Review from the CGMS group

This standard has been driven by surface observation people and WIGOS is also meant to describe Satellite observations.One of the goal is to have WIGOS metadata records being the source of [OSCAR Space Database](https://www.wmo-sat.info/oscar/satellites)

WIGOS needs to be assessed and endorsed by the satellite community and WMO has asked CGMS to provide a review on the WIGOS standard.

[Wigos Metadata Standard](https://library.wmo.int/doc_num.php?explnum_id=3653)

[WIGOS XML schema](http://schemas.wmo.int/wmdr/index.php?dir=/1.0RC8)

Review organised in two steps. Review the WIGOS metadata standard which is an abstract standard and review the XML metadata format.

Review the WIGOS metadata standard should be done by end of March 2019

Review the XML format by June 2019

**WIGOS Standard Review**

* Is there a title and abstract??
* Is there a place to include identifiers for the resource?? there is a unique WIGOS ID in OSCAR
* How do we understand the relationship b/t this WIGOS metadata and the two complementary types of metadata (discovery and interpretation)?

**1. Observed Variable**

* Looks good

**2. Purpose of observation**

* Looks good

**3. Station/platform**

**General question:**

**WIGOS identifier:** [**https://wiswiki.wmo.int/tiki-index.php?page=WIGOS-Identifiers**](https://wiswiki.wmo.int/tiki-index.php?page=WIGOS-Identifiers)

**Open question: Do satellite platform have WIGOS identifiers ? Is it necessary to define some for Satellite. What is the process. It is defined by OSCAR Surface for surface observation but there is nothing for satellite observations. What is the process ?**

* 3-01(Region of origin of data) and 3-02 (Territory of origin of data) are confusing
  + {3-01, 3-02} Mandatory for fixed land-based stations, optional for mobile stations

**The region and Territory of origin are optional for mobile stations (ie satellites).**

**Proposal ignore that remark.**

* 3-05 (Station/platform model: The model of the observing equipment used at the station/platform) the definition is not very clear

True: Proposal for a better definition ? The model of the observing equipment used at the station platform (The model of the platform hosting the satellite)

* How to distinguish 1-04 (Spatial extent) and 3-07 (Geospatial location)

1-04 is the spatial extent of the observation (geostationary disk) and 3-07 is the satellite position

Proposal, add an example for satellites.

* 3-09 (Station operating status) Why no platform here?

Proposal: add Station/Platform in the definition

* Orbit information is missing for the satellite. It is mandatory to add the orbit information for satellite platforms

Proposal: Recommend to add satellite orbits in WIGOS or XML representation

**4. Environment**

* 4-01/02 (Surface cover): Are there predefined surface cover types with definitions? Can data producer defined their own?

Do not apply for Satellite observations (only surface observations).

**5. Instruments and methods of observation**

* 5-05 (Vertical distance of sensor) The definition of the vertical distance is not clear; what if the sensors are located on satellites?

This is optional for satellite (do not need to indicate the vertical distance of the sensor). Could be if it makes sense.

Proposal: ignore that comments.

* 5-15 (Exposure of instruments) The definition of this item is not clear; what does “external influences” mean?

This is expressed in terms of code table. Proposal is the check the code table and see if it can be applied to satellite products.

Recreate the natural description Satellite → Instrument → Channel for Equipment

It is an accepted best practice in the Satellite observation community to name the channels with a name (commonly a number) as well as the centre wavelength of the bandwidth covered by a channel. In the WMDR, a Satellite is a facility, an instrument is an equipment and a channel one of the frequency feature object described. It would be interesting to name each frequency information such as Channel 1 as well as providing the central wavelength as an information. Guidance should be provided to indicate how to do it or it is recommended to add it in the WMDR.

**Proposal: Provide guidance on how to name frequency features as channels and provide information regarding the centre wavelength or add it in the WMDR standard.**

**6. Sampling**

- Doesn't seem relevant to satellite data; can't tell if the entire section is optional or not

This is not relevant except to express the observation sampling schedule 6-04/6-05/6-06/6-08

- Mandatory fields: time period, spatial resolution, temporal interval, schedule of observation (how is this different from temporal interval?) - nilReason is acceptable (except for timeperiod)

One is the period between sampling (every 15 min), the other one schedule is the time (if it can be defined) over a period of time (00:00, 00:15, 00:30)

Proposal: it is mandatory but in some case doesn’t apply for satellite. Recommend to make it conditional (application for station observations only)

**7. Data Processing and Reporting**

7-04. spatial reporting interval -- mandatory for satellite data (may be redundant with spatial resolution in part 6)

Yes as indicated in the comments. Proposal is to ignore that comment

7-06. Level of Data -- Optional; this is important for satellite data

Proposal: make it conditional (mandatory for satellite data) and check the code table available here: <https://github.com/wmo-im/wmds/blob/master/tables_en/7-06.csv>

Do we need to amend it ?

7-09. aggregation period? -- doesn't seem relevant to satellite data

Proposal: Make it conditional (mandatory for surface observations only)

**8. Data Quality**

-- should data quality have a higher categorization? (e.g. spatial uncertainty…)?

Proposal: It is quite open to allow reporting any kind of uncertainty. In the case of some satellite products, you can have complex large uncertainty datasets (covariance matrix, ….) so it is good to only link it from there.

**9. Ownership and Data Policy**

**-** seems straightforward

**10. Contact**

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