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)

Facility-Nomenclature-BC.pdf

- 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

06_facilities_uniqueIDs.pdf

- 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
  - Syntax is https://pds.nasa.gov/services/registry-pds4/extrinsics/logicals/ + logical_identifier
- Other link from Browsable interface: https://starbase.jpl.nasa.gov/pds4/context-pds4/instrument_host/Product/PDS4_host_MAVEN_1.0.xml
  - Browsable 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 (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

Action items

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