2014-03-27

Minor revision 2016-05-8 to change reference in clause 4 to build_CR.xsl (rather than build_part1000.xsl).

ISO Technical Committee ISO/TC 184, WG12 *Automation systems and integration*, Subcommittee SC 4, *Industrial data*

WG12 N8352

STEPmod Deliverable directory structure

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SC 4 standing documents specify procedures, methods, and guidelines for the development of SC 4 standards for industrial data. SC 4 standing documents, together with additional documents such as templates and checklists, can be obtained from the Internet:

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

This standing document was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration*, Subcommittee SC 4, *Industrial data*.

This SC 4 standing document is applicable with immediate effect to SC 4 projects that use the STEP modular repository.

0 Introduction

0.1 Overview of this standing document

This standing document specifies requirements for the content of Change Requests created by standards developers using the STEPmod environment.

0.2 Change history

Table 1 summarizes the major revisions of this standing document.

Table 1 — Revision history

Document	Date	Notes
SC 4/WG12 N8352	2013-05-17	DRAFT
	2014-03-27	Add reference to SMRL build procedure, change title, clarify key xsl file location.

2016-05-08 - Markup to correct reference to build_CR.xsl

Scope

This document outlines the required directory contents for several classes of WG21/WG12 deliverables. It also includes a subset of index.htm from CR9 for use as an example of index.htm. The relevant bug associated with this document is 4172.

Our deliverables content:
Each deliverable contains an index and front matter pertaining to its intended function and optionally HTML files as aids to checking.

1 Normative References

TBD

2 Terms, definitions and abbreviations

TBD

2.1 Other terms and definitions

TBD

2.2 Abbreviations

TBD

3 Requirements for the structure and content of relevant WG21/WG12 deliverables

3.1 Publications affected: All 10303-parts other than APs are published in the SMRL.

3.1.1 AP as ISO product

AP plus complete tree of referenced relevant modules/resources/AIC/ BOM as at present, based on published SMRL. The AP content itself is not included in the SMRL but is integrated with the SMRL to produce the ISO AP product.

Directory structure

iso_10303_2xx<long name>
iso_10303_2xx<long name>/abstracts
iso_10303_2xx<long name>/data
iso_10303_2x<long name>/data/application_protocols
iso_10303_2xx<long name>/data/application_protocols/<ap_name>
iso_10303_2xx<long name>/data/business_object_modules
iso_10303_2xx<long name>/data/modules
iso_10303_2xx<long name>/data/resource_docs
iso_10303_2xx<long name>/data/resources
iso_10303_2xx<long name>/images
iso_10303_2xx<long name>/iso_10303_2xx.htm

3.1.2 **SMRL as ISO product**

SMRL as ISO product, containing all modules (4xx, 1xxx), resources (x4, 5x, 6x) and AICs(5xx) and BOMs(3xxx).

Directory structure
smrl/data/library
smrl/data/business_object_modules
smrl/data/modules
smrl/data/resource_docs
smrl/data/resources
smrl/images
smrl/index.htm

The SMRL creation is an incremental process. Each SMRL version is based on the previous SMRL version with the additions/changes/deletions of the included CRs.

/stepmod/data/library/part.xml includes an explicit list of CRs to apply to the SMRL. Only documents listed in the publication_index.xml files referenced in "/stepmod/data/library/part.xml" shall be added/modified/deleted. [Currently there is an issue with broken links that result from removal from the SMRL of withdrawn editions of parts. WG21 has not concluded how to deal with this. The current work around is to simply remove the offending links.] The procedure to build and deliver an SMRL edition is documented in WG12 N8496.

3.2 Change Requests

3.2.1 Content

A CR can contain part1000 (modules), AICs, resources and BOM parts. A CR cannot include AP document. CR are built directly from stepmod.

Directory structure

At the top level, each part has its own place and its own subtree.

Tags

stepmod is tagged with a unique tag for each CR. See bugzilla #3361 for format and process.

3.2.2 AICs, resources directory

CRNNNNN/iso10303_NN/abstracts
CRNNNNN/iso10303_NN/data/resource_docs
CRNNNNN/iso10303_NN/data/resources
CRNNNNN/iso10303_NN/images
CRNNNNN/iso10303_NN/inserts
CRNNNNN/iso10303_NN/iso10303_NN.htm
CRNNNNN/iso10303_NN/iso10303_NN_readme.txt

Only AICs, resources explicitly listed in relevant publication_index.xml are included. [Note: This is a change from current build.xml which includes dependent resources in the "CRNNNNN/iso10303_NN/data/resources" directory.]

