

ISO 19157-1 & ISO 19157-3 update

Project leaders

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ISO/DIS 19157-1 Geographic information – Data quality – General requirements

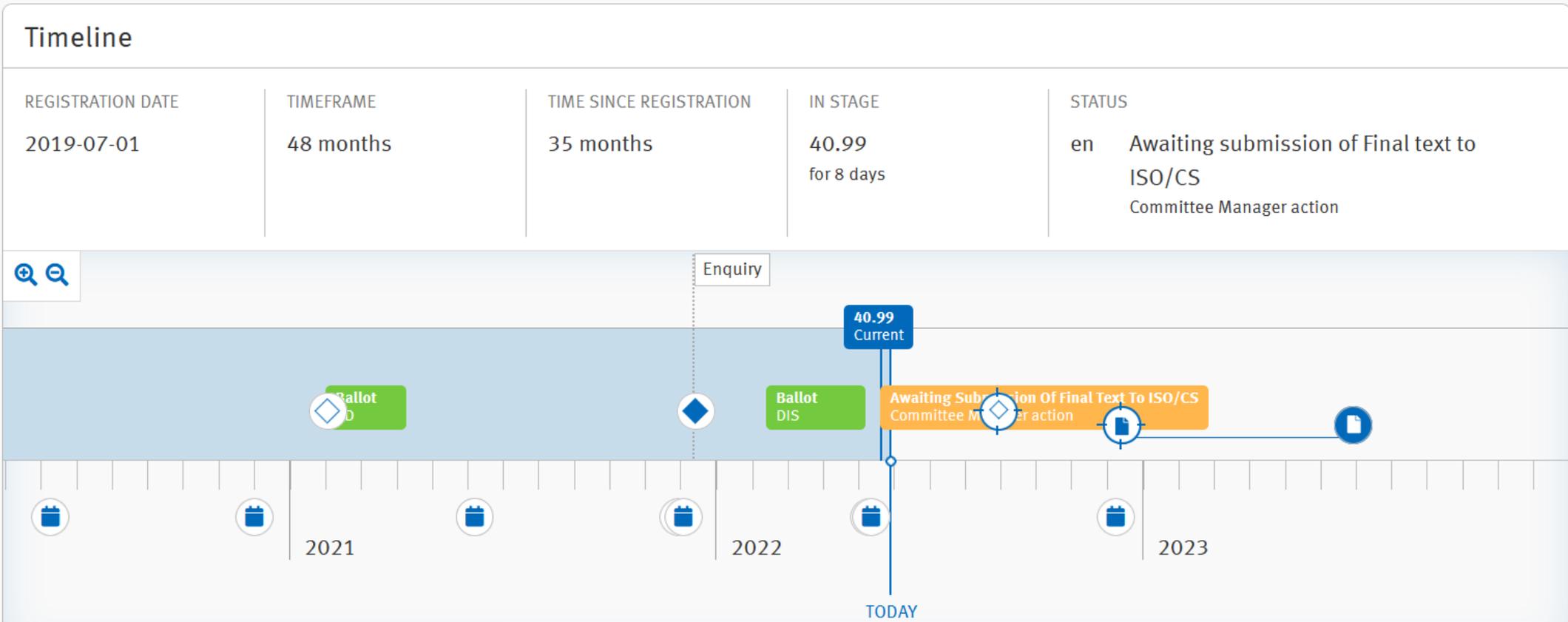
- ISO 19157-1 conceptual Data Quality model
- Very similar to ISO 19157:2013
- Contains proper (as per ISO/TC211 rules¹) URIs for model components, requirements, recommendations and permissions
- One fundamental change – Annex with Data quality measures moved to ISO 19157-3

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¹<https://committee.iso.org/sites/tc211/home/resolutions/isotc-211-good-practices/--structure-of-uris-in-isotc-211.html>

ISO/DIS 19157-1 Geographic information – Data quality – General requirements



ISO/DIS 19157-1 Geographic information – Data quality – General requirements

- 199 comments mostly editorial (majority from ISO/CS)
- Few technical but ONE essential warranting FDIS
- Plan is to submit FDIS by end of September'22

