



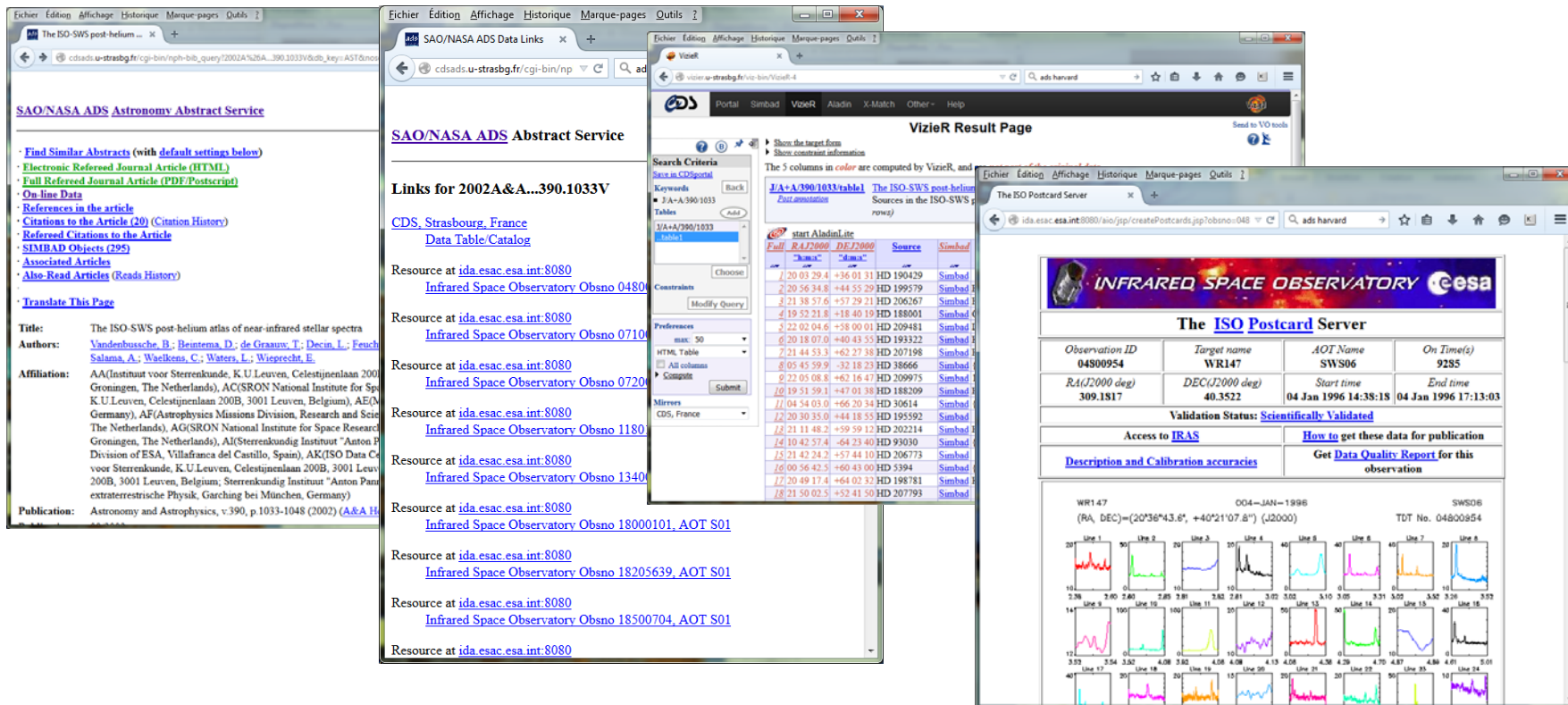
Introducing the IVOA

ASTERICS DADI 2nd ESFRI Forum
Newcomer session

From networking to interoperability

- Astronomy has been a pioneer in the development of on-line resources
- Also early standards: FITS, bibcode
- Networked using http links very early in the 90's
 - CDS, NED, ADS, observatory archives, journals
- End of the 90's: Go beyond networking and develop interoperability of data and tools