3.2.3 part 1000 modules directory structure

part 1000 modules is treated as a single part.
CRNNNNN/part1000/data/modules
CRNNNNN/part1000/images

Only modules explicitly listed in relevant publication_index.xml are included. No other directories shall exist under part1000 structure for a CR that is compliant with this document.

3.2.4 BOM directory structure

Because BOM type is dissimilar to modules (and similar to a resource) each BOM part should get its own top level node:

CRNNNNN/iso10303_3NNN/abstracts
CRNNNNN/iso10303_3NNN/data/business_object_models/managed_model_based_engineering
CRNNNNN/iso10303_3NNN/images

Only BO models explicitly listed in relevant publication_index.xml are included. No other directories exist in the structure.

3.2.5 AP ballot package directory structure

AP ballot package contains the AP plus dependent content

Directory structure

The AP ballot package is a directed graph (i.e., there is only one copy of representation_schema in the AP ballot package)

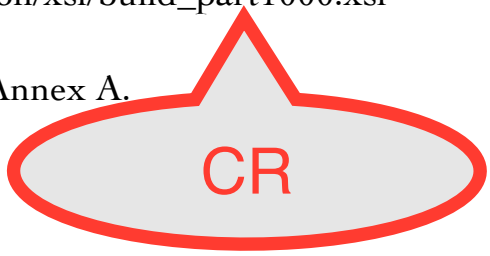
iso10303_2xx/abstracts
iso10303_2xx/express
iso10303_2xx/data/application_protocols
iso10303_2xx/data/business_object_modules
iso10303_2xx/data/modules
iso10303_2xx/data/resources

4 Automation

Currently only automation for CR build is included herein. The scripts are derived from the directory structure defined above.

NOTE: In the context of a CR build, ~~redundant resource directories are currently included.~~ Redundant directories of any kind shall not be included in a CR when the publication script stepmod/publication/xsl/build_~~part1000~~.xsl is in compliance with this document.

The index.htm file for a CR9 sample is included in Annex A.



5 Future Work

Look at the redundant copies of express special purpose built and included and see if we really need them; initial conversations with covener is that we probably don't.

Extend the build process to include resource parts that are in PDF format.

