Status Report: VO-interoperability radio data

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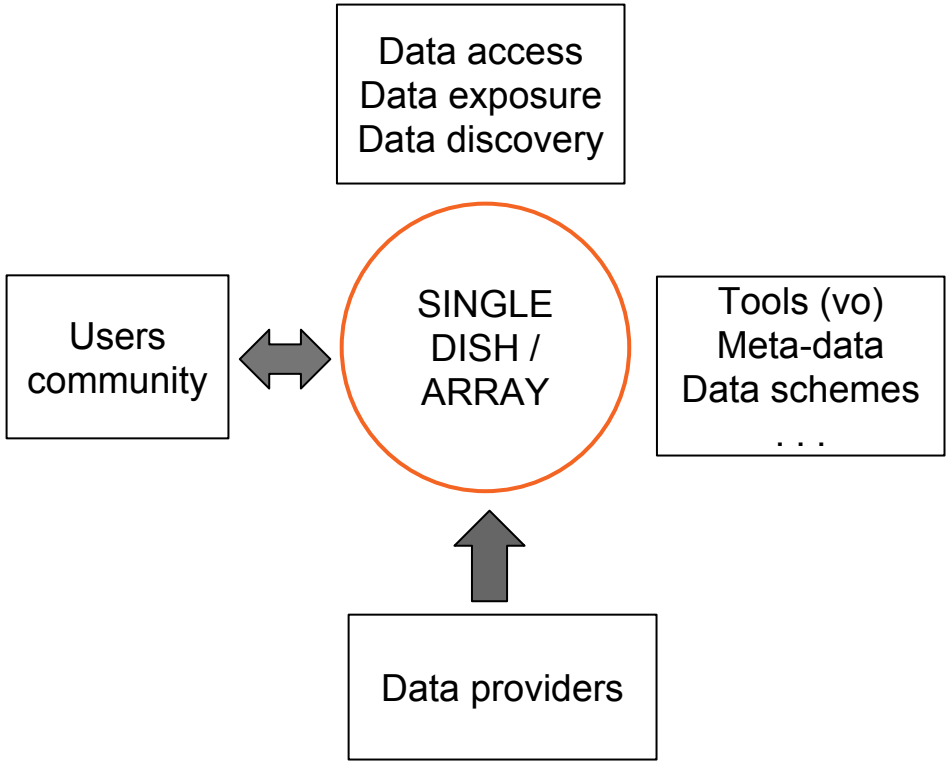
Overview



Recent progress

- Specifications of users / data providers / archive (meta-)data requirements
- Characterization of current exposure limitations

Aim

Provide (technical) recommendations to set up VO-standards for publishing radio data

Radio data outlook - from visibility to science ready products

Single dish radio data

- Several data formats adopted; well described
- Can be handled using available VO standards & tools.
- Meta-data completeness . .

Array radio data

- Old-fashion array data can be exposed using available VO standards & tools.
- Things are not in stone: modern (upcoming) arrays new capabilities release (meta-)data which need new standards / tools

Radio data outlook - from visibility to science ready products

General remarks

- Data exposure: description to be easy for non radio astronomers
- Data discovery: ObsCore viable to check for data availability.
- Data selection: the option “retrieve them, then see if they are ok” is not a viable; an effective metric to compare radio datasets needed to enable low/high level products exploitation
- Data discovery/exposure: How to handle multi-beam datasets? (Provenance . .)

