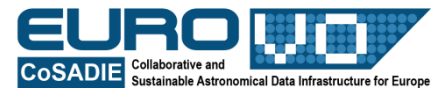# Lessons learnt from building the International Virtual Observatory Alliance

Françoise Genova

The IVOA

- Formed in June 2002 with a mission to *"facilitate the international coordination and collaboration necessary for the development and deployment of the tools, systems and organizational structures necessary to enable the international utilization of astronomical archives as an integrated and interoperating virtual observatory."*
- Focuses on the development of standards and encourages their implementation
- A global endeavour from the beginning
- "Thin" interoperability layer on top of data holdings, anyone can 'publish' data in the VO or build a portal
- IVOA has been continuously adapting its organization and procedures to fulfill its mission at best

- **Goals similar to RDA for a single discipline, similarities and differences: of course a more focused role with a world-wide but easier-to-grasp target community**

http://www.ivoa.net

IVOA membership and Exec

- Membership: national and international VO projects (includes Europe and ESA)

  Currently 20 members (Argentina, Armenia, Australia, Brazil, Canada, China, Europe, France, Germany, Hungary, India, Italy, Japan, Russia, South Africa, Spain, the United Kingdom, Ukraine, and the United States, plus ESA)

- Formal Guidelines for participation

- Senior representatives of the members form the Executive Committee, rotating chairpersonship (first one year – good to give a voice to different members during the construction phase but we 'burnt' people kickly, now 18 months)

IVOA structure

- A formal procedure for acceptance of Recommendations (adapted from W3C)
- Standards done by Working Groups in the areas of key interoperability standards (ie some stability in topics although list regularly revisited).
- Each REC has authors and Editors and is under the responsibility of one WG (with eventually contact persons in other WGs when interfaces)
- Interest Groups providing feedback to WGs on different topics
- Standing and other Committees

Fichier Édition Affichage Historique Marque-pages Outils ?

WebHome < IVOA < TWiki

wiki.ivoa.net/twiki/bin/view/IVOA/WebHome

Welcome to the IVOA TWiki!

This is the web-based collaboration area of the **International Virtual Observatory Alliance**

Log In or **Register**

IVOA.net

Wiki Home
WebChanges
WebTopicList
WebStatistics

Twiki Meta & Help

IVOA
Know
Main
Sandbox
TWiki

TWiki intro
TWiki tutorial
User registration
Notify me

Working Groups

Data Access
Data Model
GWS
Query Language

Main topics:

- Who is Who?
- Documents and Standards
- Events
- Training Materials
- Exec Reports & Minutes
- Mailing Lists
- Technical Coordination Group
- VO Glossary

Working Groups:

- Applications
- Semantics
- Data Access Layer
- VO Event
- Data Modeling
- Resource Registry
- Grid & Web Services
- VOTable

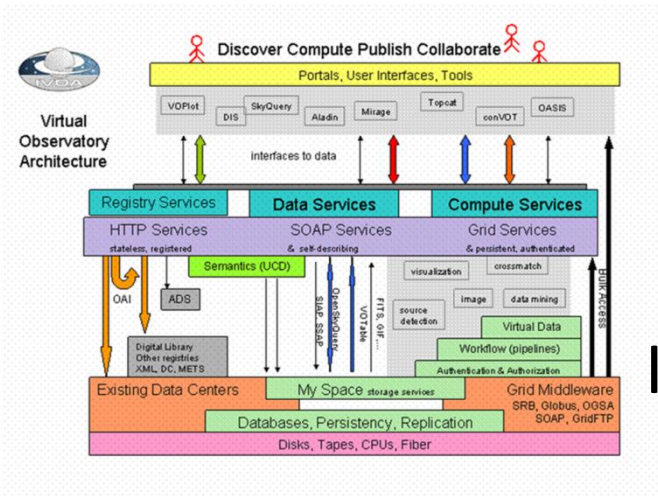*Interest Groups:*

- Theory
- OGF Astro-RG
- Data Curation & Preservation
- Knowledge Discovery in Databases

