State of the TCG

Christophe Arviset
For the TCG

Technical Coordination Group

TCG	Chair	Vice-Chair
TCG	Christophe Arviset	Séverin Gaudet
IVOA Chair	Fabio Pasian	Paolo Padovani
Working Group	**Chair**	**Vice-Chair**
Applications	Tom McGlynn	Mark Taylor
Data Access Layer	Keith Noddle	Jesus Salgado
Data Model	Mireille Louys	AnitaRichards
Grid&Web Sevices	Matthew Graham	Paul Harrison
Registry	Ray Plante	Gretchen Greene
Semantics	Sebastien Derriere	Norman Gray
VOEvent	Rob Seaman	Alasdair Allan
VO Query Language	Pedro Osuna	Yuji Shirasaki
VOTable	François Ochsenbein	n/a
Interest Group	**Chair**	**Vice-Chair**
Standard and Processes	Francoise Genova	n/a
Data Curation & Preservation	Bob Hanisch	n/a
Theory	Herve Wozniak	Claudio Gheller

http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/IvoaTCG

- Technical Coordination amongst WGs/IGs

- Liaison with IVOA Exec

- Specific role in Recommendation Process

- WG/IG chairs 3 years term ending

TCG Charter 1.1

Charter for the IVOA Technical Coordination Group

Version 1.1
IVOA Note 2010-03-29

This version:
  NOTE-TCGCharter-1.1-20100329
Latest version:
  http://www.ivoa.net/Documents/latest/latest-version-name
Previous version(s):

Author(s):
  Christophe Arviset, Roy Williams, Severin Gaudet

- Small updates to reflect the comments that had come from RFC review in the IVOA Document Standard v1.2
  - Strengthen TCG meetings organization and coordination

TCG F2F #01 Meeting
14-15 May 2010 @ Victoria

1. Review and update IVOA top level architecture

2. Study main Science use cases for the VO

3. Discuss and review TCG organization

TCG F2F#1 Participants

- TCG - Christophe and Severin
- Apps WG – Tom and Mark
- DAL WG – Keith and Jesus
- DM WG - Mireille
- GWS WG – Matthew
- Registry WG - Ray
- Semantics WG – Sebastien
- VOEvent WG - Rob
- VOTable WG – Francois
- Std & Proc Ctte– Francoise
- Theory IG – Herve
- IVOA – Fabio and Paolo

IVOA Top Level Architecture
What?
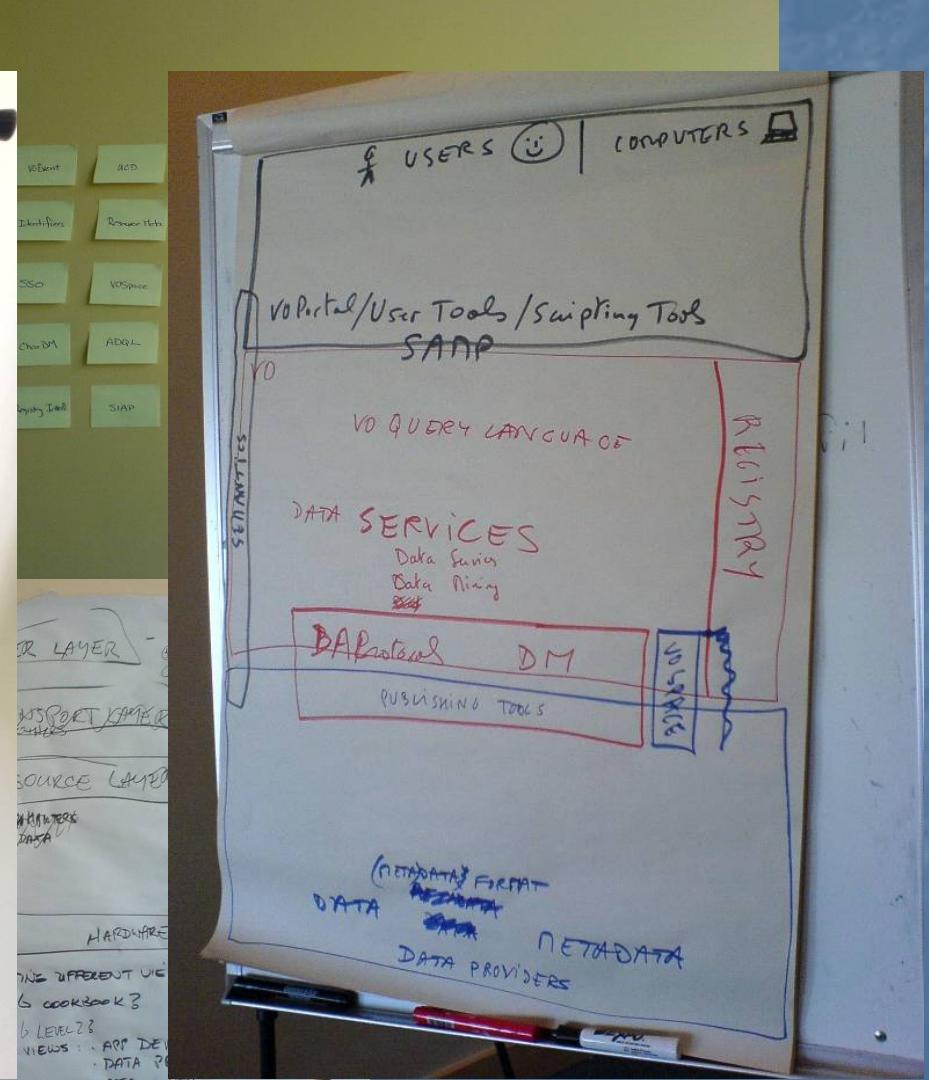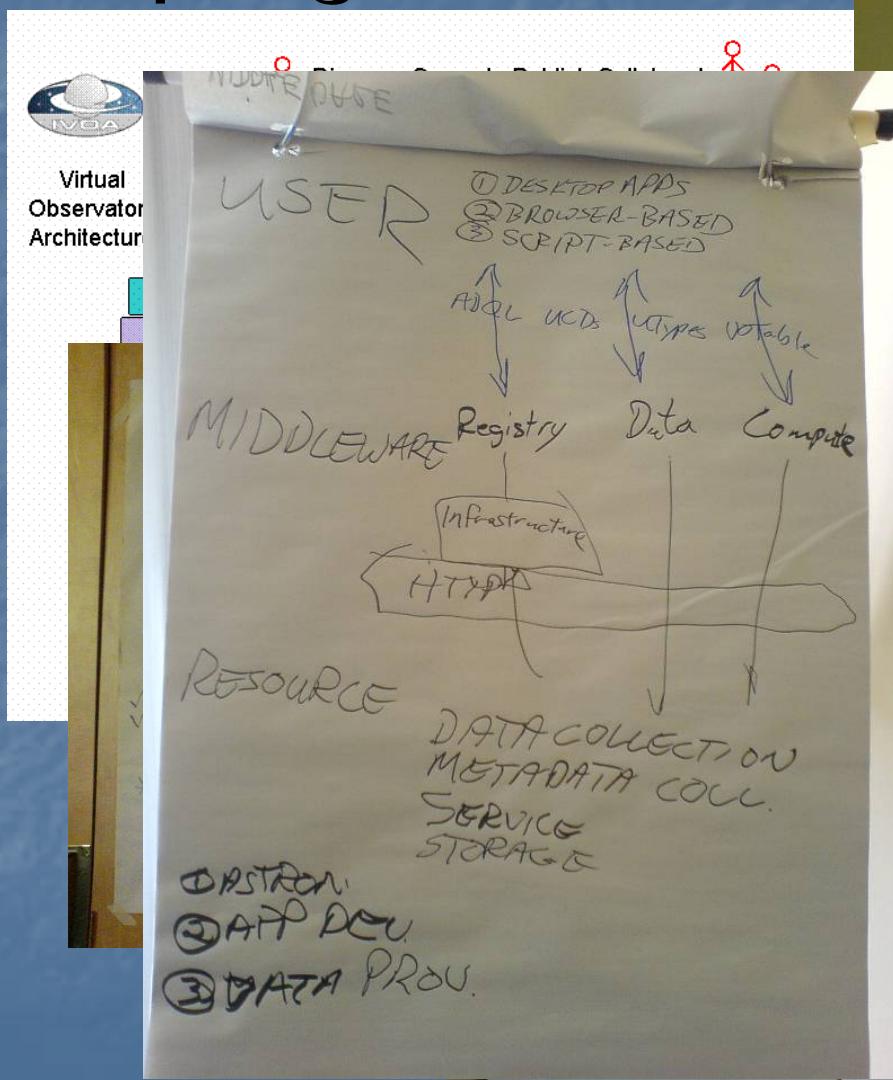
2 views required

1. (level 0) view for "public" consumption
   - Global, generic, minimize VO jargon
   - Readable by all, not too technical

2. (level 1) view for IVOA and VO needs
   - Extension of (level 0)
   - More detailed, all IVOA standards mentioned
   - Clear connections between IVOA standards (helps the TCG review, the inter-dependency)
   - Shows what is need to implement VO (as a Data Centre, an Apps developer, an astronomer, ...)