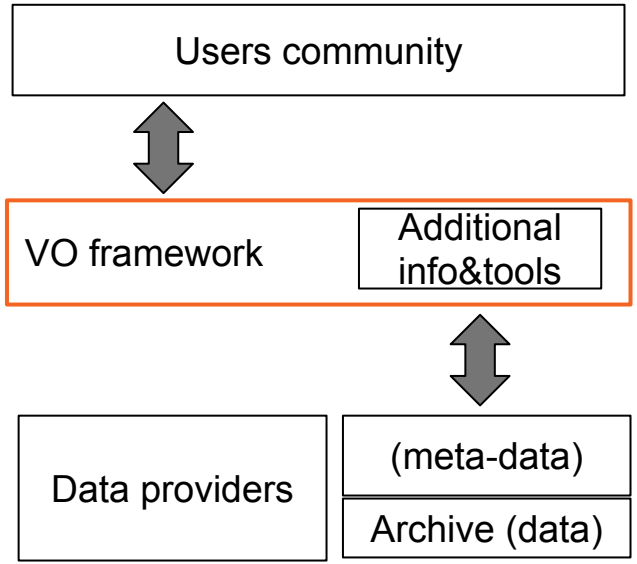
Radio data outlook - from visibility to science ready products

Current limitations

- Data search and selection

  Additional info array related to be provided about (e.g.) instrument response and released data quality

Radio data outlook - from visibility to science ready products



Current limitations

- Data search and selection

  Additional info array related to be provided about (e.g.) instrument response and released data quality:

  local or central service?

Radio data outlook - exploitation

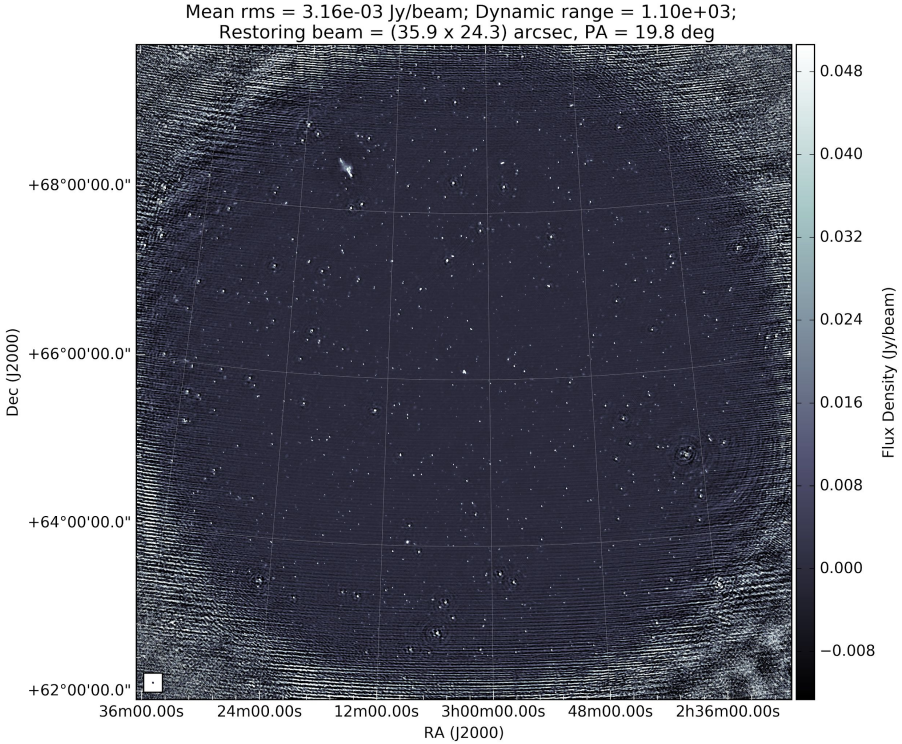
Search algorithms

- Instrument configuration, response on the plane of the sky. For wide FoV telescopes VO users must be able to check if the geometry target vs pointing centre is adequate in a dataset (HiPS regions)

Expand queries

- Instrument configuration, response on the plane of the sky. Datalink DataCube capabilities to graphically provide relevance of a query result (e.g. bandwidth, uv-coverage, sensitivity . .)

Radio data outlook - exploitation



Next steps

Map similarities of radio data formats

Find the largest amount of shared info for data description in the most used data formats (to be used for Provenance)

Identify a meaningful parametrization for scientific exploitation and instrument description (& tools needed)