

# 2017-07-11 Observation Facility Meeting

## Date

11 Jul 2017

## Location

- Paris Observatory, Building B, 3rd floor
- Coffee and croissant at 9h30.

## Attendees

- [Baptiste Cecconi](#)
- [Tarek Al-Ubaidi](#)
- Mireille Louys (CDS)
- Jérôme Berthier (IMCCE)
- Jonathan Normand (IMCCE)

## Goals

- Observation Facility nomenclature
- VOFacility data model
- Convergence of Observation Facility name resolver (IMCCE) / observatory matrix (IWF)

## Documents and Links

- Local VESPA pages:
  - [Observatory Facility Database](#)
  - [Merging Facility Lists](#)
  - [Existing List of Observatories and Spacecraft](#)
- Presentations at IVOA meetings:
  - <http://wiki.ivoa.net/internal/IVOA/InterOpMay2016-Semantics/Semantics-VOFacility-BC.pdf>
  - <http://wiki.ivoa.net/internal/IVOA/InteropMay2017-Semantics/Semantics-Facilities-BCecconi.pdf>

## Discussion items

### General Presentation ([Baptiste Cecconi](#))



- Notes on IMCCE work
  - Name resolver = <https://api.ssodnet.imcce.fr/quaero/1/sso?q=cassini>
    - Syntax : <https://api.ssodnet.imcce.fr/quaero/1/sso?q=> + name to search
  - Spacecraft list is ingested weekly from [Celestrak](#)
  - Based on ElasticSearch
  - Parent = primary object around with the spacecraft is orbiting
  - System = main gravitational system
- Notes on IWF work
  - Merging done by Tarek (scripts) and Manuel (runs and checks)
  - JSON formatted output, including all alternateNames as a list (with source, name and id from list)
  - Various merging paths:
    - direct match (name\_listA = id\_listB or name\_listA = name\_listB or id\_listA = id\_listB)

- fuzzy match (added location match , ...)
- inclusion match (compare partial parts of names)
- Next steps
  - send example from IWF to IMCCE
  - identify and prioritize new lists to merge
  - implement "merge new lists in merged\_list"
  - how to update information from updated lists
  - import into matrix of observatories ?
  - how to proceed with webservices ? needed ?
  - plan a meeting for final merge step ?

## Extra discussion with Mireille Louys



- Slides presented at LISA8 conference (Librarians)
  - Many use cases presented, including Instruments.
  - Need to link between nomenclature/aliases list with Registry.
  - EtherPad to discussed and describe needs: <https://oasis.sandstorm.io/shared/ZpiQhYHptf7dEWXKSjmOVxGDkjEBvLbMA39m7CI5rZY/>

## Discussion on granularity / levels of description. Examples:

- SRN-NDA-Routine
  - SRN (Station de Radioastronomie de Nançay) = Observatory
  - NDA (Nançay Decameter Array) = Telescope
  - => accurate location (mostly) + pointing
  - Routine = Instrument
- Same for SNR-NDA-NewRoutine
- Cassini-RPWS-HFR
  - Mission = Cassini
  - Spacecraft = Cassini ou Cassini Orbiter => location
  - Experience = RPWS (Radio Plasma Wave Science) (<=> Telescope) => pointing
  - Instrument = HFR (High Frequency Receiver)
- Cassini-VIMS
- Cassini-Huygens-DISR
- Voyager2-PRA-HB
  - Mission = Voyager
  - Spacecraft = Voyager 2
  - Experience = PRA (Planetary Radio Astronomy)
  - Instrument = HB (High Band)
- LOFAR-LBA
  - Observatory = LOFAR = ILT (International LOFAR Telescope) => location of interferometer center of phase
  - LOFAR station = each node of LOFAR interferometer => location of each node
  - Telescope / Instrument = LBA (Low Band Antenna array) or HBA (High Band Antenna array) for each LOFAR Station
  - => coarse beam pointing
  - Analog to digital conversion = analog front-end
  - Instrument (imager ou spectrum) = software in central computing facility => pointing
- Same issues with CTA, SKA, VLA...

## What are the search criteria for resource identification in a discovery search from a scientist ?

- Name of the instrument ? (such as STIS on HST)
- Name of Instrument + InstrumentHost ? (such as VIRTIS/Rosetta or Cassini/Mag) => note the order can change between communities...

## Brief exploration of NASA/PDS4 information model

Example of a context product for MAVEN (description of the instrument\_host):

- URI = urn:nasa:pds:context:instrument\_host:spacecraft.maven

- Registry link = [https://pds.nasa.gov/services/registry-pds4/extrinsics/logicals/urn:nasa:pds:context:instrument\\_host:spacecraft.maven](https://pds.nasa.gov/services/registry-pds4/extrinsics/logicals/urn:nasa:pds:context:instrument_host:spacecraft.maven)
  - Syntax is <https://pds.nasa.gov/services/registry-pds4/extrinsics/logicals/> + logical\_identifier
- Other link from Browsible interface: [https://starbase.jpl.nasa.gov/pds4/context-pds4/instrument\\_host/Product/PDS4\\_host\\_MAVEN\\_1.0.xml](https://starbase.jpl.nasa.gov/pds4/context-pds4/instrument_host/Product/PDS4_host_MAVEN_1.0.xml)
  - Browsible interface: <https://starbase.jpl.nasa.gov/pds4/context-pds4>

NB: PDS4 is an implementation of OAIS standard.

NASA/PDS4 Information model is available here: [https://pds.jpl.nasa.gov/pds4/doc/im/current/index\\_1800.html](https://pds.jpl.nasa.gov/pds4/doc/im/current/index_1800.html) (version 1.8.0.0)

Internal\_reference relations are listed here: [https://pds.jpl.nasa.gov/pds4/doc/im/current/index\\_1800.html#attribute\\_pds\\_internal\\_reference\\_pds\\_reference\\_type](https://pds.jpl.nasa.gov/pds4/doc/im/current/index_1800.html#attribute_pds_internal_reference_pds_reference_type)

## Action items