Resource networking still in use



The collage consists of five overlapping browser windows:

- Top Left:** "The ISO-SWS post-helium ..." showing the SAO/NASA ADS Astronomy Abstract Service page for a paper by Vandenhussche et al. (2002).
- Top Middle:** "SAO/NASA ADS Data Links" showing a list of links for the same paper, including CDS, Strasbourg, France, and Infrared Space Observatory (ISO) data tables.
- Top Right:** "VizieR Result Page" showing a table of stellar data with columns for RA, DEC, and SIMBAD identifiers.
- Bottom Left:** "The ISO Postcard Server" showing a table with observation ID (04800954), target name (WR147), and AOT name (SWS06).
- Bottom Right:** "The ISO Postcard Server" showing a grid of 24 spectral line plots labeled "Line 1" through "Line 24".

IVOA precursor

- OPTICON Working Group on Interoperability (2001)
- International participation
- First meeting in Strasbourg, 28-29 January 2002
- First standard: VOTable, March 2002



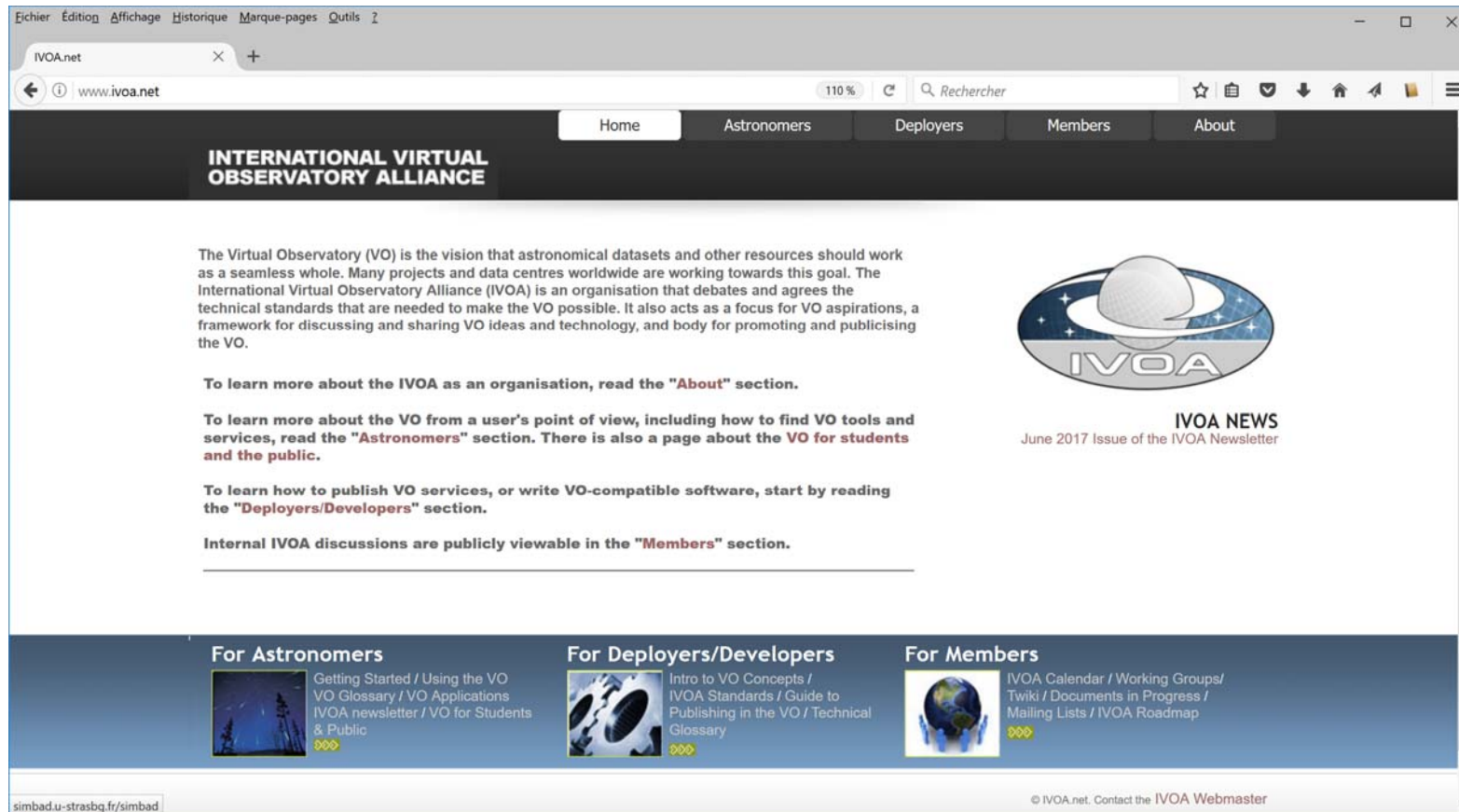
The IVOA

- International Virtual Observatory Alliance
- Created in May 2002 to define interoperability standards for astronomy, the so-called astronomical virtual observatory
- National (funded) VO initiatives + intergovernmental organisations (ESA) + Euro-VO (EC funded)
- Best effort/in-kind contributions
- Created by Europe, UK, USA
- Now present on the 5 continents
- Two plenaries/year, « Northern Fall » with ADASS