IVOA Architecture
In progress
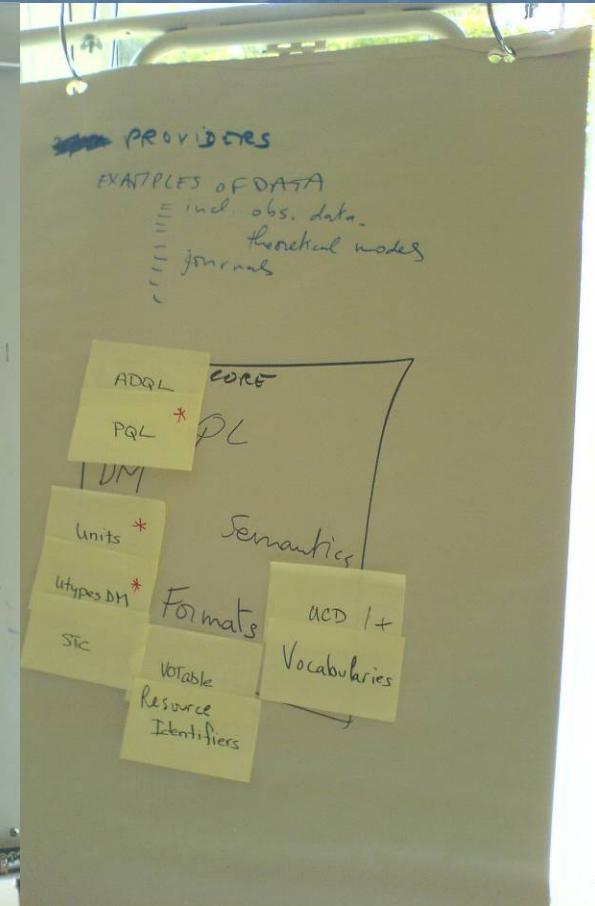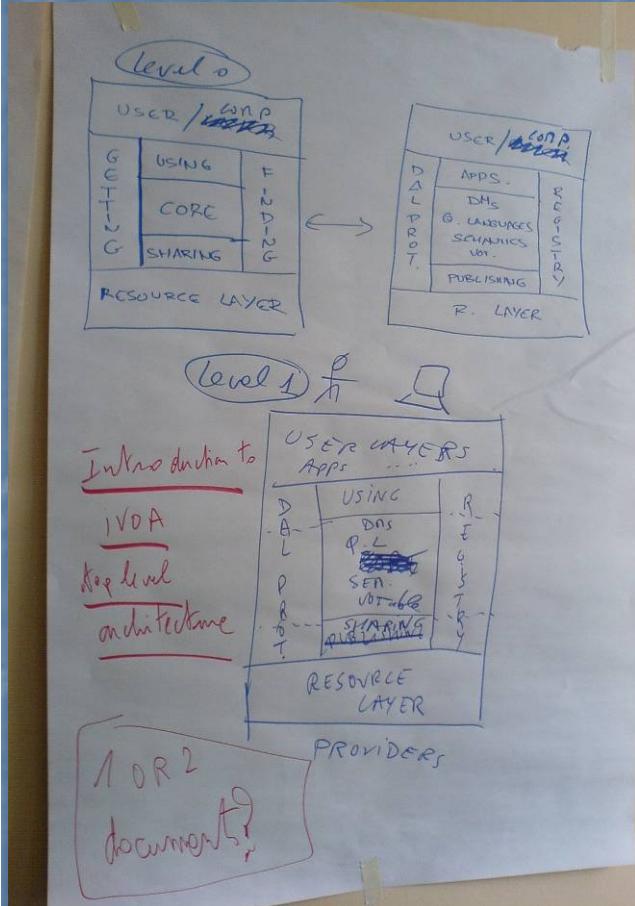