RadioAstronomy in the VO

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  We got inputs from LOFAR / ASTRON / JIVE. SKA and ALMA were missing
  Additional inputs from Katharina (CDS), Marco (INAF), Baptiste (Paris, Nançay)

  I) Discovery and Access for science data :
        + Obscore + SIA
          - experimented by LOFAR and ASTRON. Not only LOFAR but also for APERTIF and older Westerborck data.
          - First implementations using DACHS now registered in the IVOA registry.
          - (Jive doesn't have science data archived – see below visibility)
      + HiPS for targeted data also makes sense but no plan to implement that at LOFAR/ASTRON
          - CDS experimented that for moment maps.
      + Full retrieval
          - No plans to have SODA services at LOFAR for the moment. Could be useful for APERTIF.
           - INAF experimenting SODA currently. Some information on autoDescription is missing. → version 1.1 ?

  II) Discovery and Access for visibility data
- JIVE use case :
  - Coarse grain discovery of Visibility data with ObsTAP (DACHS implementation)
    --> Should Work well, according to ASTRON experience
  - Provide processing on the « ESCAPE Platform » through Jupiter Notebooks
  - Store parameters used in the processing for further reprocessing
  - Possibility to change some of them if result not satisfactory
  - Finer description of visibility data required for better selection
   ---> beam, sensitivity map, uv coverage, frequency/amplitude plots (characterization 2 data model? Summary by a couple of additional parameters)
   –--> instrumental configuration such as (provenance?)
      Describe the table tracing antennas properties, nb of participating antennas, with their feature (set up , mode , position in the antenna grid etc)

- Advanced access strategy :
  - summarize finer description with
    - additional columns (to be tested by ASTRON/JIVE)
      added as free columns to Obscore table
      or as an extension table (standardized)
    - or alternatively plots or maps accessible via datalink
      - but no possibility to query on DataLink content at the ObsCore service level
    - standardization of processing and observation configuration using provenance and extensions
    *   these Ideas could be tested by CDS, LOFAR, JIVE

III) Complex data :

        +multi-target in OBservation expressed as multiple raws in Obscore with same obs_id is OK.

        + Discussion on distinction between Continuum versus Line in ObsCore.

        + How to describe the antenna table. Which format to use (HDF5) is the structure of mode and instrumentation parameters to be normalized or is that too much project dependent?

        + These three above are good discussions for IVOA radio IG

I V) Question of staging

        * JIVE and ASTRON have many data on tapes. Loading requires some time. How do we stadardize staging ?

        * UWS service manage

V) WP4/WP5 (science platform) collaboration

    + JIVE use case excellent example.

    + Others to come ?

VI) SKA ? Look at AENEAS reports, Ask them in Brussels (Rosie) ; May have interests in SODA and platforms.