ISO document, or a terminology defined in an ISO document, it is often necessary to identify that ISO specification in the envelope surrounding the exchange. That identification should use a formal, unambiguous identifier in a form readily recognized by the receiving software, and possibly by the ultimate human recipient of the information.

In order to facilitate the use of existing and emerging Internet technologies for all of these purposes, URNs conforming to [RFC2141] represent the most useful form of formal, globally unambiguous identifiers. The use of a managed namespace for such identifiers, following a consistent scheme for identifying ISO documents and their derivatives, would be of significant benefit to the entire ISO community.

It would give professional users in many industries a standard form for electronic reference to ISO standards in HTML, XML, PDF, etc., documents.

It would give software developers a standard form for reference to ISO standard protocols, schemata, languages, data sets, etc.

It would give standards developers a standard form for reference to other ISO publications in various stages of development. And it would give them a standard form for creating identifiers for machine-readable information sets contained in, or derived from, the specifications.

It would give standards managers and publishers a formal uniform scheme for reference to specific publications, editions, and versions of ISO documents.

While the assignment of identifiers under this scheme is managed by the ISO Central Secretariat, the processes by which the identified objects arise and acquire such identifiers are the result of agreements made by the member bodies. Every such project is

initiated by one member body and reviewed and voted on by the others. Every accepted project is open to participation by any member body, and in fact, participation by a certain minimum number (usually 5) of member bodies is required for acceptance of most projects. In general, the member bodies are open professional and industrial organizations reflecting broad expertise and national interest.

It should be noted that ISO documents in draft state are not usually made available outside the ISO standards development community. Making them available to professionals outside of the process might well mislead the recipients into premature adoption of practices that are not yet completely specified or have not yet achieved consensus, and therefore may well change.

It should also be noted that ISO documents are not, in general, freely available over the Internet. Rather, there are complex agreements between ISO and its member institutes as to the rights to the publications and the corresponding fees that may be charged for paper or electronic copies of various editions. Some ISO documents are freely available, and some are freely available in certain forms. In general, derivatives of ISO documents (schemata, metadata sets, etc.) are freely available over the Internet in the appropriate machine-readable forms. A URL associated with a URN in the requested namespace may therefore lead directly to a machine-readable copy of the text of the document or derivative, or it may lead to a site that can provide that text for a fee, or it may lead to a site that can only sell a paper copy of the document. Bearing in mind that ISO is a network of otherwise independent institutes, this behavior is simply a property of the ISO community.

Finally, it should be noted that, for many purposes, reference to the ISO standard is what is required, and only the product engineer or software tool builder actually needs access to the text. This request is based on the need to standardize the form of reference, not the means of access.

5. IANA Considerations

IANA has assigned "iso" (29) as a formal NID.

The ISO Central Secretariat will maintain a registry of the permissible values for the elements comprising the NSS. Information may be obtained from the following address: urn@iso.org.

6. Security Considerations

The ISO URN Namespace ID shares the security considerations outlined in [RFC3406], but has no other known security considerations.

7. References

7.1. Normative References

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- [ISODIR-2] International Organization for Standardization, "Rules for the structure and drafting of International Standards", ISO/IEC Directives Part 2, Edition 5, 2004.
- [ISODIR-S] International Organization for Standardization, "Procedures specific to ISO", ISO/IEC Directives Supplement.
- [ISOGUIDE69] International Organization for Standardization, "Harmonized Stage Code system (Edition 2) - Principles and guidelines for use", ISO Guide 69:1999.
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7.2. Informative References

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- [ISO/IEC9070:1991] International Organization for Standardization, "Information technology -- SGML support facilities -- Registration procedures for public text owner identifiers", ISO/IEC 9070:1991.

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- [ISO/IEC8825:1987]
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for Public Identifiers", RFC 3151, August 2001.
- [RFC4646]
Phillips, A. and M. Davis, "Tags for Identifying
Languages", BCP 47, RFC 4646, September 2006.

Appendix A. Alternative Naming Schemes

Before initiating this request, ISO attempted to find an existing or currently proposed URN NID scheme that might be used instead of a dedicated scheme. Two existing schemes were carefully considered because they clearly meet part of the requirements:

- o The OID scheme, documented in [RFC3061]
- o The PublicId scheme, documented in [RFC3151]

The OID scheme is derived from the joint ISO/ITU-T ASN.1 object-identifier scheme specified in [ISO/IEC8824-1:2002] (original edition 1984; [RFC3061] cites the 1988 [CCITT] edition of the encoding rules in [ISO/IEC8825:1987]). This standard assigned the registry authority for all identifiers in the { iso(1) } namespace to ISO, and therefore, ISO controls the registry of all identifiers beginning "oid:1:". And in fact, ISO has developed, and is using, an identification scheme under ASN.1 that meets most of the above requirements. ISO could clearly define a use of the OID scheme that would be adequate to meet all of its technical objectives, although it would further complicate the current ASN.1 scheme.

The original intent of ISO 8824 was to permit both a human-readable form for the identifier, to maximize intuitive recognition, and an encoding that minimized the number of bits needed to communicate an OID value over a network. Regrettably, the encoding chosen in RFC 3061 is much closer to the minimal bits encoding than to the human-readable one. The NSS for the OID scheme consists entirely of digits and punctuation. For example, the ASN.1 identifier { iso(1) standard(0) 7852 part(2) edition(3) } becomes: urn:oid:1:0:7852:2:3.