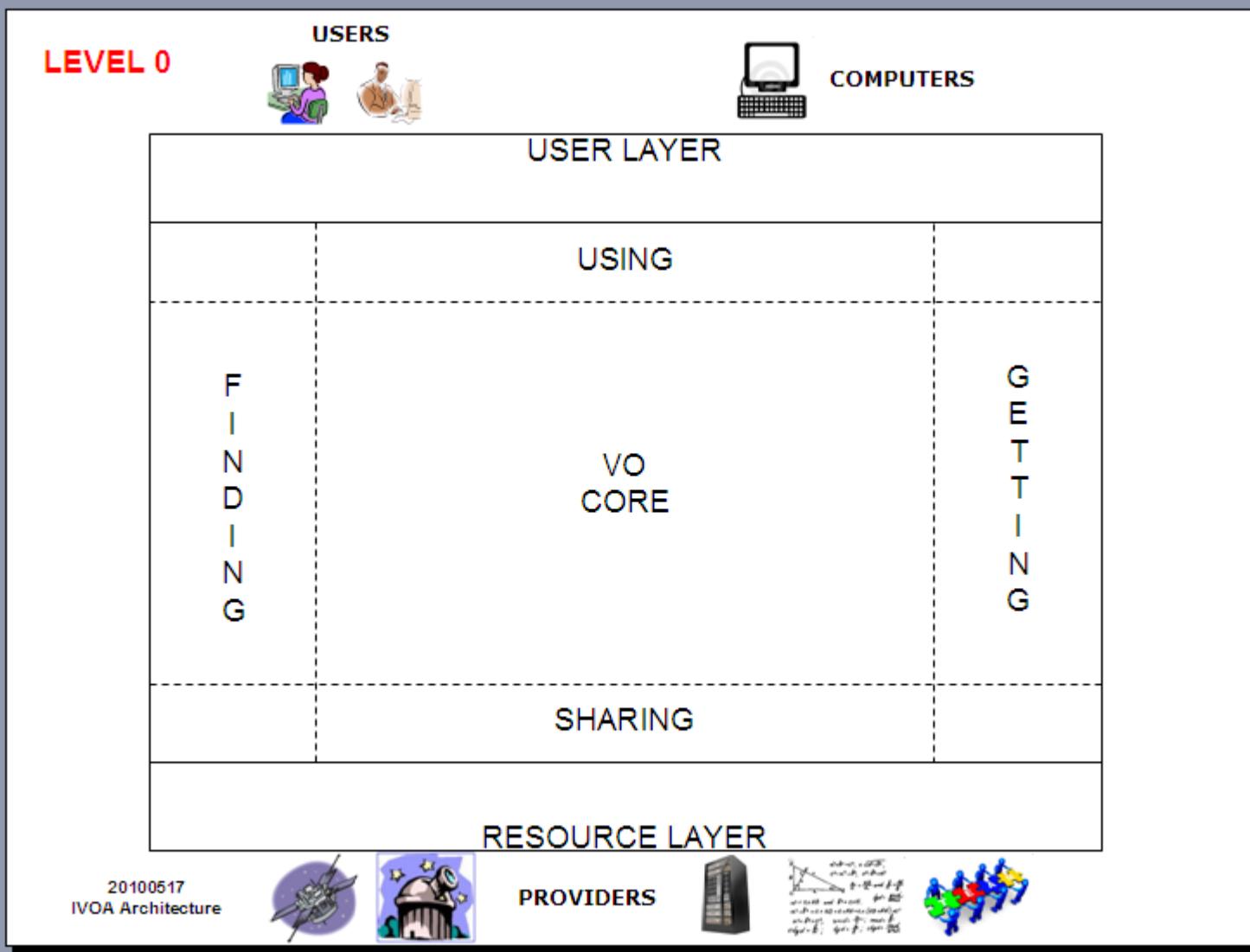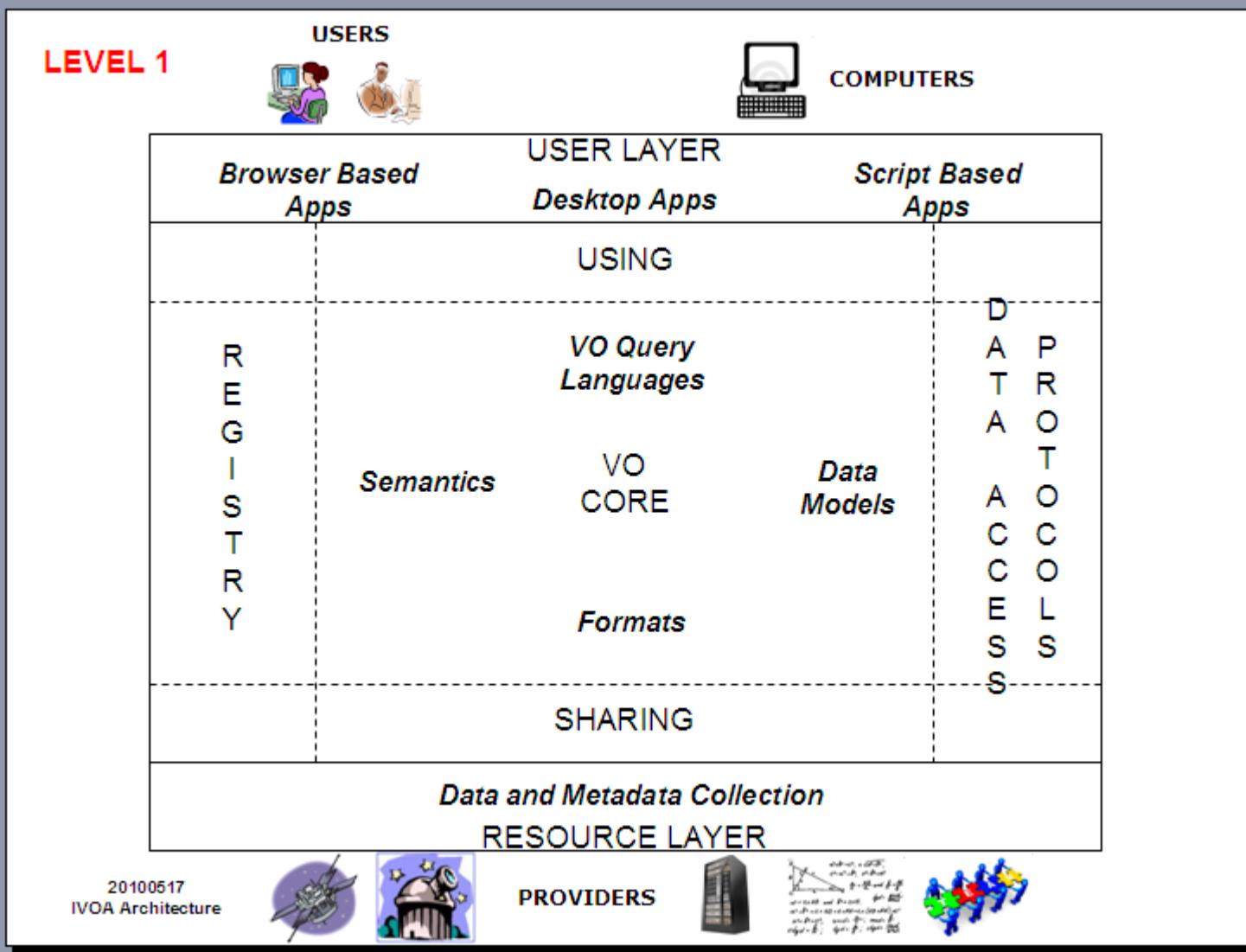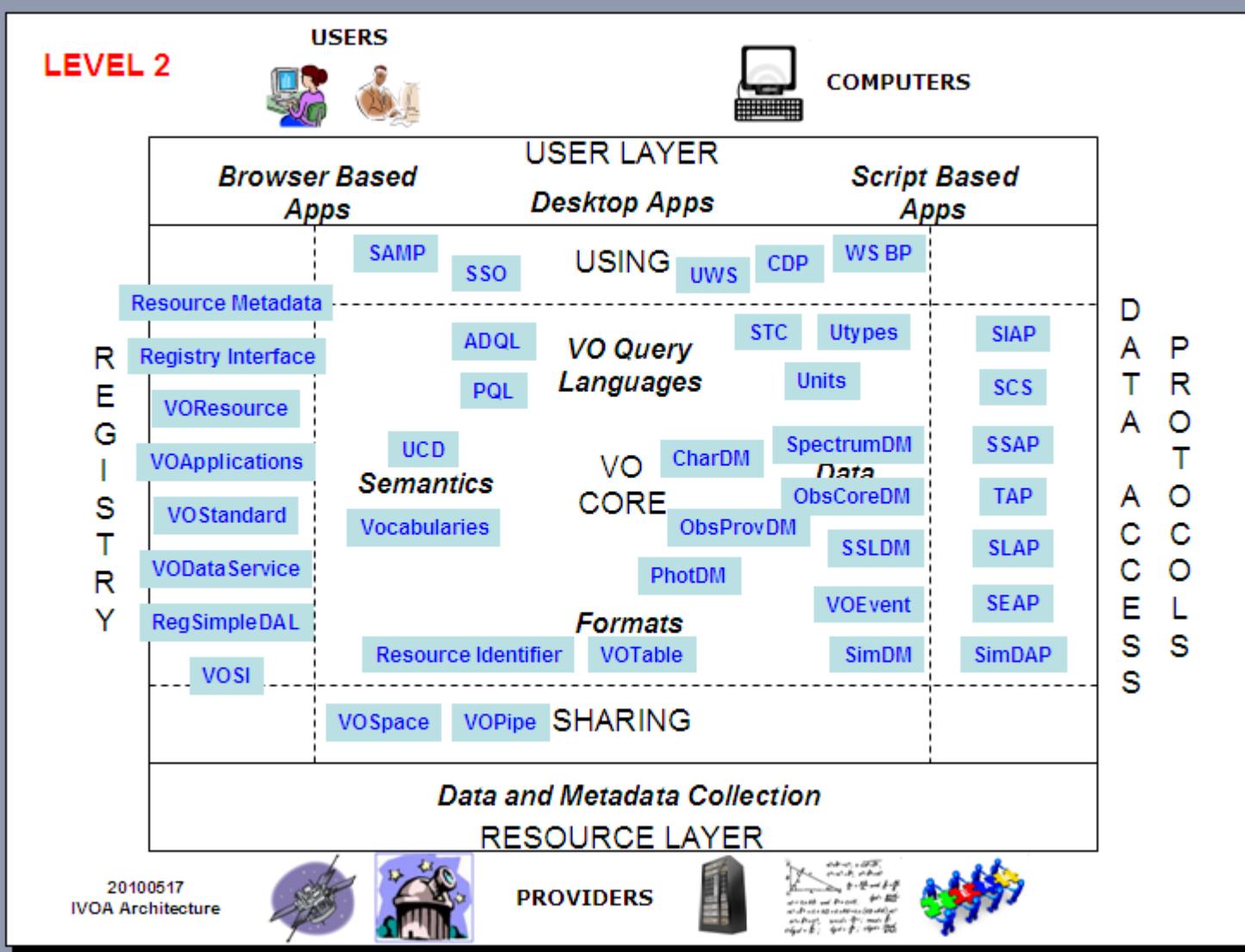
IVOA Architecture – Level 0