Ballot Information			
Reference	ISO/DIS 19157-1	Committee	ISO/TC 211
Edition number	1		
English title	Geographic information — Data quality — Part 1: General requirements		
French title	Information géographique — Qualité des données — Partie 1: Exigences générales		
Start date	2022-02-15	End date	2022-05-10
Opened on	2022-02-15 00:00:58	Closed on	2022-05-11 00:04:32
Status	Closed		
Voting stage	Enquiry	Version number	1
Note			
Vienna agreement	Joint, ISO lead		

Result of voting
<p>P-Members voting: 21 in favour out of 21 = 100 % (requirement >= 66.66%)</p> <p><i>(P-Members having abstained are not counted in this vote.)</i></p>
<p>Member bodies voting: 0 negative votes out of 21 = 0 % (requirement <= 25%)</p>
<p style="text-align: center;"><i>Approved</i></p>

ISO 19157-3: Rationale

- In ISO 19157:2013 Clause 8 + Annex D – both normative.

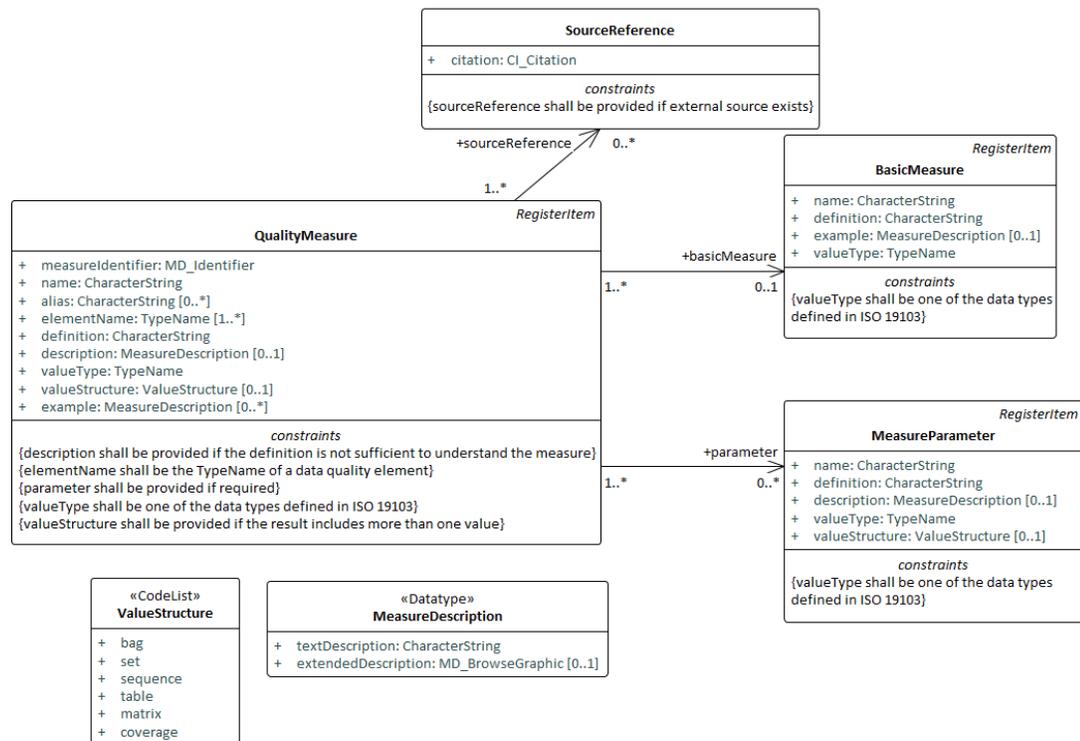


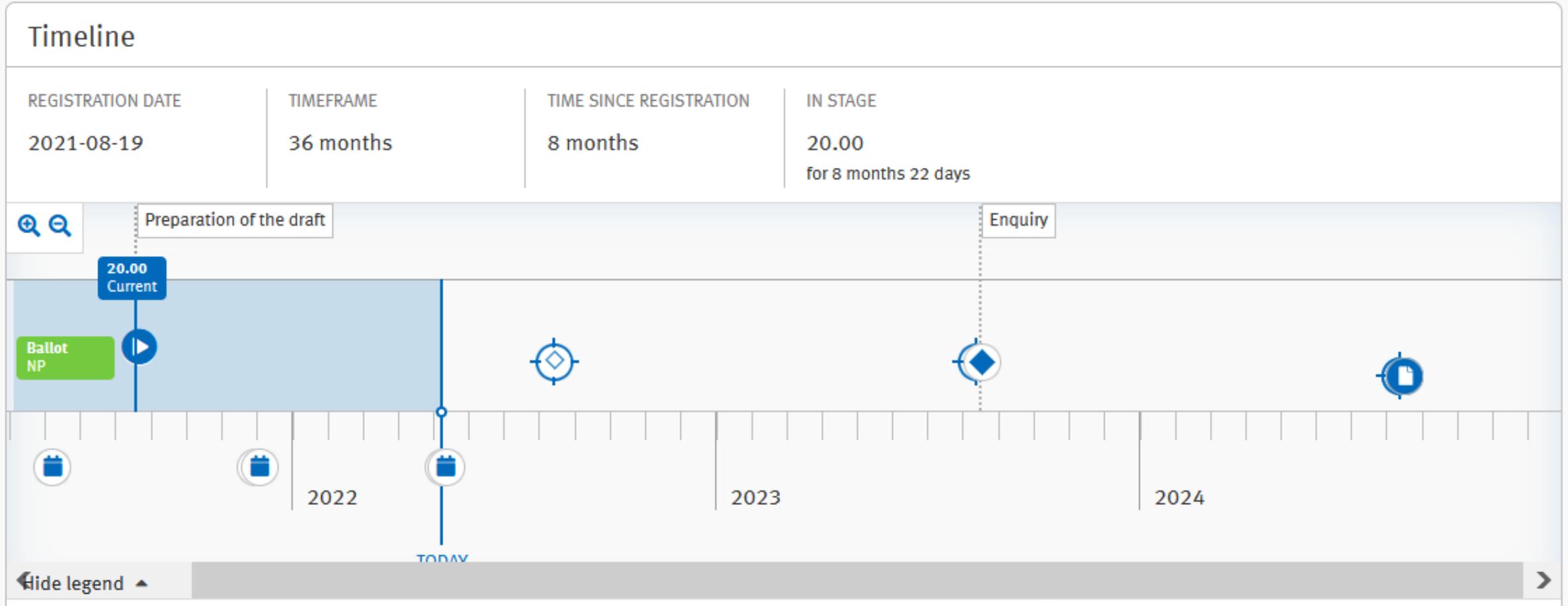
Table D.11 — Number of invalid overlaps of surfaces

Line	Component	Description
1	Name	number of invalid overlaps of surfaces
2	Alias	overlapping surfaces
3	Element name	conceptual consistency
4	Basic measure	error count
5	Definition	total number of erroneous overlaps within the data
