

# Notes from ad-hoc meeting of WMO IPET-MDI

23 September 2010  
07:40

## Attendance:

- Jeremy Tandy [JT]
- Ted Habermann [TH]
- Jean-Pierre Aubagnac [JPA]

## Notes:

JPA's major upcoming task is to develop the 'DRAFT' metadata to populate the GISCs for demo to CBS in November; expectation is that this metadata will be imperfect - but at least this is a start

- to achieve this, the 'Metadata Generator' tool (that converts Vol-C1 into 60k+ records) needs updating to implement the recommendations of IPET-MDI-1  
[\[http://www.wmo.int/pages/prog/www/WDM/IPET-MDI-I/report/Report\\_IPETMDI\\_I\\_20100503.htm\]](http://www.wmo.int/pages/prog/www/WDM/IPET-MDI-I/report/Report_IPETMDI_I_20100503.htm)

JPA suggests an amendment to **Recommendation 34** from the IPET-MDI-1 meeting report, concerning the expression of the access control policy.

- Multiple-entries are permitted to express the Resolution 40 Additional Data policy; the subsequent (free-text) entries will describe the names of data policies established for exchange of these data with other organizations in the WMO community - if any exist

MD\_Metadata/identificationInfo/MD\_Identification/resourceConstraints/MD\_LegalConstraints/useLimitation/gco:CharacterString = "«category-code»"

MD\_Metadata/identificationInfo/MD\_Identification/resourceConstraints/MD\_LegalConstraints/useConstraints/MD\_RestrictionCode = "otherRestrictions"

MD\_Metadata/identificationInfo/MD\_Identification/resourceConstraints/MD\_LegalConstraints/otherConstraints/gco:CharacterString = "«category-code»"

«category-code» will be a semi-controlled vocabulary for the WMO Core Profile and can be either:

“WMO Essential”

“WMO Additional”

«free-text»

“otherRestrictions” is part of the codelist MD\_RestrictionCode

JPA asked how one might allow a data provider to indicate some information about the internal systems used to serve datasets, as this may provide additional information required to resolve incoming queries. This is a requirement for OpenWIS. TH suggested using the **nativeEnvironment** element

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We reviewed progress for outstanding actions allocated to JPA, TH & (partially) JT (*ordering is chronological - so the meeting Action numbers are not sequential*) ...

**Action MDI-1-ii** (WIS-174: <https://vets.development.ucar.edu/jira/browse/WIS-174>) ... and ...

**Action MDI-1-xxiii** (WIS-194: <https://vets.development.ucar.edu/jira/browse/WIS-194>) [JPA][TH]

Concerning development of static metadata components

- TH discussed mechanism used in NGDC: using xlink to refer to metadata component 'tagged' with UUID; access is via a restful interface; codebase is Java with Oracle XMLdb; the tool handles 'any' blob of XML and autogenerates the UUID for the component
- Tool is able to 'merge' non-default values into the 'template' xml-component

We agreed that the NGDC instance of this tool would be used to host the WMO metadata fragments for the interim period - we would look to create an alternate instance at a later stage (or formalize NGDC's commitment to host on behalf of WMO)

**JPA will modify his Metadata-Generator tool to exploit the NGDC metadata component server.**

Description of tools developed at NGDC can be found here: [https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=ISO\\_Components](https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=ISO_Components)

Also note the (very useful) 'landing page' for the Metadata Tools category of the NGDC wiki: [https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Category:Metadata\\_Tools](https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Category:Metadata_Tools)

JT noted that he was vaguely aware of a W3C initiative to specify xlinks - this is rumoured to be different to OGC's usage ... a quick Google finds this page [\[http://www.w3.org/XML/2008/05/xlinklc/\]](http://www.w3.org/XML/2008/05/xlinklc/) which I have not assessed yet, but see Simon Cox (OGC-superhero!) has been involved & commented

JPA has some suggestions already for 'candidate' components that can **normalized** from the metadata records ...

- CI\_ResponsibleParty ...
  - JPA's excel list of NMHS's [\[http://www.wmo.int/pages/prog/www/WDM/IPET-MDI-I/documents/IR3.JPA.v0.1.xls\]](http://www.wmo.int/pages/prog/www/WDM/IPET-MDI-I/documents/IR3.JPA.v0.1.xls)\* has been sent to TH
  - TH has converted this into a first pass XML doc that can be used for components ... **looks quite sparse to me on a first glance though!**



Responsible  
Party

**ACTION 1:** TH agreed to list the entities within ISO records that he sees routinely factored out within metadata at NGDC

## Side-note:

JPA mentioned that he is investigating how to represent recurring intervals in ISO8601 ...

**ACTION 2:** JPA to send examples of this to TH & JPA ... and also post to the WIS wiki [\[http://www.wmo.int/pages/prog/www/WIS/wiswiki/tiki-index.php?page=IPET-MDI\]](http://www.wmo.int/pages/prog/www/WIS/wiswiki/tiki-index.php?page=IPET-MDI) please!