IVOA Architecture – Level 1

Christophe Arviset – TCG chair

IVOA Architecture – Level 2
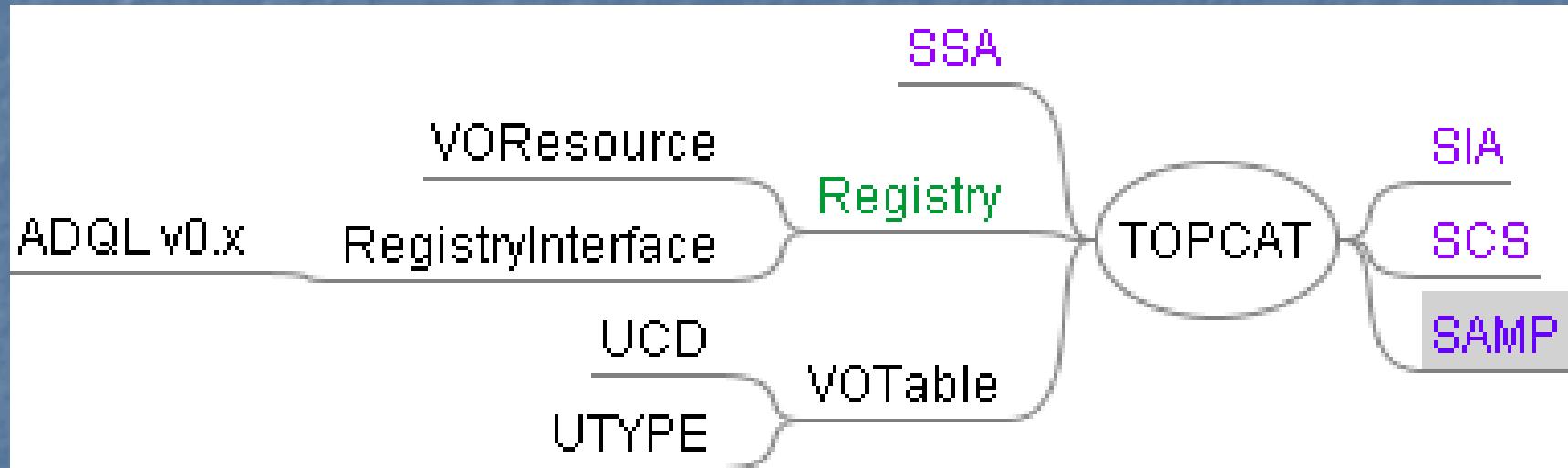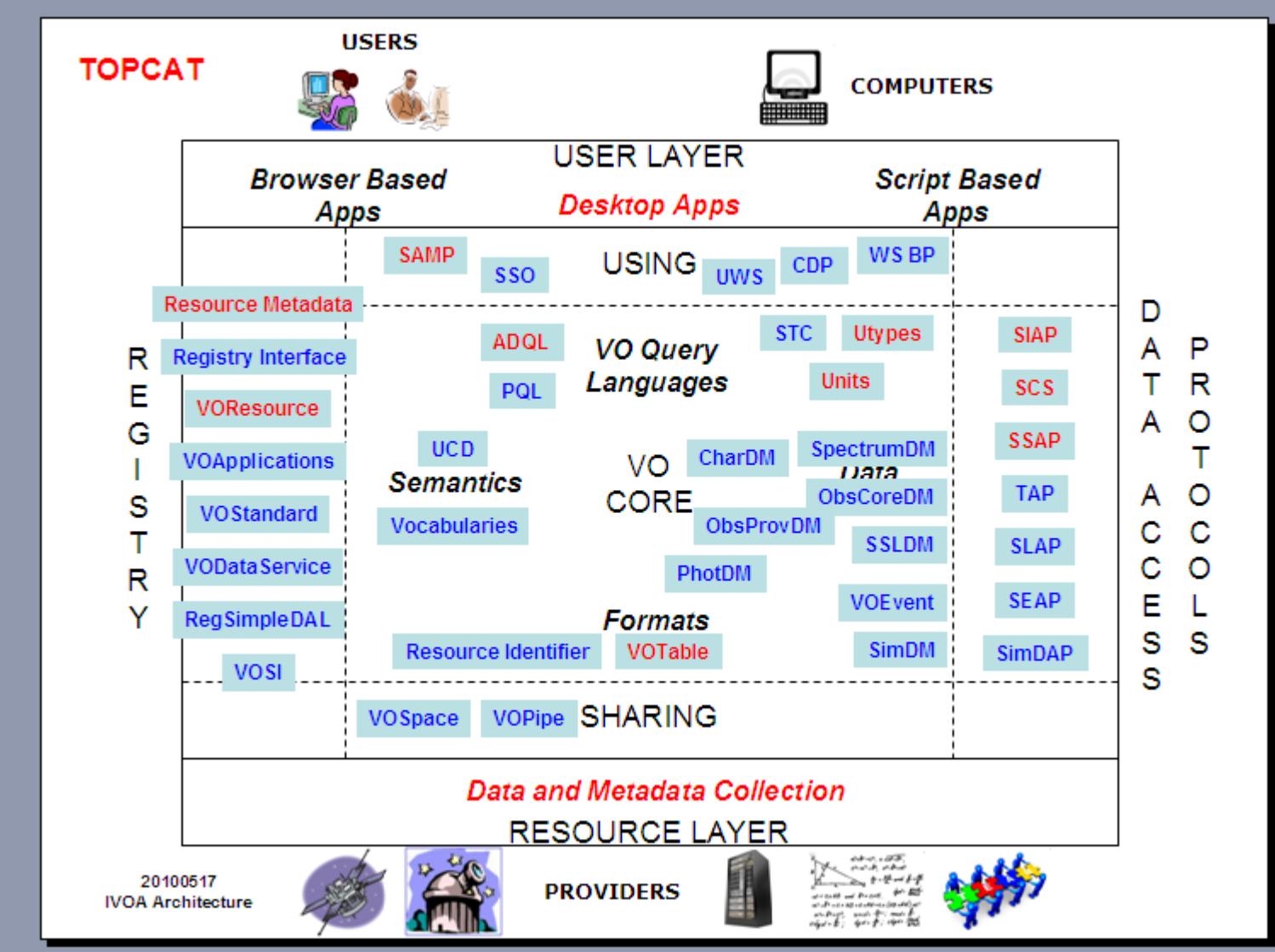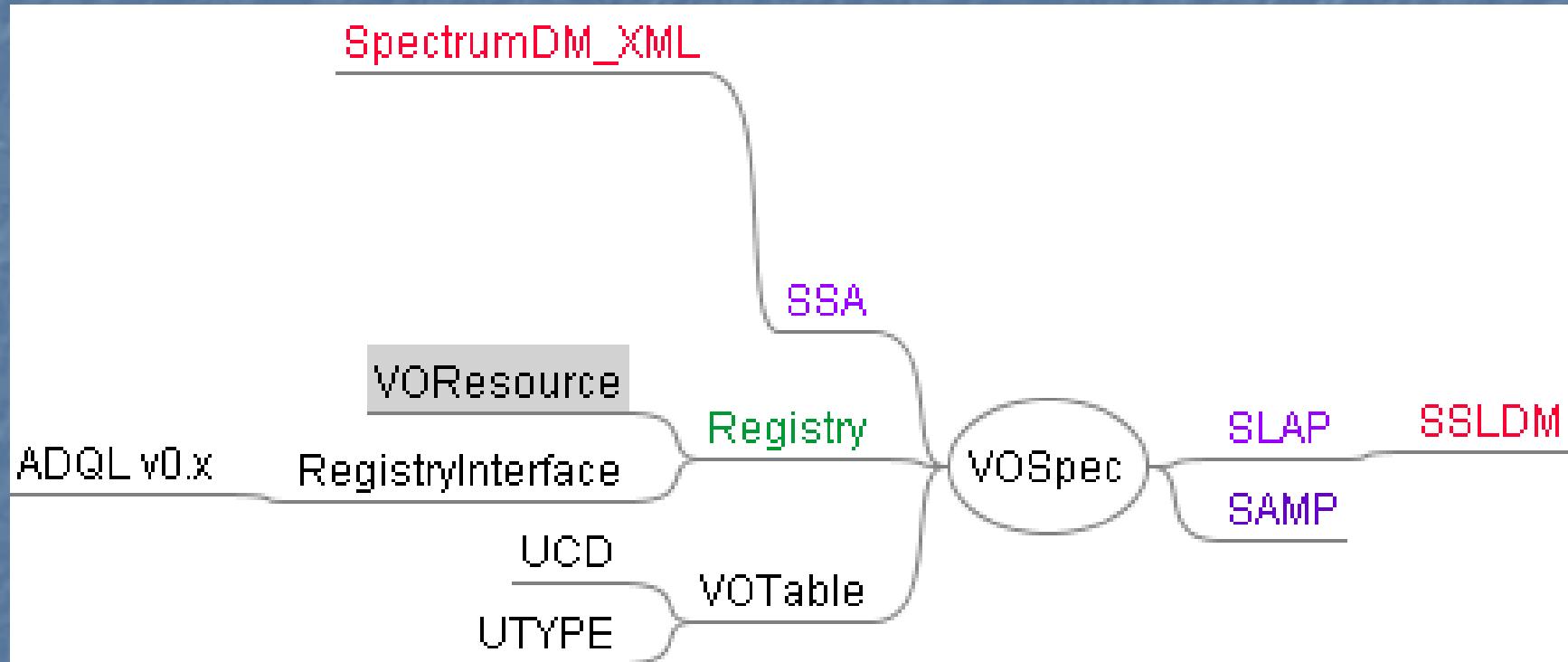
IVOA Architecture
In action - TOPCAT