This is difficult for a human reader or author to interpret. It is also easy to mistype, and the scheme contains no "check-digits", which makes it difficult to validate, leading to the propagation of URNs that are invalid or valid but erroneous. Finally, the all-numeric form conveys no hint of the name of the responsible organization, and therefore no hint of any URL that might aid a human reader in interpreting the reference. The OID scheme makes all of the required identifiers technically possible and technically useable by software, but for all practical purposes, the OID URNs are useful only to software.

The PublicId scheme is derived from Standard Generalized Markup Language (SGML) [ISO8879:1986] and [ISO/IEC9070:1991] bibliographic catalogue forms. Narrowed to ISO publications, it is adequate for the unique global persistent identification of published documents, in both paper and machine-processable form.

Importantly, the PublicId scheme does not have a "conceptual document" notion -- it identifies specific publications and editions. "Weak identification" could be used to implement the conceptual document concept, but the PublicId scheme does not document that interpretation. In any case, the PublicId scheme does not extend to draft documents, which are often referenced in pilot implementations, to separate forms of a document, or to resources extracted from documents. It supports only those metadata elements that are defined in SGML. The scheme could be extended to do most of these, but the ISO-specific extensions would not in general extend to the much broader base of documents identified by PublicIds. (Version and edition management practices vary significantly across publishers, depending on their milieu.) Further, the ISO Central Secretariat could not and should not control the registry of such URNs.

ISO therefore concluded that the alternative schemes are not adequate to meet the requirements of the ISO community.

Whilst requesting a new namespace for ISO documents and their derivatives, ISO does not wish to discourage the use of these other identifiers for ISO publications. The PublicId form, in particular, is useful for referring to ISO publications in a larger bibliographic information space.

Appendix B. ABNF Definition of Namespace ID = "iso" (Informative)

```

NSS                = std-nss

std-nss            = "std:" docidentifier *supplement *docelement
                    [addition]

docidentifier       = originator [":" type] ":" docnumber [":" partnumber]
                    [":" status] ":" edition
                    [":" docversion] [":" language]

originator          = "iso" / "iso-iec" / "iso-cie" / "iso-astm" /
                    "iso-ieee" / "iec"

                    ; iso      = International Organization for
                    ;          Standardization

                    ; iec      = International Electrotechnical
                    ;          Commission (IEC), or Commission
                    ;          Electrotechnique Internationale

                    ; iso-iec   = jointly developed by ISO and IEC

```

```

; iso-cie = jointly developed by ISO and the
;           Commission Internationale d'Eclairage
;           (CIE)

; iso-astm = jointly developed by ISO and the
;           American Society for Testing and
;           Materials (ASTM) International

; iso-ieee = jointly developed by ISO and the
;           Institute for Electrical and
;           Electronics Engineers (IEEE)

type = "data" / "guide" / "isp" / "iwa" /
      "pas" / "r" / "tr" / "ts" / "tta"

; data = Data (document type no longer published)

; guide = Guide

; isp = International Standardized Profile

; iwa = International Workshop Agreement

; pas = Publicly Available Specification

; r = Recommendation (document type no longer
; published)

; tr = Technical Report

; ts = Technical Specification

; tta = Technology Trends Assessment

docnumber = DIGITS

partnumber = "-" 1*( DIGIT / ALPHA / "-" )

status = ( "draft" / "cancelled" ) / stage

; draft = document that has not yet been
;         accepted for publication by
;         international ballot

; cancelled = document that has been deleted or
;            withdrawn

stage = "stage-" stagecode [ "." iteration]
```

```

stagecode      = DIGIT DIGIT "." DIGIT DIGIT

iteration       = "v" DIGITS

edition        = "ed-" DIGITS

docversion     = "v" (simpleversion / isoversion)

simpleversion   = DIGITS
                ; 1 = first version published
                ; 2 = corrected version published

isoversion     = baseversion *includedsuppl

baseversion    = DIGITS

includedsuppl  = "-" suppltype supplnumber [ "." supplversion ]

language       = monolingual / bilingual / trilingual

monolingual    = "en" / "fr" / "ru" / "es" / "ar"

bilingual      = "en,fr" / "en,ru" / "fr,ru"

trilingual     = "en,fr,ru"

supplement     = ":" suppltype ":" supplnumber
                [ ":" supplversion ] [ ":" language ]

suppltype      = "amd" / "cor" / "add"
                ; amd = Amendment
                ; cor = Technical Corrigendum
                ; add = Addendum

supplnumber    = DIGITS

supplversion   = "v" DIGITS

docelement    = ":" ( "clause" / "figure" / "table" / "term" ) ":"
                elementnumber / elementrange
                *( "," elementnumber / elementrange )

elementnumber  = ( ALPHA / DIGITS ) *( "." DIGITS )

```

elementrange = elementnumber "-" elementnumber
addition = techdefined / isodefined
techdefined = ":tech" *techelement
techelement = <unspecified>
isodefined = <unspecified>
DIGITS = DIGIT *DIGIT
DIGIT = %x30-39 ; 0-9
ALPHA = %x41-5A / %x61-7A ; A-Z / a-z

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