Summary of the panel

A set of questions where given to the panelist

- What are your data products and the data distribution plans of your project?
- Which IVOA standards do you make use of and do you plan to use others in the future?
- Where and how did you start from and what where the difficulties you encountered?
- Are there any IVOA standard protocols missing or not sufficiently described for you to make use of them?
- Would you have done something different if you were to start the process again?

Mission	Data Product	Data Standards	Future Plans	Difficulties	Recommendations
LAMOST & China-VO	Catalogue, Image, Spectrum, Light Curve, solar binary format,…	SQL (not TAP), SAMP, ConeSearch, SSAP, HiPS, SIA, VORegistry	Full SIA, full VORegistry, SSO, TAP, VOSpace, MOC, Datalink	Arbitrary field query on 10^6 rows, huge images Cutout, TAP (need java lib), download lots of small files (sol: science platform)	Distributed structure, high availability/reliability, support more dataset by configuration, more API & better documentation
OA Javalambre	Images (individual and co-added), catalogues	SCS, SIAP, TAP, Obscore, Datalink, HiPS, MOC, Registry, SAMP	SSAP, Open time data through VO services - Time-Domain data projects	Difficult to know if you are correctly interpreting the protocol	Study other observatories implementations, validate your services using external validators, attend interop meetings
ESO					
ASTRON	images (PSRFITS, PDF), catalogues	HiPS, TAP, ObsCore, Datalink	Considering UWS, VOTable, SCS	Hard to find a good introduction, You can do a lot with DACHS but one can get lost with it	Architecture Doc turned into a website. Guidelines on how things are meant to be used. Public discussion forum. Actively curated FAQ. Attend data provider forums. Standards for remote data (remote SODA, data staging UWS). The future: larger tables, bigger images, and spectra

Other questions

1. Sometimes not sure how to share certain types of data
2. Journal engagement is not visible enough
3. Some protocols need upgrades to be used by the coming missions
4. Extend protocols from discovery and access to data manipulation
5. How can VO protocols & formats help Machine learning and AI algorithms?
6. Funding for making archives VO-compliant is hard to get

What would you recommend?