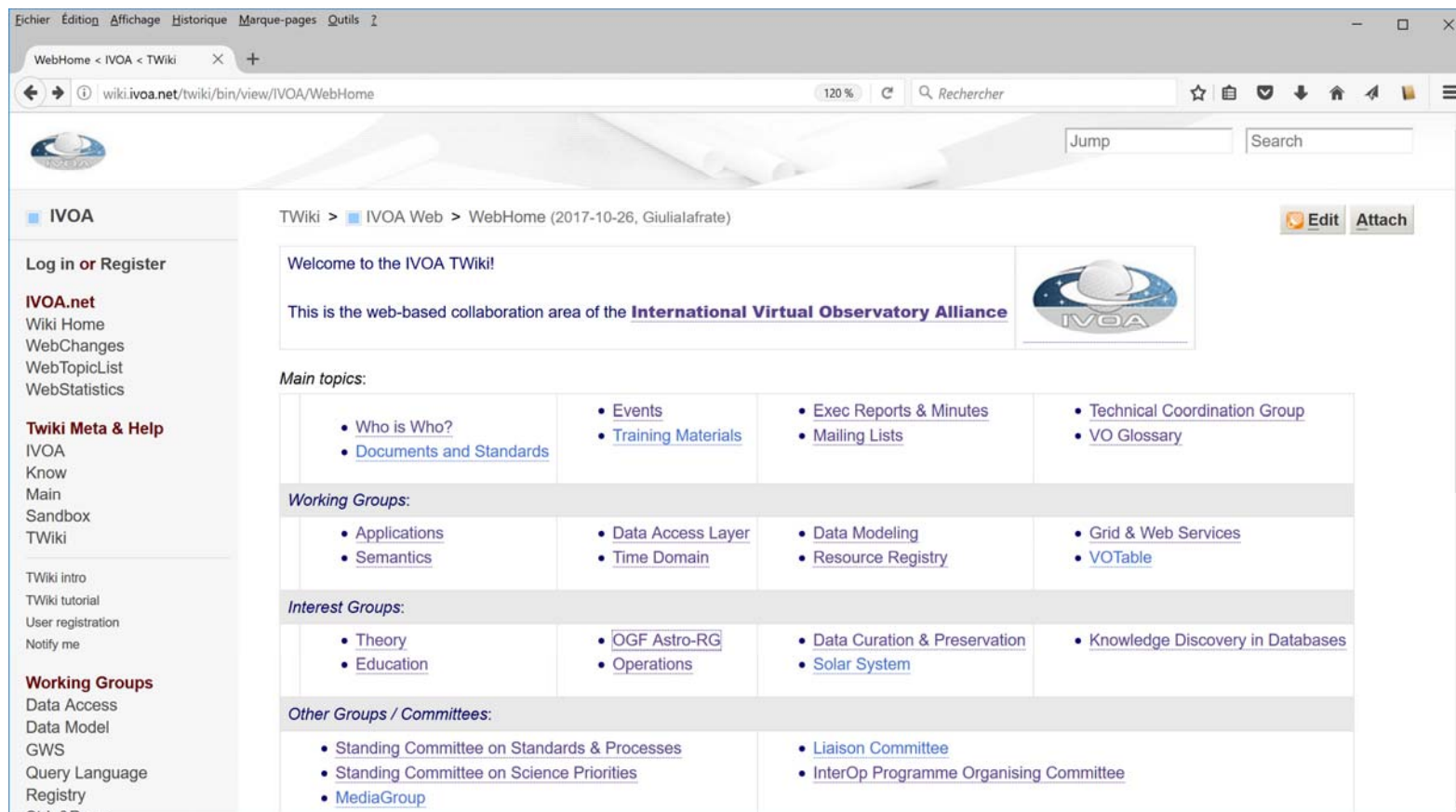
IVOA members



The IVOA web site



IVOA Twiki



The screenshot shows a web browser window displaying the IVOA Twiki page. The browser's address bar shows the URL `wiki.ivoa.net/twiki/bin/view/IVOA/WebHome`. The page content includes a navigation menu on the left, a main content area with a welcome message, and several categorized lists of links.

Navigation Menu (Left):

- IVOA
- 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
 - Registry
 - Side & Proc

Main Content Area:

Twiki > IVOA Web > WebHome (2017-10-26, GiuliaIafrate) Edit Attach

Welcome to the IVOA Twiki!

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

Main topics:

<ul style="list-style-type: none"> Who is Who? Documents and Standards 	<ul style="list-style-type: none"> Events Training Materials 	<ul style="list-style-type: none"> Exec Reports & Minutes Mailing Lists 	<ul style="list-style-type: none"> Technical Coordination Group VO Glossary
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Working Groups:

<ul style="list-style-type: none"> Applications Semantics 	<ul style="list-style-type: none"> Data Access Layer Time Domain 	<ul style="list-style-type: none"> Data Modeling Resource Registry 	<ul style="list-style-type: none"> Grid & Web Services VOTable
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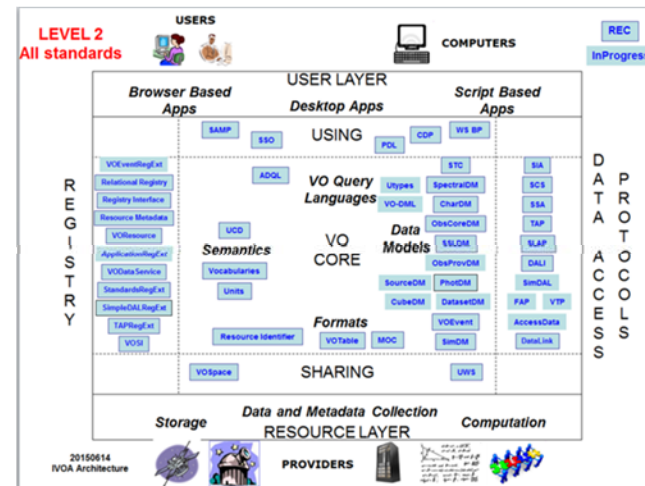
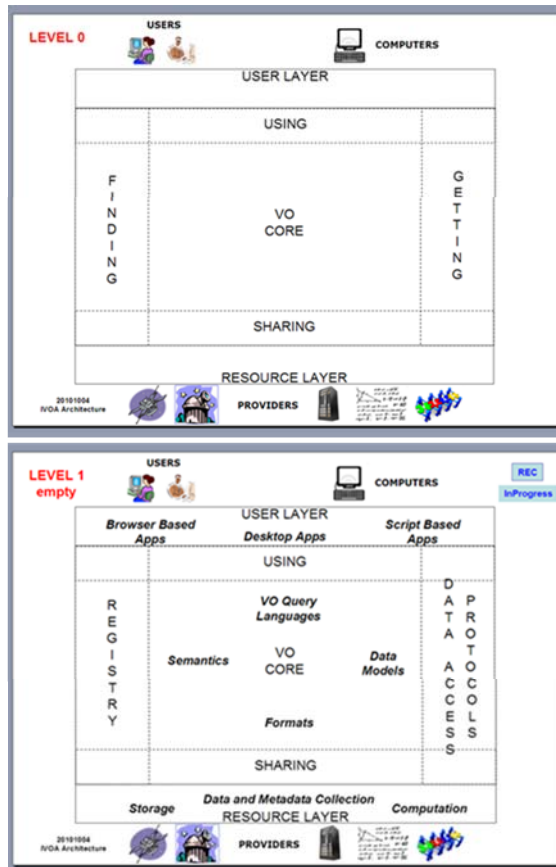
Interest Groups:

<ul style="list-style-type: none"> Theory Education 	<ul style="list-style-type: none"> OGF Astro-RG Operations 	<ul style="list-style-type: none"> Data Curation & Preservation Solar System 	<ul style="list-style-type: none"> Knowledge Discovery in Databases
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Other Groups / Committees:

<ul style="list-style-type: none"> Standing Committee on Standards & Processes Standing Committee on Science Priorities MediaGroup 	<ul style="list-style-type: none"> Liaison Committee InterOp Programme Organising Committee
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IVOA architecture



IVOA bodies

- Executive Board : representatives of the members
Chair/Vice-Chair/Secretary
- Working Groups (standards) and Interest Groups
Chair/Vice-Chair
- Technical Advisory Board
Chair/Vice-Chair/Group Chairs and Vice-Chairs
- Standing Committees
Science Priorities, Standards and Processes, ...



Eichier Édition Affichage Historique Marque-pages Outils ?

