

Workshop

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Euro-VO Data Centre Alliance

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The DCA in Euro-VO (1)

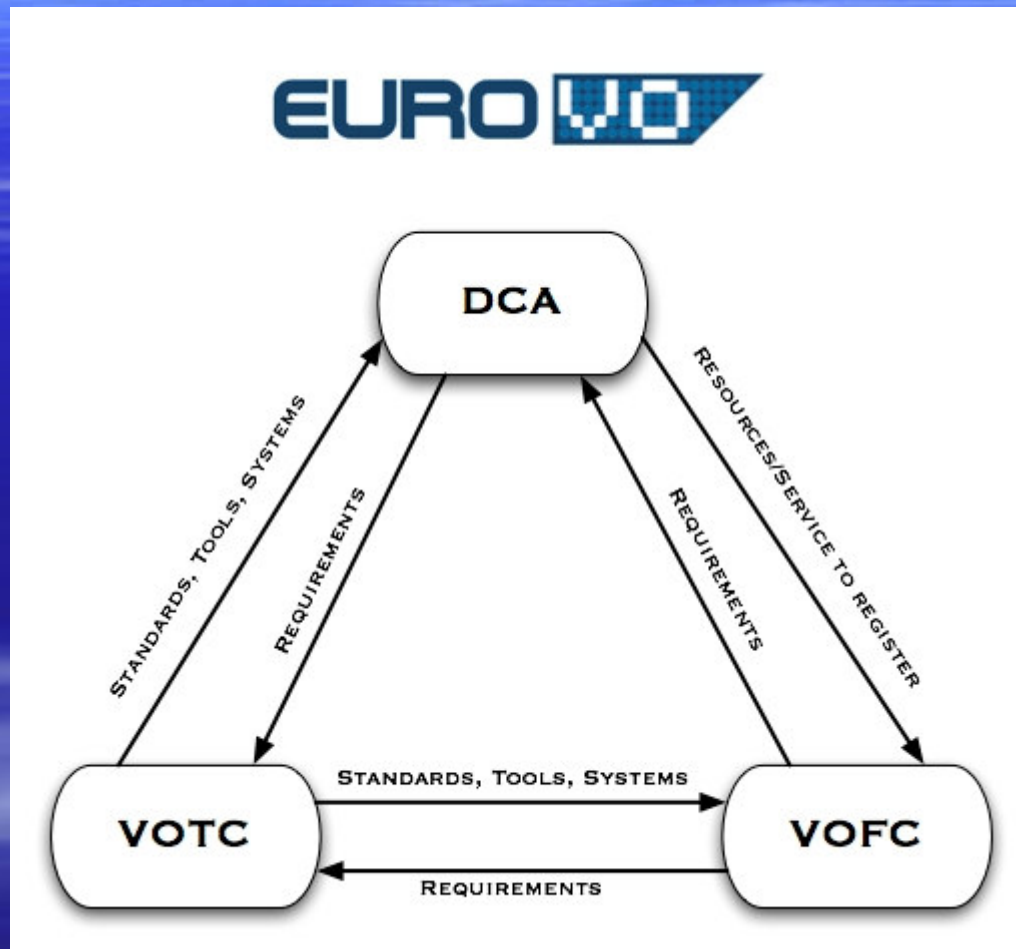
- **Euro-VO Objective 1**

Technology take-up and full VO compliant data and resource provision by astronomical data centres in Europe.

- **DCA as defined in the draft Euro-VO MOU**

An alliance of European data centres who will populate the EURO-VO with data, provide the physical storage and computational fabric and who will publish data, metadata and services to the EURO-VO using VO technologies.

The DCA in Euro-VO (2)



DCA in Euro-VO (2)

- All VO projects are different: they have different funding frames and funding agencies, which means different constraints and scope
- In spite of the differences, all national Euro-VO projects have by one way or another links with their data centers – same at ESA and ESO

DCA structure / role in Euro-VO (1)

- Board: Euro-VO national nodes/ESO/ESA
 - Understand the objectives of each VO project
 - Identify possible collaborations and synergies
 - Identify actions towards data centres
 - Organize feedback from implementation
 - Census of data centres in Europe
- Coordinator at CDS
- Project scientist

DCA structure / role in Euro-VO (2)

- Forum
 - Facilitate take-up of VO technologies and standards
 - Share best practice
 - Consolidate operational requirements for tools and systems
 - Enable the identification and promotion of scientific requirements
- *Inclusive effort: take into account as far as possible data centres from all European countries*
- Interesting 'by-product': contacts and discussions between European data and service providers

DCA funding

- Just the beginning, progressively building up
- Difficult to find the proper frame in European AOs (2003)
- Funds for DCA: some money from the OPTICON and RadioNet, and from the Euro-VO partners
- Additional funds sought for travel to large scale meetings, networks in specific areas, some manpower for implementation of the interoperability layer
- European proposal in March 2005 – an AO for *Consolidating Grid initiatives* – below but very close to the threshold
- Future strategy TBD
- DCA has begun to work anyway!