\* included as a pre-meeting note for IPET-MDI-1, these documents can be found here: [http://www.wmo.int/pages/prog/www/WDM/IPET-MDI-I/IPET-MDI-I\\_list\\_documents.html](http://www.wmo.int/pages/prog/www/WDM/IPET-MDI-I/IPET-MDI-I_list_documents.html)

**ACTION MDI-1-v** (WIS-176: <https://vets.development.ucar.edu/jira/browse/WIS-176>)

JPA has begun to catalogue the geographic extents for sea regions described for SHIPS & BOUYS; he notes that the TTAaii for these entities only describes the sea region as described in the Code-table

TH indicated that NGDC distribute a 'Global Maritime Boundaries database (GMBdb) on behalf of NASA

**ACTION 3:** TH to send link to GMBdb resources to JPA & JT ... and add a link on the WIS wiki

No progress has been made for AMDARs

**ACTION MDI-1-x** (WIS-181: <https://vets.development.ucar.edu/jira/browse/WIS-181>) ... and ...

**ACTION MDI-1-xi** (WIS-182: <https://vets.development.ucar.edu/jira/browse/WIS-182>) [JPA][TH]

Conformance tests and ordering ... and the associated schematron rulesets

A brief discussion suggested we should check (at least) the following:

- Schema validation
- Schematron validation
- Code-lists
- [external controlled vocabularies?]

For more information on NGDC's conformance tests see their wiki (category = ISO19115: [https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Category:ISO\\_19115](https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Category:ISO_19115)) ... although I can't

seem to find *exactly* the right resource just now!

- ACTION 4:** TH to send link to schematron validation rules used at NGDC to JT & JPA ... and add a link on the WIS wiki

Validation of Code-lists requires reference to external documents. A dictionary of ISO19115 and ISO19115-2 Code-lists can be found here: [https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=ISO\\_19115\\_and\\_19115-2\\_CodeList\\_Dictionaries](https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=ISO_19115_and_19115-2_CodeList_Dictionaries) ...

The **official** code lists for ISO19115 can be found at the ISO TC/211 [2005] resources page: <http://www.isotc211.org/2005/resources/>  
This does not include changes incorporated in ISO19115-2. Due to ISO 'red-tape' the schemas and resources for ISO19115-2 are not yet hosted on the ISO TC/211 pages ... but the next best thing can be found on the **Eden** wiki (hosted by IGN; the French national mapping agency: <http://eden.ign.fr/xsd/isotc211/isofull/20090316/resources/view>

The ISO19115-2 schemas **must** be used if you want to use the MI\_Metadata root element.

- ? An open question that we did not resolve during the discussion is: "*how do you know which schematron rule sets to validate a metadata instance against?*" ... a metadata instance EXPLICITLY identifies the schema, but how do you identify the conformance tests? Presumably it is the responsibility of the 'consuming' application to validate *against* the a set of agreed tests ...

JPA noted that Geonetwork has built-in schematron rulesets for assessing validity with ISO19115

**ACTION MDI-1-xxiv (WIS-195:** <https://vets.development.ucar.edu/jira/browse/WIS-195>) [JPA]

Concerning the development of guidance on the transition from Vol-C1 to WIS-DAR ...  
**No progress;** no content has been initiated by Guofu - tasked as leader of this activity

**ACTION MDI-1-i (WIS-173:** <https://vets.development.ucar.edu/jira/browse/WIS-173>) [TH]

Concerning the unique identification of place names ...  
Need to do some research for this activity - but consider a vocabulary server / gazetteer to be the most likely approach. In response to this suggestion, the JIRA ticket has been linked to MDI-1-v / WIS-177 (<https://vets.development.ucar.edu/jira/browse/WIS-177>) "develop a simple Vol-A gazetteer"

**ACTION MDI-1-iv (WIS-175:** <https://vets.development.ucar.edu/jira/browse/WIS-175>) [TH]

Concerning the development of best practices for describing hierarchies of data within collections and datasets ...  
TH has developed significant guidance on this; available through the NGDC wiki: category ISO19115 "Describing Network with ISO Standards" ([https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Describing\\_Networks\\_with\\_ISO\\_Standards](https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Describing_Networks_with_ISO_Standards))  
From the same source, also see: [https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Metadata\\_Hierarchies](https://www.nosc.noaa.gov/dmc/swg/wiki/index.php?title=Metadata_Hierarchies)

Also TH presented o this subject at the OGC TC meeting - see presentations below ↓ ... or the OGC portal page for the TC Meeting: [http://portal.opengeospatial.org/index.php?m=projects&a=view&project\\_id=82&tab=2&artifact\\_id=39966](http://portal.opengeospatial.org/index.php?m=projects&a=view&project_id=82&tab=2&artifact_id=39966) ... *noting you will need OGC membership access rights for the portal.* Refer to the Metadata SWG and the Met-Oceans DWG. [I've also appended them to the IPET-MDI twiki page 'resources' here: <http://www.wmo.int/pages/prog/www/WIS/wiswiki/tiki-index.php?page=IPET-MDI>]

- ACTION 5:** TH to update JIRA ticket WIS-175

**ACTION MDI-1-viii (WIS-179:** <https://vets.development.ucar.edu/jira/browse/WIS-179>) [TH]

Concerning the creation of the ISO19115 extension object for the WMO core profile ...  
No progress on this as this *may* be quite challenging, depending on whether we EXTEND the ISO model in addition to (simpler to define) CONSTRAINTS (i.e. only changing the obligations on elements).