6	Description	Which surfaces may overlap and which shall not is application dependent. Not all overlapping surfaces are necessarily erroneous. When reporting this data quality measure, the types of feature classes corresponding to the illegal overlapping surfaces shall be reported as well.
7	Parameter	-
8	Value type	Integer
9	Value structure	-
10	Source reference	-
11	Example	<p><graphic>D13288XZ.EPS</graphic></p> <p>Key 1. Surface 1 2. Surface 2 3. Overlapping area</p>
12	Identifier	11

ISO 19157-3: Rationale

- Commenced as a result of ISO 19157-1 revision with the aim of separating concepts (data quality model) from instances (data quality measure instances)
- AWI approved in April, 2021
- Work commenced in Jan 2022 – reason: AHG7 Ad-hoc group on registers ‘in action’ from Jan’21 with register governance (N5665) approved in De’21

ISO 19157-3: Timeline



ISO 19157-3: Updates

- Group of 25 Experts from NSBs (incl. 5 from OGC)
- Monthly teleconferences – meeting document space [here](#)
 - Discussions so far mainly around data quality measure structure - reason: implications from and to ISO 19157-1
- Next meeting:
 - end of June'22: **main objective is to find consensus on revised data quality measure structure**

ISO 19157-3: Updates

- Standard development on ISO's Online Standards Development platform:
 - PLs editors – PT members commenters
 - **Commenting facility planned to be used in the CD ballot** – *please test it when prompted*
 - So far, experience is good.