Other Groups / Committees:
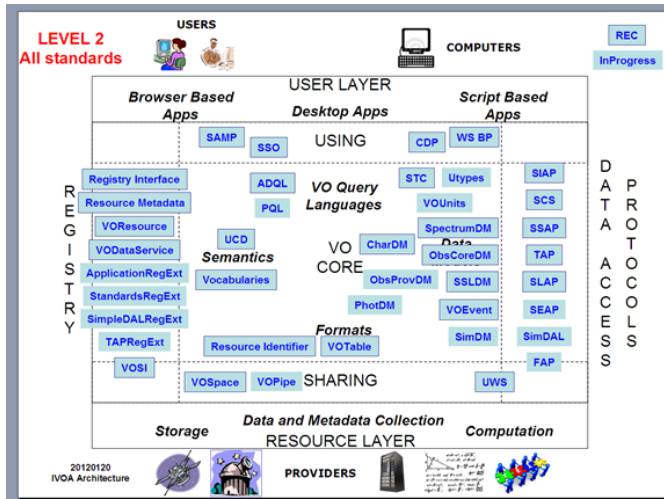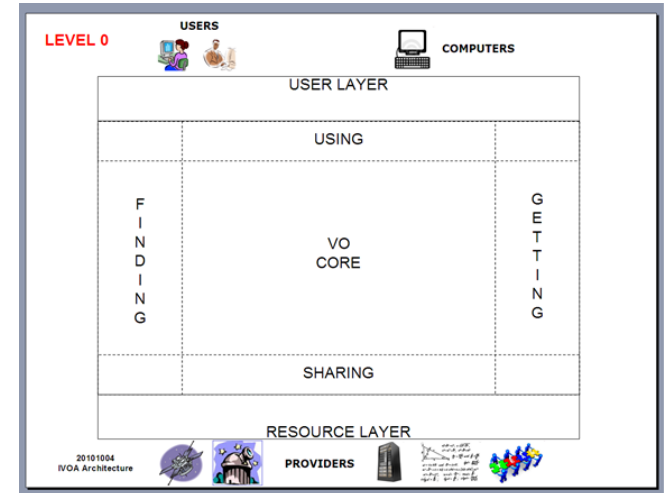
- Standing Committee on Standards & Processes
- Standing Committee on Science Priorities
- Liaison Committee
- InterOp Programme Organising Committee

Architecture

Current

Initial

Standards
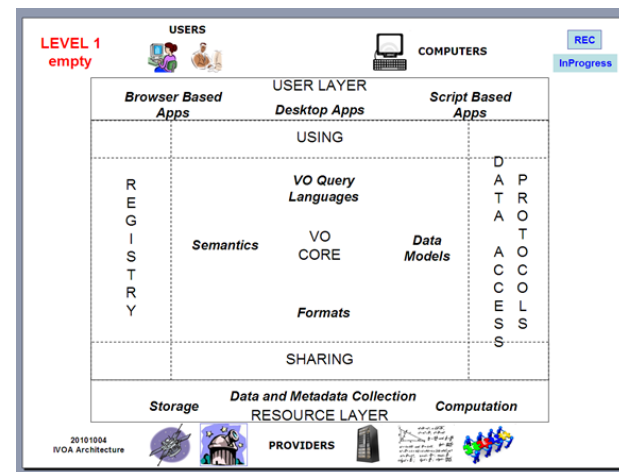
Working Groups

Technical Coordination Group

- Installation of a 'technology aware' committee in support to the 'political' Board (Executive Board) after a few years: essential role to check the coherence of the global vision, manage interfaces, evaluate the WG proposed recommendations with respect to community comments, etc

- In IVOA the WGs are evolving slowly

- TCG composition: TCG Chair and vice-chair, WG and IG chairs and vice-chairs

IVOA stakeholders/participants

- We have found that we have constantly to keep in mind several sub-communities which are hopefully not disjoint:
  - Those who develop the standards and tools (portals, etc)
  - Those who implement them in archives and data centres
  - The science users
- Essential to have both 'technologists' and 'data practionners' (and scientists from the data centres) on board among the standards and tools developers from the beginning, and **to maintain an equilibrium between the points of view. 'Technology driven' standards can be problematic with respect to implementation and science needs**

Organisation of the work

- The work is done through mailing lists and participation in the Interoperability meetings (plus telecons, etc)
- Allow anyone to register on a WG mailing list
- Allow time for discussion of the recommendations
  - First inside the WG
  - Then by the community at large
    - Working Drafts posted outside the WG when ready enough
    - Proposed Recommendations first posted and then formal Request for Comments. RfC managed by the WG, updates of the PR. Also Reference implementation.
    - When felt ready by WG check of the RfC results by the Technical Coordination Group which makes recommendation on acceptance to the Exec
    - The Exec checks that the procedure has been properly followed and promotes to REC
    - Can be a very long process

- Now the basic building blocks are done
- Key questions during operational phase: take-up by data centres and services and by the scientific community, sustainability
- Feedback from implementation is an important standing topic, plus new science requirements
- Not an isolated world: generic building blocks when possible (Registry: OAI-PMH; Semantics: SKOS & RDF)
- All reference documents are on IVOA web site, including Architecture document, yearly Roadmap, all standards, procedures and rules, etc