Annex A **Sample index.htm file**

This sample is based on CR9, which is available on the WG12/WG21 site or from the WG 12 convener. To reduce size, rows have been removed.

```
<!DOCTYPE html
  PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<HTML>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8">

    <title>CR00009</title>
  </head>
  <body>
    <hr>
    <h2>Part 1000 change request</h2>
    <hr>
    <table>
      <tr>
        <td>Publication set name:</td>
        <td>CR00009</td>
      </tr>
      <tr>
        <td>Date submitted to ISO:</td>
        <td>2013-01-01</td>
      </tr>
      <tr>
        <td>Date published by ISO:</td>
        <td>2013-01-01</td>
      </tr>
      <tr>
        <td>Publication set working group:</td>
        <td>12</td>
      </tr>
      <tr>
        <td>Publication set WG number:</td>
        <td>WG12 N8342</td>
      </tr>
      <tr>
        <td>Publication project leader:</td>
        <td>Keith
           
          Hunten<br><b>Telephone: </b>817-935-1756<br><b>Electronic mail: </b><a href="mailto:Keith.A.Hunten@LMCO.com">Keith.A.Hunten@LMCO.com</a><br></td>
      </tr>
      <tr>
        <td>Description:</td>
        <td>
    The modules, business object models, and resources that are to be added or modified to Part1000 as part of
          change request CR00008 to support publication of ISO/DIS 10303-242
```

```
    </td>
  </tr>
</table>
<hr>
<p><a name="index">Index</a></p>
<ul>
  <li><a href="bibliography_check.htm">All bibliographies</a></li>
  <li>
    SC4: All normative references
    <a href="normref_check.htm">check</a></li>
  <li><a> SC4: Modules error check <a href="modules_check.htm">check</a></a></li>
  <li><a> SC4: Modules summary <a href="wgn_summary.htm">check</a></a></li>
  <li><a href="#modulenames">Modules sorted by name</a></li>
  <li><a href="#modulenos">Modules sorted by part number</a></li>
  <li><a href="#delmodulenames">Deleted Modules sorted by name</a></li>
  <li><a href="#resourcenos">Resources sorted by part number</a></li>
  <li><a href="#bomnos">Business Object Models sorted by part number</a></li>
</ul>
<p></p>
<h3><a name="modulenames">Modules sorted by name</a></h3>
<p><a href="#index">Index</a></p>
<table border="1">
  <tr>
    <td><b>Module</b></td>
    <td><b>Part</b></td>
    <td><b>Stage</b></td>
    <td><b>Edition</b></td>
    <td><b>Year of<br>publication</b></td>
    <td><b>Date of<br>publication</b></td>
    <td><b>Previous year<br>of publication</b></td>
    <td><b>Published</b></td>
    <td><b>Title</b></td>
    <td><b>French title</b></td>
    <td><b>CVS file revisions</b></td>
  </tr>
  </table>
<h3><a name="modulenos">Modules sorted by part number</a></h3>
<p><a href="#index">Index</a></p>
<table border="1">
  <tr>
    <td><b>Module</b></td>
    <td><b>Part</b></td>
    <td><b>Stage</b></td>
    <td><b>Edition</b></td>
    <td><b>Year of<br>publication</b></td>
    <td><b>Date of<br>publication</b></td>
    <td><b>Previous year<br>of publication</b></td>
    <td><b>Published</b></td>
    <td><b>Title</b></td>
    <td><b>French title</b></td>
    <td><b>CVS file revisions</b></td>
```

```
        </tr>
        </table>
      <h3><a name="delmodulenames">Deleted Modules sorted by name</a></h3>
      <p><a href="#index">Index</a></p>
      <table border="1">
        <tr>
          <td><b>Module</b></td>
          <td><b>Team</b></td>
        </tr>
        <tr>
          <td>assembly_feature_definition</td>
          <td>ap242</td>
        </tr>
        </table>

    <p></p>
        <h3><a name="resourcenos">Resources sorted by part number</a></h3>
        <p><a href="#index">Index</a></p>
        <table border="1">
          <tr>
            <td><b>Resource</b></td>
            <td><b>Part</b></td>
            <td><b>Edition</b></td>
            <td><b>Stage</b></td>
            <td><b>Year of<br>publication</b></td>
            <td><b>Abstract</b></td>
            <td><b>EXPRESS</b></td>
            <td><b>CVS file revisions</b></td>
          </tr>
          <tr>
            <td>fundamentals_of_product_description_and_support <a href="./iso10303_41/
iso10303_41.htm">iso10303_41.htm</a></td>
            <td>10303-41</td>
            <td>4</td>
            <td>IS</td>
            <td>2013</td>
            <td><a href="./iso10303_41/abstracts/abstract_41.htm">abstract_41.htm</a></td>
            <td><a href="./iso10303_41/inserts/wg12n8234express.exp">wg12n8234express.exp</a></td>
            <td><a href="./iso10303_41/data/resource_docs/
fundamentals_of_product_description_and_support/publication_record.xml">publication_record.xml</a></
td>
          </tr>
        </table>

    <p></p>
        <h3><a name="bomnos">Business Object Models sorted by part number</a></h3>
        <p><a href="#index">Index</a></p>
        <table border="1">
          <tr>
            <td><b>Business Object Model</b></td>
            <td><b>Part</b></td>
            <td><b>Edition</b></td>
```

```
            <td><b>Stage</b></td>
            <td><b>Year of<br>publication</b></td>
            <td><b>Abstract</b></td>
            <td><b>CVS file revisions</b></td>
          </tr>
          <tr>
            <td>managed_model_based_3d_engineering <a href="./iso10303_3001/
iso10303_3001.htm">iso10303_3001.htm</a></td>
            <td>10303-3001</td>
            <td>1</td>
            <td>TS</td>
            <td>2013</td>
            <td><a href="./iso10303_3001/abstracts/abstract_3001.htm">abstract_3001.htm</a></td>
            <td><a href="./iso10303_3001/data/business_object_models/managed_model_based_3d_engi-
neering/publication_record.xml">publication_record.xml</a></td>
          </tr>
        </table>
      </body>
    </HTML>
```

Bibliography

[1] *ISO e-Services Guide*. Available from the Internet: < http://isotc.iso.ch/livelink/livelink/fetch/2000/2123/14006/629620/customview.html?func=ll&objId=629620&objAction=browse&sort=subtype >.

[2] *Guidelines for the content of application modules*, ISO TC 184/SC 4 N1685.

[3] *Guidelines for the content of application protocols that use application modules*, ISO TC 184/SC 4 N1113.

[4] *SC4 Organization Handbook*. ISO TC 184/SC 4 N 2325, 2000-01-13.

[5] *SC4 Quality Manual*. ISO TC 184/SC 4 N1110, 2000-11-08.

[6] Eurostep Ltd. STEPmod Tutorial: An Introduction to the STEP Modules Repository. http://stepmod.cvs.sourceforge.net/viewvc/stepmod/stepmod/help/STEPmod_Tutorial_v008.pdf

[7] SC 4 Supplementary directives — Rules for the structure and drafting of SC 4 standards for industrial data. Edition 4. ISO TC184/SC4 N2412. 2008-12-16.

[8] Procedure for building the STEP Module and Resource Library. ISO TC 184/SC 4 WG 12 N8496