ISO 19157-3: Updates

Browser address bar: <https://sd.iso.org/authoring/iso/82996/20.00/1/en/editor?embedded=false>

Browser tabs: from 'old machine', Other Bookmarks, Free Learning - Free T..., OSD - ISO/AWI 19157-3, ISO19157-3 - Docume..., GNSS Network Portal, New Tab

ISO Authoring Tool Menu: START, INSERT, REFERENCE, TOOLS

ISO Authoring Tool Toolbar: Undo, Redo, Bold, Italic, Underline, Text Color, Background Color, Bulleted List, Numbered List, Indent, Outdent, Link, Image, Table, Grid, Zoom, Search

CLAUSE 7

Data quality measure register management

Following roles will be actual in this standard

RA:

+ CLAUSE AT SAME LEVEL + SUB-CLAUSE

CLAUSE 7.1

Introduction

The ISO quality measure register will be publicly available through a registry with a web-based human interface for browsing/displaying register content, provide a web service interface that ensures interoperability based on open standards, have a stable Internet domain name, be available at least 95 % of the time over one year period and have an authoritative review process.

Comments

Comment Filter Resolve Share

Filtered by: Unresolved 20.00

Torsten Svärd Fri, 18 Mar 2022 12:39:04 UTC

General comment

Clause 6 comes from ISO 19135-1:2015 with some comments from the work with WD

20.00

Agree (1) Disagree (0)

