

Data Quality and Related Issues – A Discussion

Dave De Young
NOAO

Data Quality and Related Issues – A Discussion

- ✍ Elements of Community Acceptance of VO
 - Acceptance a “Ramp Up” Process
 - Process Complete When VO is an Assumed Part of Astronomy Infrastructure
- ✍ What Does the Astronomy Community Want from the VO?
- ✍ What is Required for the Community to “Trust” the VO?

Community “Wants”

✍ Ease of Access

- No Jargon, No TLA's
- “What's a ‘Registry’”?

✍ Data

- Ease of Access
- Multi-Wavelength
- Catalogs, Images, Spectra, Time Series
- Ability to Combine and Analyze

Community “Wants”

✍ Tools

- Simple, Useful
- “90-10” Rule
- Role of Power Users
 - ✍ Small Numbers, Big Projects, High Visibility
- Majority of Astronomers: Observers, Optical, Stellar Astronomy

✍ Services

- Easy to Use, Relevant, Reliable

Building “Trust”

- ✍ Data Quality – What Is the Role of the VO?
- ✍ Provenance/Metadata
 - How Extensive?
 - How Complete?
 - Who Provides?
 - Who Verifies (If Anyone)?
- ✍ Drill Down (e.g., Images, Spectra)
 - How Extensive?

Data Quality

✍ Quality Control

- Who Provides (If Anyone)?
- Curation – VO?
- Revisions?
- “Levels” of Quality?
- Definition of “Quality”?

✍ Free Market?

- Will **Never** Build “Trust”

Data Quality

- ✍ Do Some Research Areas Require “Better” Data Than Others?
- ✍ What to Do With Ageing Archives?
 - Revise?
 - Replace?
 - Discard?
- ✍ What if “Bad” Data are Found?
 - Isolated vs. Systematic Errors
 - Forum? Role of VO?

Tools/Services/Software

- ✍ Maintenance/Fixes
- ✍ Revisions
- ✍ “VO” Tools/Services vs. Other Suppliers
- ✍ Software
 - Metadata (e.g., Cloudy)
 - Documentation
 - Revisions
 - Levels of Quality?

VO Structure and Content

- ✍ To Date: VO Establishes Infrastructure
 - Almost Done
- ✍ Tomorrow: VO Enables Implementation
 - “What Does This Mean?”
- ✍ How Much Beyond Infrastructure Should be Provided by VO?