IVOA Architecture
In action - TOPCAT
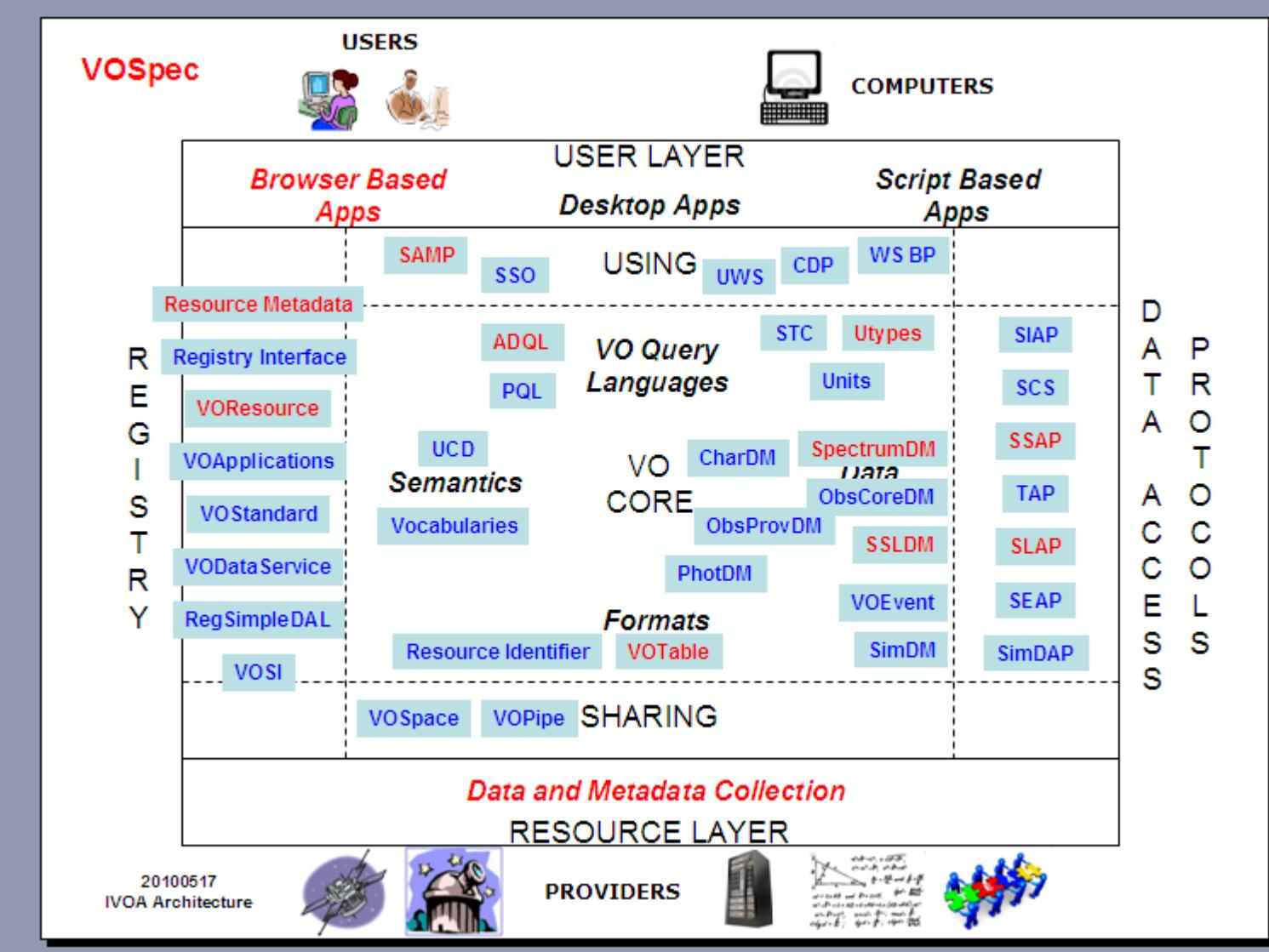
Christophe Arviset – TCG chair

IVOA Architecture
In action - VOSpec
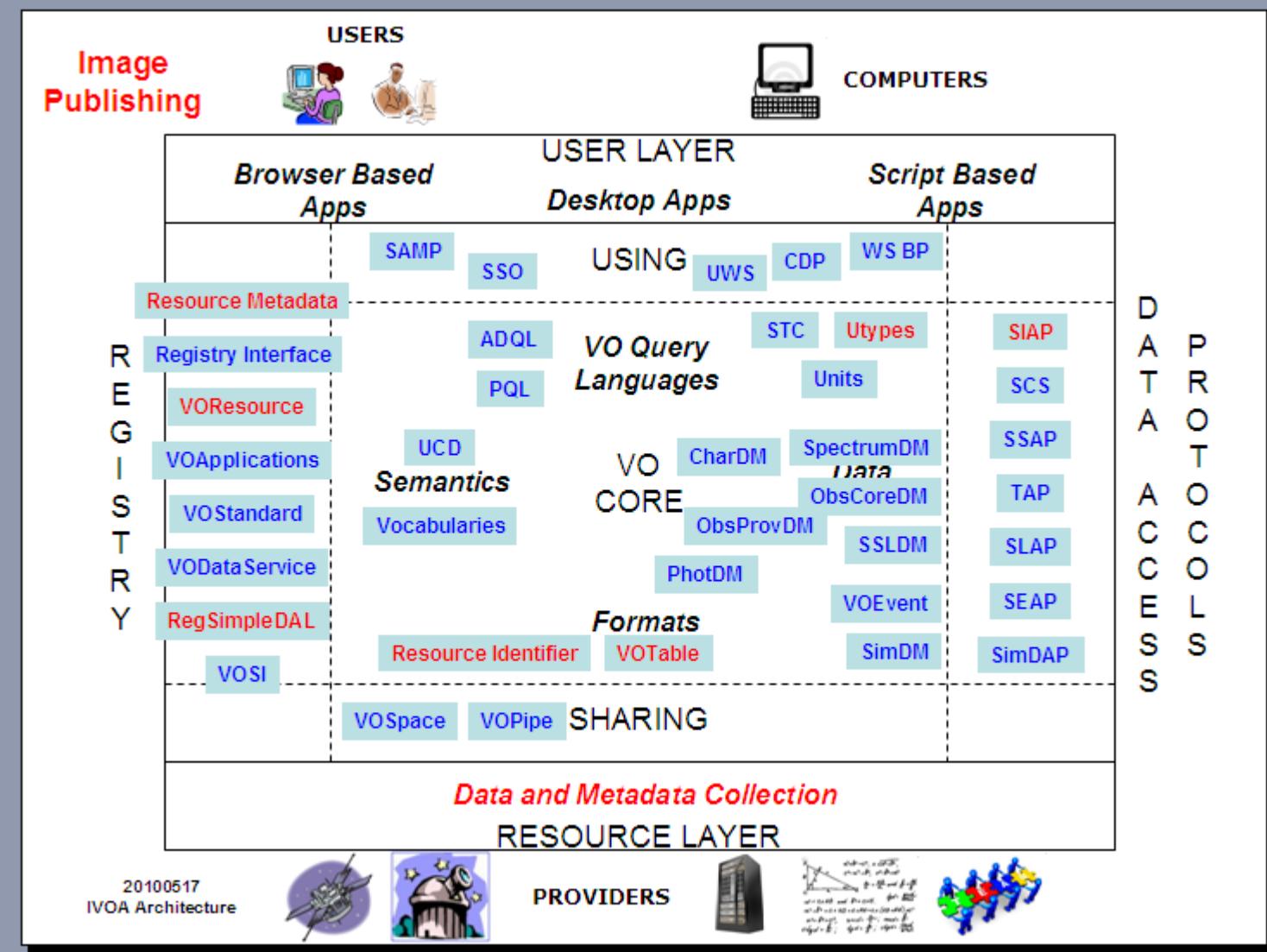
IVOA Architecture
In action - VOSpec