You Mon, 21 Mar 2022 05:55:51 UTC

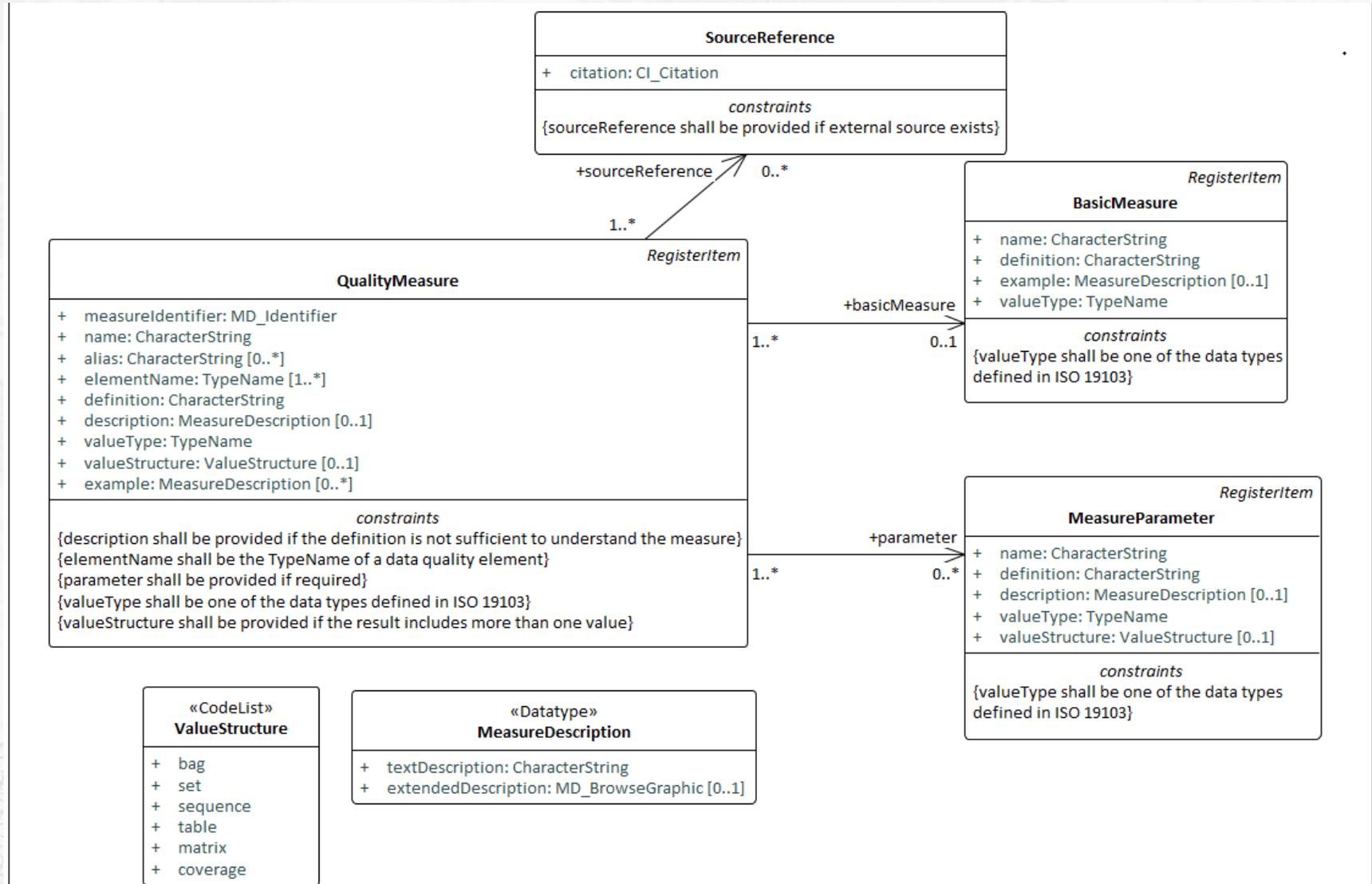
Hi Torsten,

I like this addition - I only quickly reviewed now, once we progress a bit we might want to re-shuffle as applicable.



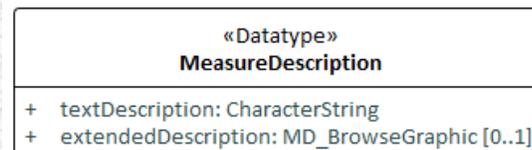
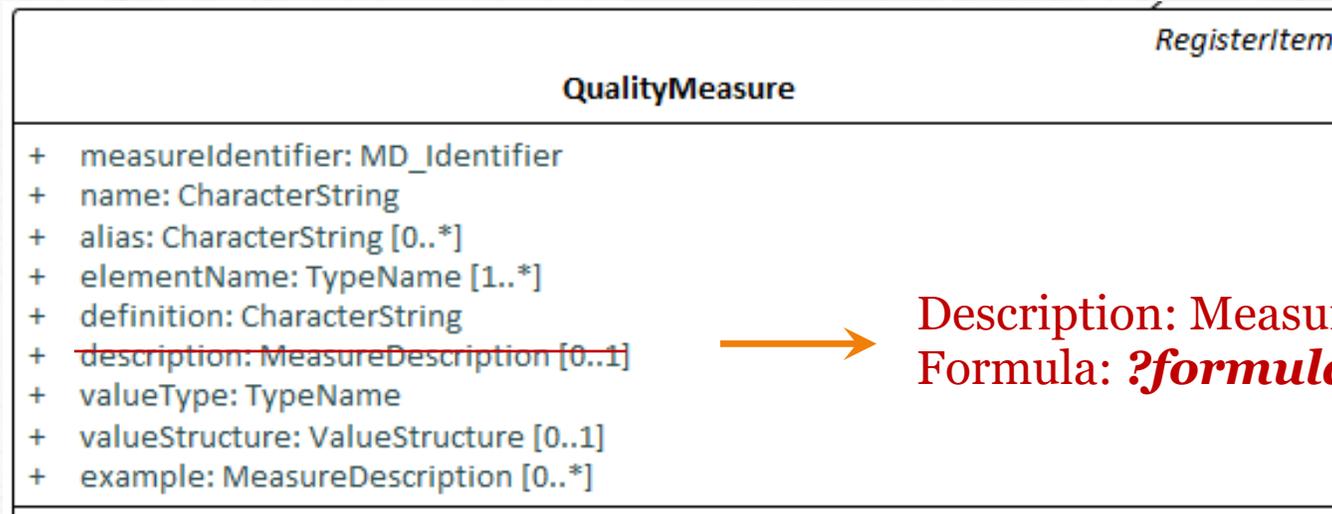
2. Structure of a Data Quality Measure