This is an area of interest for TH - so he will proceed with this activity. First task is getting a clearer picture of the *actual* XML extensions for the Core profile.

**ACTION MDI-1-xiv (WIS-185:** <https://vets.development.ucar.edu/jira/browse/WIS-185>) [TH]

Concerning the creation of human-readable style sheets for ISO metadata records ...  
TH indicates that NGDC have several style-sheets for rendering this content - but suggests we may need a more focused style-sheet specifically for the WMO / WIS community. He also notes that the 'hierarchy' best-practices are not yet rendered in this form (see MDI-1-iv above).

TH suggests that the most productive route may be the conversion of the ISO19139 records in JSON (<http://www.json.org/>) (rather than HTML) to enable simple navigation of the record within a browser. By way of example, TH demonstrated the nISO tool @ NGDC that crawls a THREDDS catalogue and builds a JSON document for browsing: <http://www.ngdc.noaa.gov/eds/tds/>. An example of the browsable hierarchy can be found here: <http://www.ngdc.noaa.gov/eds/tds/oceanSITESMetadataAssessment.html>

- ACTION 6:** TH to update JIRA ticket WIS-185 to reflect this proposal to use JSON objects for browsable metadata.

NGDC will develop an ISO-metadata JSON browser for their own use that TH would be happy to share. [timescales?]

**ACTION MDI-1-xv (WIS-186:** <https://vets.development.ucar.edu/jira/browse/WIS-186>) [TH]

Concerning the development of a style sheet to support in-line editing of metadata records ...

TH noted that this functionality has not (yet) been implemented at NGDC; most 'expert' metadata editors will use XML tools such as OxygenXML. JPA noted that Geonetwork provides a simple UI for metadata editing. This may no longer be a high-priority requirement ...

To progress this issue, a skype call with Michael Burek & Eiji Toyoda will be most effective, enabling TH to explain how NGDC's rubrics function.

- ACTION 7:** TH to contact Eiji and Michael to set up a call to explain how NGDC's rubrics function

**ACTION MDI-1-xvii (WIS-188:** <https://vets.development.ucar.edu/jira/browse/WIS-188>) [TH][JT]

Concerning the referencing of keywords from external controlled vocabularies ...

JT indicated that SKOS (<http://www.w3.org/2004/02/skos/>) appears to be the preferred model / format for publishing web-accessible vocabularies. This offers a richer set of semantics than the 'blunt' ISO Code-List catalogue.

TH provided examples where NGDC are using controlled vocabularies: GCMD (<http://gcmd.nasa.gov/>), CF-Standard Names (<http://cf-pcmdi.llnl.gov/documents/cf-standard-names/>) and UDUnits (<http://www.unidata.ucar.edu/software/udunits/>). UDUnits and CF Standard Names appear to have created a custom xml structure ...

The key requirement is that the (XML) structure employed must have ANCHORS allowing the xlink from the metadata instance to link directly to the appropriate part of the vocabulary ... e.g. myVocabFile.xml#myElement. The xml file in this example could easily be an ISO Code-List catalogue or a SKOS vocabulary.

The JIRA ticket WIS-188 has been updated with this discussion.

**ACTION MDI-1-xxi (WIS-192:** <https://vets.development.ucar.edu/jira/browse/WIS-192>) [TH]

Concerning the official locations of schema for ISO19115-2 ...

TH indicated that due to ISO 'red-tape' the schemas and resources for ISO19115-2 are not yet hosted on the ISO TC/211 pages ... but the next best thing can be found on the **Eden** wiki (hosted by IGN; the French national mapping agency: <http://eden.ign.fr/xsd/isotc211/isofull/20090316/resources/view>. These schemas could be view as 'almost' official - TH's view was that they are safe to reference. TH expects the ISO19115-2 (2009) schemas to be publically hosted on the ISO TC/211 website soon.

The JIRA ticket WIS-192 has been updated with this information and closed.

**ACTION MDI-1-xxvi (WIS-197: <https://vets.development.ucar.edu/jira/browse/WIS-197>) [TH]**

Concerning suitability of TWIKI software for WMO ...  
Done.

**ACTION 8:** TH to update JIRA ticket WIS-197

**Additional metadata discussions at the OGC TC meeting:**

Ted Habermann presented twice:



Connecting\_  
netCDF\_a...



Forecast\_M  
odel\_Run\_...

Dave Denko (chair of ISO19115 revision team) presented once:



Metadata\_D  
WG\_Meet...

Arnulf Christl presented once:



Metadata\_R  
eloaded