



A PPARC funded project



# AstroGrid DataSetAccess Update

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# Brief overview

- AstroGrid DSA/Catalog component is a VO wrapper for RDBMS tabular data
- Supplies IVOA ADQL querying and standard conesearch
- “RDBMS-agnostic” – works with ‘any’ JDBC-compliant RDBMS
  - ◆ E.g. Tested against MySQL, SQLServer, PostgreSQL, Sybase, Oracle, HSQLDB



# Key Developments 1: Multi-DB wrapping

- DSA can now wrap multiple databases (in the same RDBMS) in a single installation
- Reduces installation/maintenance burden for providers with e.g. multiple small databases
- Potential for future efficient crossmatching across co-installed databases (where supported by the RDBMS)



# Key Developments 2: Multicone service [Mark Taylor]

- New “multicone” service:
  - ◆ Input: VOTable of positions, search radius
  - ◆ Output: single VOTable containing objects within specified radius of those positions
  - ◆ Like running multiple separate cone searches and merging the results
  
- Two interfaces:
  - ◆ Synchronous REST-style interface (HTTP Get/POST) (unpublished in registry – not an IVOA standard yet)
  - ◆ Asynchronous AstroGrid CEA interface – published in registry
  
- Multicone functionality currently in beta; should be on production services before end Q4



# Key Developments 3: Data-model publishing

- DSA now provides "indirection layer":
  - ◆ Dataset descriptions (tables, columns etc) can be published using arbitrary names (e.g. names from a future standard data model)
  - ◆ Queries can be formulated and submitted using the published names; the DSA re-maps the query internally to query on the real table and column names
  - ◆ Allows "generic queries", based on data model, to be constructed and submitted to multiple DSAs
  - ◆ Avoids the need for RDBMS administrator to set up views etc in the database to support data model querying
  
- Indirection layer mappings stored in XML config file; hope we can use other VOTech tools (e.g. MeX, DMMapper) for creating/editing these files (by mapping data models to real data fields)



# Forthcoming work

- Integration of new IVOA ADQL standard when available
- Implementation of IVOA Table Access Protocol (TAP) standard when available
- More explicit consideration of epoch, units etc (may require IVOA input/consensus about fallback defaults)