From ISO/DIS
19157-1



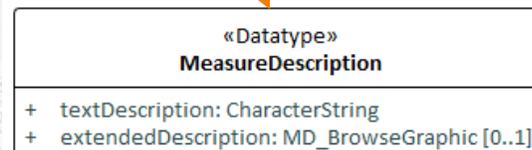
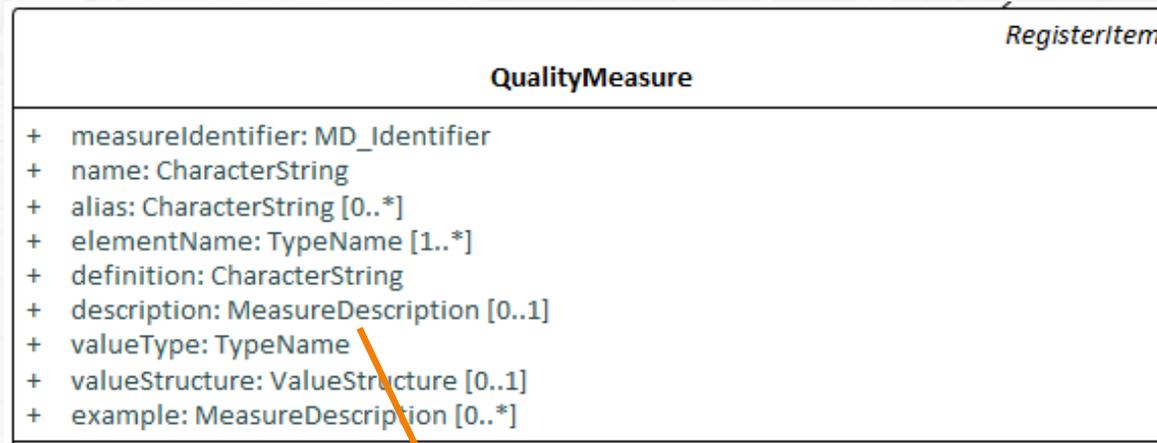
Structure of DQM

- We received a suggestion to include an optional property holding the formula



Structure of DQM

- ISO 19103 do not define a 'formula/equation' datatype. Is 'formula' just a 'character string' with special instructions to translate it into 'MathML' or similar?