IVOA Architecture
In action – Image Publishing

20100517
IVOA Architecture
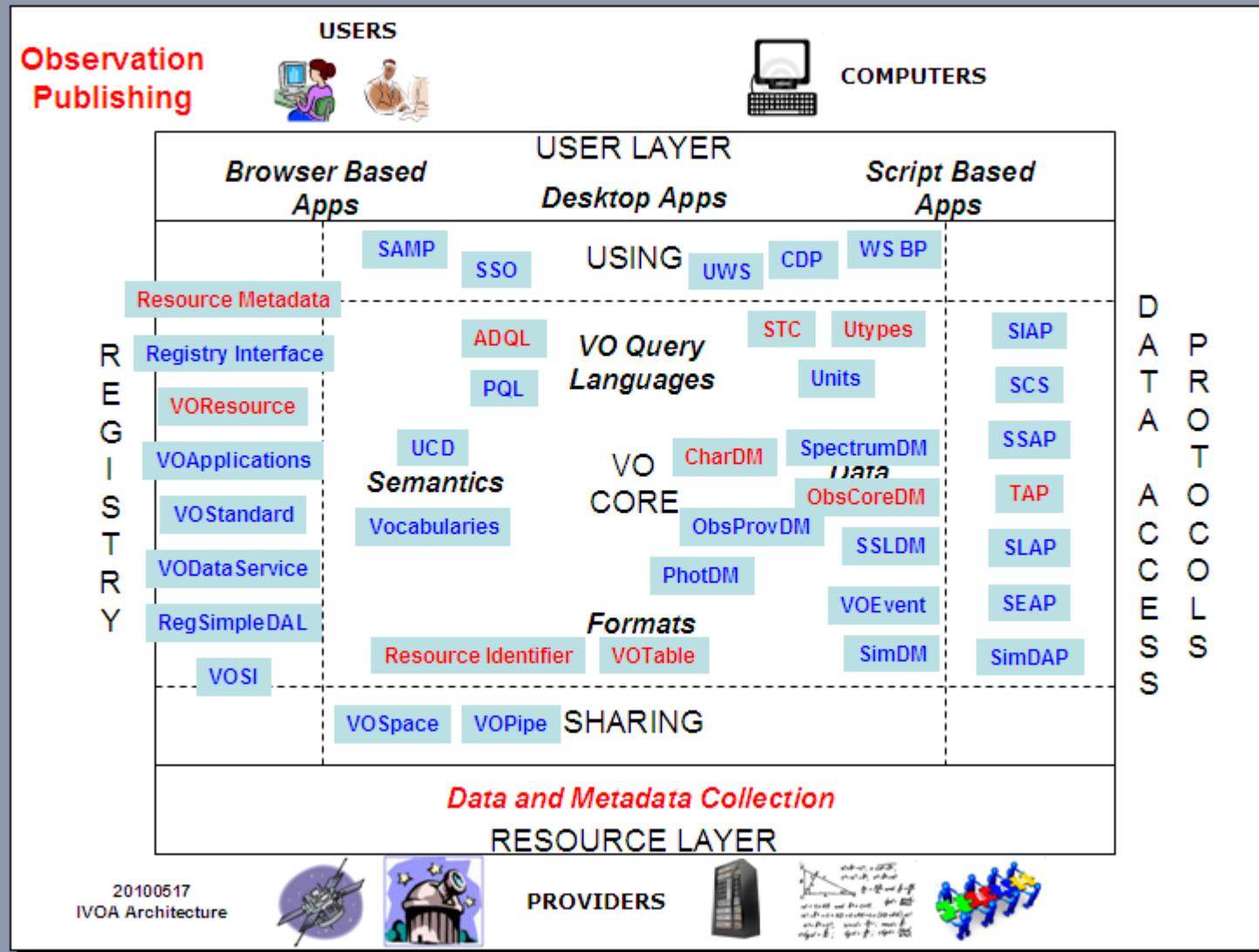
Observation Publishing

USERS

COMPUTERS

USER LAYER

Browser Based Apps — Desktop Apps — **Script Based Apps**

USING

| SAMP | SSO | UWS | CDP | WS BP |

Resource Metadata

Registry Interface

VOResource

VOApplications

VOStandard

VODataService

RegSimpleDAL

VOSI

REGISTRY

VO Query Languages — ADQL, PQL, STC, Utypes, Units

Semantics — UCD, Vocabularies

VO CORE — CharDM, SpectrumDM, *Data*, ObsCoreDM, ObsProvDM, SSLDM, PhotDM, VOEvent, SimDM

Formats — Resource Identifier, VOTable

SHARING — VOSpace, VOPipe

DATA ACCESS PROTOCOLS — SIAP, SCS, SSAP, TAP, SLAP, SEAP, SimDAP

Data and Metadata Collection

RESOURCE LAYER

20100517
IVOA Architecture

PROVIDERS

Updated IVOA Architecture

- Including all existing IVOA REC standards
- Including all (planned) upcoming IVOA standards

- Clearer IVOA "Technical" Picture
  - For the public
  - For the IVOA
  - For the WG and IGs
  - For the VO "implementers"

IVOA Architecture
Next steps

- Finalize and write IVOA Note with updated Architecture

- For all upcoming standards, include IVOA architecture showing where the standards fits in it

- (editorial) Update of all existing standards with similar change ?
  - (side question) we might need a "fast track" for IVOA standards for this type of change