Data centre role in the VO (1)

- Data centre participation is essential for the success of VO: they publish data, metadata and services in the VO framework
- Their importance in the system will continue to increase with the VO evolving from RTD projects to operations
- Standards are still evolving but many components of the system are at or near recommendation
- Ready for incremental take-up by data centres
- Feedback from implementation in different conditions and by people with different backgrounds is essential

Data centres in the VO (2)

- Data centres = data curators, service providers
- Data centres may also be active in other aspects of the VO
 - Development of applications, tools and methods
 - Technology development
 - Participation to the interoperability standard development in IVOA (WGs and IGs, mailing lists, meetings) – many key people in IVOA work or have worked in data centres

Data centre role in the VO (3)

- Data centres have a user community, and can also play an important role
 - in popularizing VO and VO tools in the research community
 - In encouraging and transmitting feedback from science users

Data curators

- Often difficult to get proper recognition of the importance of curation and distribution of observational data – in competition with new instruments and operations
- The rapid development of the concept of VO may push towards a better recognition of this role
- VO pushes also towards distribution of ‘science ready’ data
- VO will increase the re-use of data and the diversity of usage: higher requirements on data centres - data quality/proper data description
- Input/feedback on standards from data centres especially required in these domains

Future large projects

- The VO is a framework for the large projects to come, ground- and space based, so one important objective is to make them aware of the VO development and willing be VO-compliant
- These projects may have specific requirements towards the VO and this has to be addressed as early as possible

Service providers (1)

- A large diversity of possible services appear in the plans of VO projects
- A willingness to participate to the VO in the community
- Assessment of diversity: French VO: only 'triggering'/coordination money, mainly laboratory manpower. Bottom-up approach to identify possible projects from the community:
 - census by asking teams willing to participate to the VO to fill a form, transmitted through the director of the laboratory
 - Results: 41 answers from 24 laboratories
 - Data curators
 - Many different kinds of services
 - Many levels of participation

Service providers (2)

- Many kinds of services
 - Observation archives
 - Tools for data management, data processing, visualization
 - Added-value databases
 - ‘Software instruments’ to tackle specific scientific questions
 - ‘Thematic portals’
 - ...

Service providers (3)

- At very different levels: from reference data centres to services in national and international niches
- Take advantage of local expertise on instrument hardware, pipelines, science topics + additional effort to produce a service
- Interesting to see laboratories organizing themselves to produce VO services (dedicated structure, encourage synergies between teams, building up critical mass on projects...)

Service providers (4)

- A new field for services: theory/modelling – provide modelling results; allow astronomers to run models
- A new field for collaboration between ESA, ESO and laboratories: Provision or publishing of highly processed data products by teams in laboratories with knowledge of instrument or in a given scientific domain

Service providers (5)

- Newcomers are very welcome
 - Reasonable overhead for joining the VO
 - Their feedback on interoperability implementation is very important
 - Warning: providing a service to the community requires a long term commitment (motivation + manpower) and critical mass in terms of manpower

Measurement of success

- IVOA action on measurement of success: number of data centres having implemented VO standards and publishing in the VO framework
- Experience from the incremental networking of bibliographic information in astronomy:
 - can build up very quickly if motivation in developing interoperability standards and on the side of service providers
 - If it succeeds: seamless access! astronomers will use the VO everyday without even knowing they use it

Questions/comments

- VO needs the participation of data centres. VO has to track properly provenance if we want data centres to join the system (M. Ohishi)
- What is the proportion of French labs which presented VO-related projects? (R. Hanisch)
All Observatories except one; 70-80 % of labs have at least one project
- What do you mean by critical mass? (X. Luri)
It depends on the kind of project. One can have very good projects with few people involved but one also has to avoid scattering resources