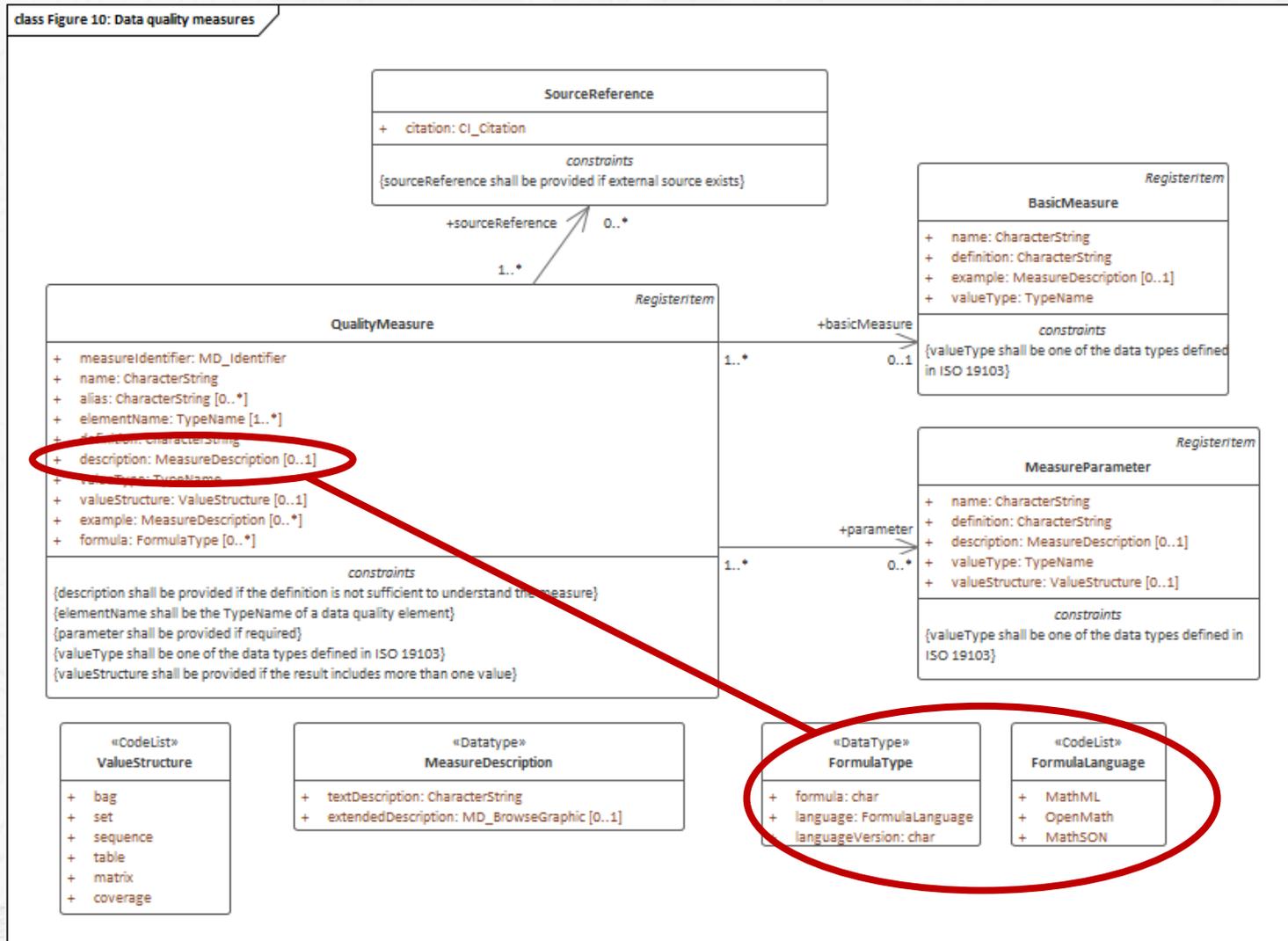


formulaLang: charString[1] - conditional
 formula: **?formula?** [0..1]

Proposal from the team discussion: check how version and status code is defined in/for registers – PLs: this is something discussed at GOM right now

Formula - A new field in QualityMeasure to store the formula including its language in a machine readable way

Structure of DQM



Example $x^2 + 4x + 4 = 0$

Formula:

```

<apply>
  <eq/>
  <apply>
    <plus/>
    <apply>
      <power/>
      <ci>x</ci>
      <cn>2</cn>
    </apply>
  </apply>
  <times/>
  <cn>4</cn>
  <ci>x</ci>
</apply>
<cn>4</cn>
</apply>
<cn>0</cn>
</apply>
  
```

Language: MathML

Version: 3.0

We are also looking at UncertML encoding and QualityML implementation of ISO 19157:2013 Annex D for their usefulness to ISO 19157-3

ISO 19157-3: Updates

- Call for Registration Authority in draft – expected tentative timeline
- Draft with PLs – specification of register requirements

6. Timeframe for appointment process

2022-05-21	Call for candidates opens
2022-05-30	Call published on TC web
2022-07-17	End of Call
2022-08-29	Decision sent to nominated candidates
2022-09-01	Decision ballot for the TC
2022-10-02	End of Decision ballot
2022-10-05	RA Agreement process initiated with ISO/CS

Timeframe is only indicative, we are slightly delayed...

Thank you!

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