Archive Access Tool

Review of SSS Readiness for EVLA Shared Risk Observing, June 5, 2009

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Atacama Large Millimeter/submillimeter Array
Expanded Very Large Array
Robert C. Byrd Green Bank Telescope
Very Long Baseline Array

NRAO

AAT – Archive Components

- Data ingest and storage
  - Archive storage uses ESO NGAS system (with ALMA)
  - Ingest data types
    - Raw telescope data in real time
    - Science data products
    - Calibration data
    - Logs, scripts, proposals
  - Meta data retrieval and storage
    - Meta data miner programs based on data file formats
    - Meta data storage – Oracle 11g databases

AAT – Archive User Access

- User Interface - queries
  - Web-based query tools
  - Python scripts
- User interface – query response
  - Observational meta data – project level, scan level, summaries
- User Interface – data delivery
  - User specifies delivery location
  - Proprietary data protection
  - File format conversion

ATT – SRO Readiness

- Data Ingest and Storage – June 2009
  - Six NGAS hosts : 1 – EVLA site, 5 – AOC.
  - NGAS cluster hierarchy with master nodes.
  - Create duplicate NGAS nodes
  - Ingest SDM and BDF files real-time into evlangas-1
  - Mirror into AOC NGAS cluster
  - (135 SDM/BDF file sets in the archive)
- Data Ingest and Storage – March 2010
  - Two NGAS clusters, primary storage, copy storage
  - Improved data transfer between EVLA site – AOC (ESO)
  - 1 Gbit fiber EVLA – AOC
  - (expect < 20MB/s)

AAT – SRO Readiness

- Archive Access Tool – Meta data – June 2009
  - Cataloging SDM (WIDAR)
  - Minimal db table schema changes (CASA-like)
  - File set id's for archive meta data and NGAS
  - (automated, moderate failure rate)
- Archive Access Tool – Meta data – March 2009
  - Possible db schema modifications (WIDAR modes)
  - Support connections to archived log files, scripts, calibration files.

AAT – SRO Readiness

- Archive Query Tool – June 2009
  - Web tools include telescope = EVLA
  - Supports queries and creates responses for EVLA SDM/BDF file sets.
  - Displays scan level query responses (SDM)
  - Delivers SDM/BDF file sets :
    - SDM/BDF file set in directory
    - Convert to CASA MS
    - Convert to AIPS uvfits file
- Archive Query Tool – March 2010
  - Provide ability to deliver data for selected observing scans.