Science Cases
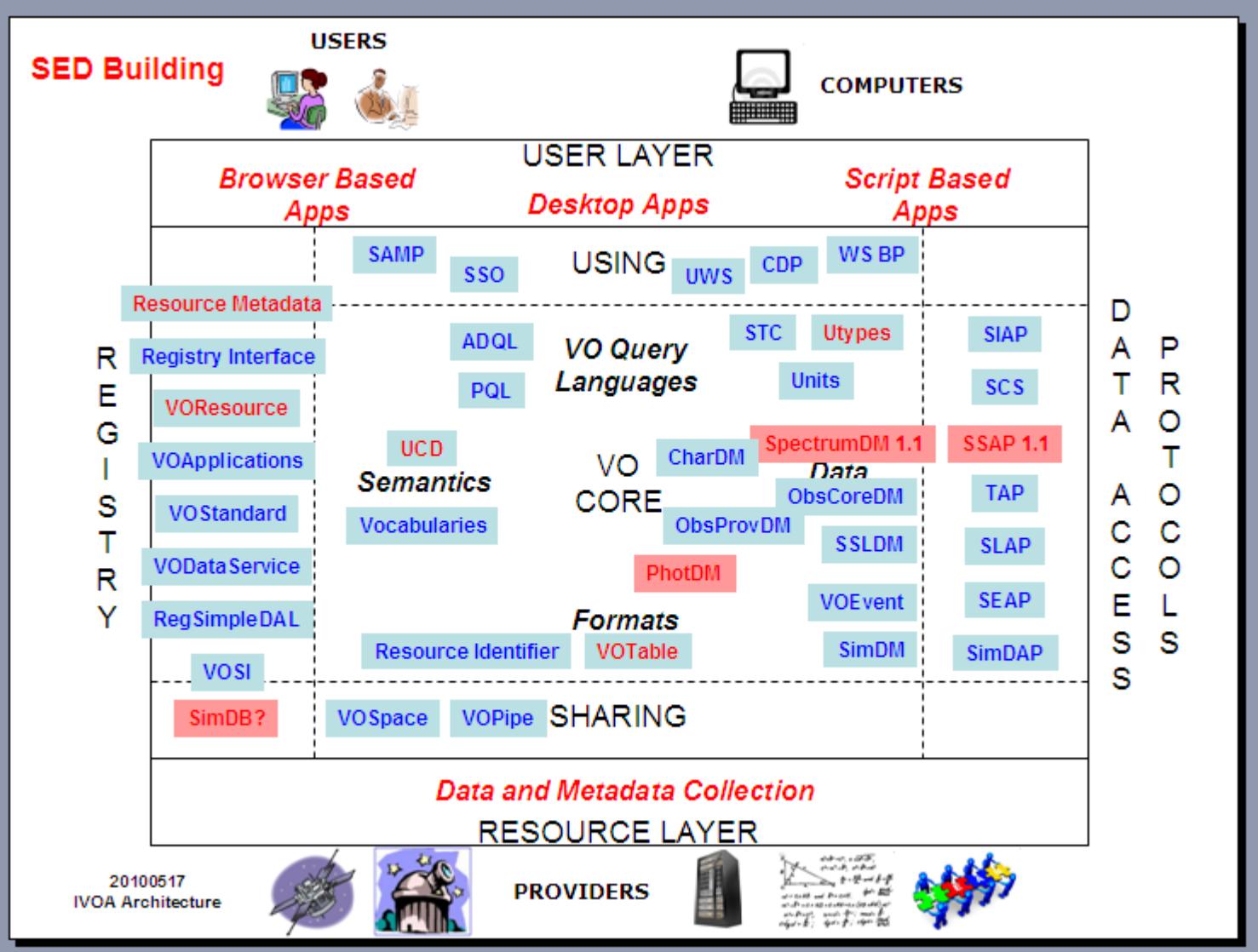
- Drive TCG work from science requirements coming from the community

- 3 main science cases coming from the IVOA Take-up Committee
  - SED building
  - Search by list of sources + search on class
  - VO "Portal"

- Brainstorming sessions and compilation to determine IVOA standards required to address these science cases

SED Building

SED Building

USERS **COMPUTERS**

USER LAYER

Browser Based Apps *Desktop Apps* *Script Based Apps*

SAMP SSO USING UWS CDP WS BP

REGISTRY

Resource Metadata

Registry Interface — ADQL — *VO Query Languages* — STC — Utypes — SIAP

VOResource — PQL — Units — SCS

VOApplications — UCD — VO — CharDM — SpectrumDM 1.1 — SSAP 1.1

Semantics — CORE — *Data*

VOStandard — Vocabularies — ObsCoreDM — TAP

VODataService — ObsProvDM — SSLDM — SLAP

RegSimpleDAL — PhotDM — VOEvent — SEAP

Formats

VOSI — Resource Identifier — VOTable — SimDM — SimDAP

SimDB? — VOSpace — VOPipe — SHARING

DATA ACCESS PROTOCOLS

Data and Metadata Collection

RESOURCE LAYER

20100517
IVOA Architecture

PROVIDERS

Document SED part of the model

SED data provider cookbook (NOTE)
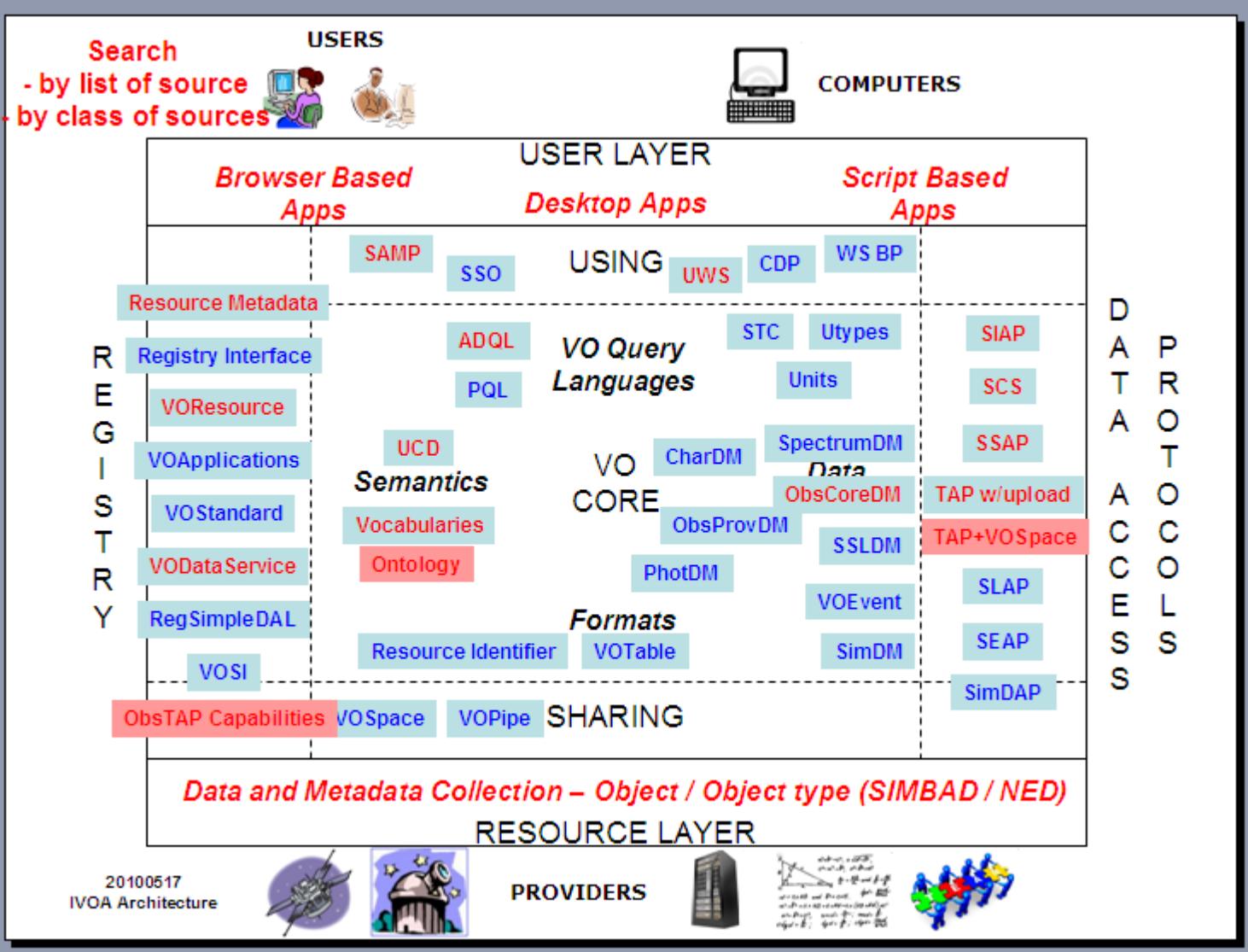
TAP to be used as well ?

Search by list of sources
Search by class of sources

TCG
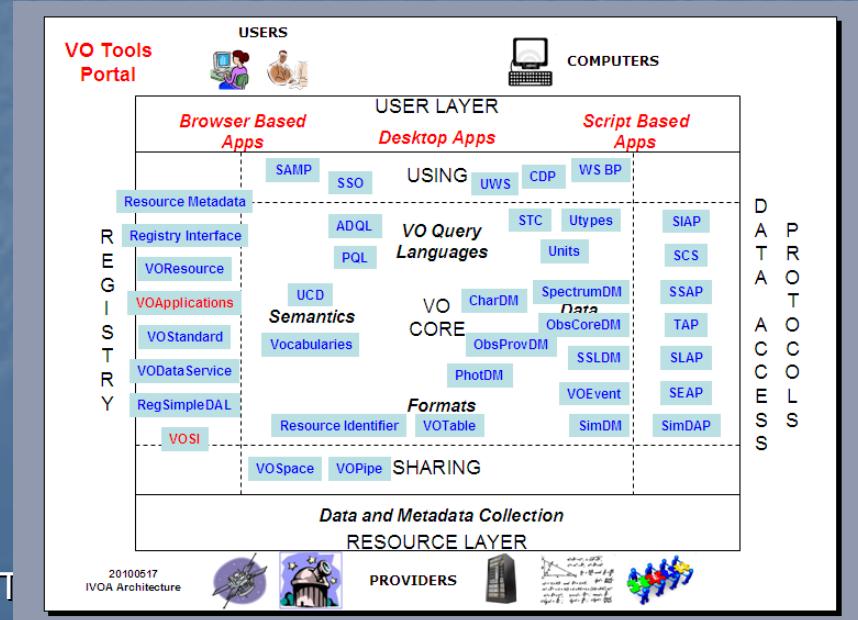
Source DM to be considered as well ?

Christophe Arviset – TCG chair

VO "Portal"

- **Discussion about the concept**
  - **More a VO Tools discovery portal**
  - **Not a data discovery portal**
- **Linked with overall IVOA Web reorganization**
  - **EXEC FM34S-6 on AL**
  - **Site of the astronomer**

- **Dynamic list of VO Tools**
  - **Curation issues**

Science Cases
Next steps

- Some standards to be finalized
- Some standards to be updated
- New standards to be developed

- To be endorsed by the EXEC

- To be taken into account in WG / IG upcoming work plan and reflected in Technical Assessment and Roadmap for 2010

Validation and Verification 1/2

- Two dedicated sessions planned during this interop
- Discussions *about the process* at TCG F2F

- Inter-dependency and consistency of standards amongst WGs
  - Normally addressed through TCG review
  - Now made clearer with updated IVOA Architecture

- Inconsistencies of Registry entries
  - To be addressed by Registry WG

Validation and Verification 2/2

- **Validation and Verification of standards implementation**
  - To be addressed by each WG
  - At next Nara Interop
    - Special standards implementation and feedback session for each WG (joint sessions if more adequate)
    - Each WG chair to look at all existing implementations of the WG standards, "learn" from these, and determine if modifications / improvements of the standards are required

- **For the main Science cases**
  - "Contact name" from the Committee on Science Priorities
  - Regular implementation report in Apps sessions

Standards into RECs since last Interop

- SIAP v1.0 ("legacy" version)
- VOTable 1.2
- Credential Delegation Protocol v1.01
  - All three in November 2009

- TAP 1.0
  - February 2010

- IVOA Document Standards v1.2
  - March 2010
  - Including small updates on TCG Charter

State of the TCG

- **Standards in REC process**

> **On-going Recommendations (RFC period)**
>
> - Web Services Basic Profile 1.0 RFC, 24/03/2010-28/04/2010
> - IVOA Support Interfaces (VOSI) 1.0 RFC, 09/04/2010-14/05/2010
>
> **On-going Recommendations (TCG Review)**
>
> - UWS 1.0 RFC, 05/10/2009-05/11/2009, TCG Review 17/02/2010-19/03/2010
> - VODataService 1.1 RFC, 15/04/2010-15/05/2010
> - SLAP 1.0 RFC, 20/07/2009-15/09/2009, TCG Review 12/05/2010-11/06/2010
> - SSLDM 1.0 RFC, 20/07/2009-15/09/2009, TCG Review 12/05/2010-11/06/2010

- **Technical Assessment and Roadmap for 2010 to be written**
    - Strong link to updated IVOA Architecture
    - Strong link to Science Cases

Existing IVOA REC standards - 1

Standards	WG	Date	Comments
2003			
IVOA Document Standards v1.0	Standards & Process Committee	October. 2003	IVOA Doc Std v1.2 in 2010
2004			
VOTable v1.10 VOTable Format Definition	VOTable	August 2004	VOTable v1.2 in 2009
2005			
UCD v1.10 An IVOA Standard for Unified Content Descriptors	Semantics	August 2005	
2006			
Maintenance of the list of UCD words v1.20	Semantics	May 2006	
VOEvent v1.11 Sky Event Reporting Metadata	VOEvent	November 2006	
2007			
Standards	**WG**	**Date**	**Comments**
IVOA Identifiers v1.12	Registry	March 2007	
Resource Metadata for the Virtual Observatory v1.12	Registry	March 2007	
UCD 1+ v1.23 The UCD1+ controlled vocabulary	Semantics	April 2007	UCD 1+ v1.3 expected in 2009
STC v1.33 Space-Time Coordinate Metadata for the VO	DM	October 2007	
SpectraDM v1.01 Spectral Data Model	DM	October 2007	

More details can be found
on the IVOA Document pages at:
http://www.ivoa.net/Documents/

Existing IVOA REC standards - 2

2008

Standards	WG	Date	Comments
SSO v1.03 Single-Sign-On Profile: Authentication Mechanisms	GWS	January 2008	
VOSpace v1.02 VOSpace service specification	GWS	January 2008	VOSpace v1.15 in September 2009
VOResource v1.03 VOResource: an XML Encoding Schema for Resource Metadata	Registry	February 2008	
SCS v1.03 Simple Cone Search	DAL	February 2008	
SSAP v1.04 Simple Spectra Access Protocol	DAL	February 2008	
CharDM v1.13 Data Model for Astronomical DataSet Characterization	DM	March 2008	
ADQL v2.0 Astronomical Data Query Language	VOQL	October 2008	

2009

Standards	WG	Date	Comments
SAMP 1.11 Simple Application Messaging Protocol	Apps	April 2009	
Vocabularies 1.16	Semantics	September 2009	
VOSpace 1.5	GWS	September 2009	Update from VOSpace 1.0
Registry Interface 1.01	Registry	September 2009	
SIAP 1.0 Simple Image Access Protocol	DAL	November 2009	
VOTable v1.2 VOTable Format Definition	VOTABLE	November 2009	Update from VOTable 1.10
CDP 1.0 Credential Delegation Protocol	GWS	November 2009	

More details can be found on the IVOA Document pages at:
http://www.ivoa.net/Documents/

Existing IVOA REC standards - 3

2010			
Standards	**WG**	**Date**	**Comments**
TAP 1.0 Table Access Protocol	DAL	February 2010	
IVOA Document Standards v1.2	Standards & Process Committee	March 2010	Update from IVOA Document Standards v1.0

More details can be found
ment pages at:
et/Documents/

Standards	**WG**	**Date**	**Comments**
2010 (RFC started and later)			
UWS 1.0 Universal Worker Service	GWS		TCG Review
VODataService 1.1	Registry		TCG Review
SSLDM 1.0 Simple Spectra Line DM	DM		Updates after initial RFC
SLAP 1.0 Simple Line Access Protocol	DAL		Updates after initial RFC
VOSI 1.0 IVOA Support Interface	GWS		Initial RFC
WS BP 1.0 Web Service Basic Profile	GWS		Initial RFC