IVOA.net

www.ivoa.net/members/ 110% Rechercher

Twiki Pages | Documents in progress | Meeting Calendar

IVOA Working Group Links

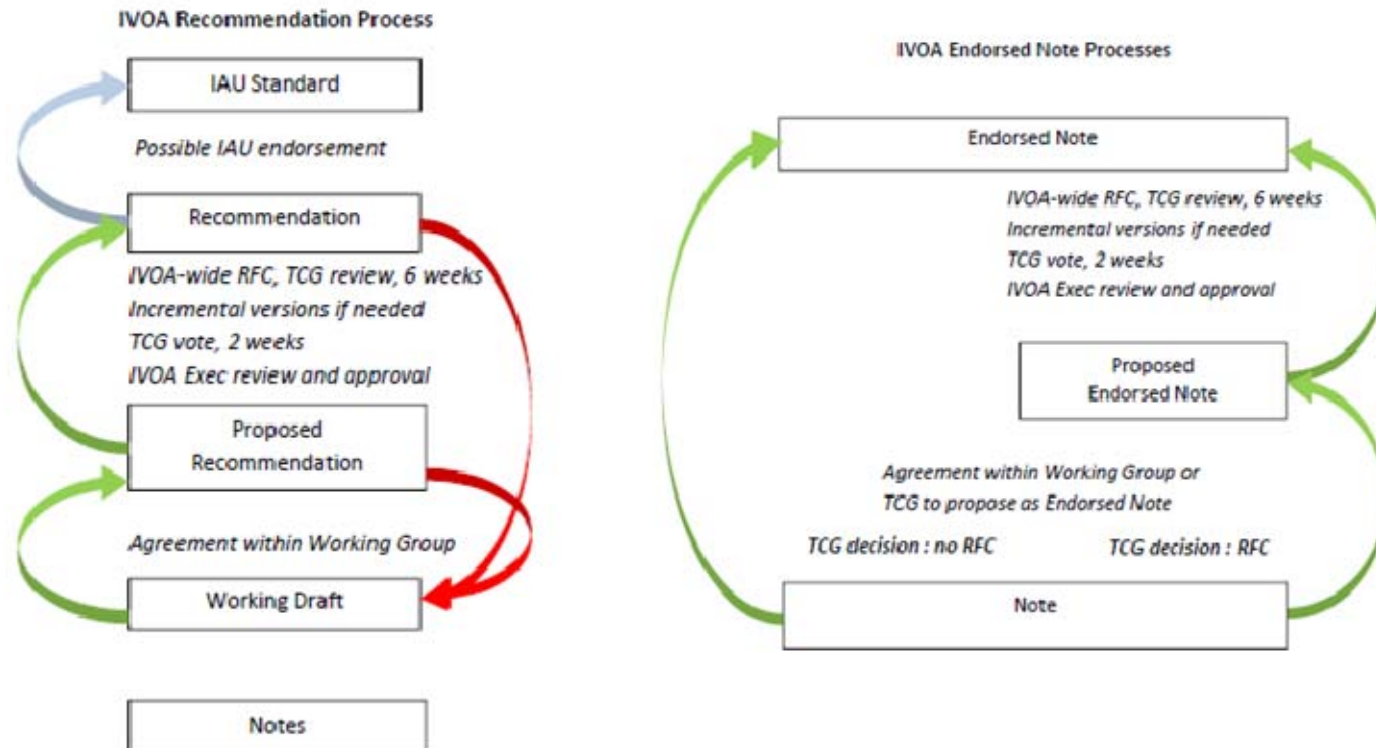
Working Group Page	Previous Messages	Subscribe	Send Mail	Chair	Vice Chair
Applications	archive	options	apps@ivoa.net	Pierre Fernique	Tom Donaldson
Data Access Layer	archive	options	dal@ivoa.net	François Bonnarel	Marco Molinaro
Data Model	archive	options	dm@ivoa.net	Mark Cresitello-Dittmar	Laurent Michel
Grid & Web Services	archive	options	grid@ivoa.net	Brian Major	Giuliano Taffoni
Registry	archive	options	registry@ivoa.net	Markus Demleitner	Theresa Dower
Semantics	archive	options	semantics@ivoa.net	Mireille Louys	Alberto Accomazzi

* See the Policy on IVOA Working Group/Interest Group Chairs & Vice chairs for an explanation of the role of Chairs & Vice-chairs. You can also look at the IVOA History page on the wiki to see term dates for the positions.

Interest Groups

Interest Group Page	Previous Messages	Subscribe	Mailing List	Chair	Vice Chair
Data Curation & Preservation	archives	options	datacp@ivoa.net	Francoise Genova	
Education	archives	options	edu@ivoa.net	Chenzhou Cui	Hendrik Heint
Knowledge Discovery in Databases	archives	options	kdd@ivoa.net	Kai Polsterer	N/A
Operations	archives	options	ops@ivoa.net	Tom McGlynn	Mark Taylor
Solar System	archives	options	ssig@ivoa.net	Baptiste Ceconi	
Theory	archives	options	theory@ivoa.net	Carlos Rodrigo	
Time Domain	archives	options	voevent@ivoa.net	Ada Nebot	Dave Morris

IVOA processes



IVOA Standards



IVOA Document Standards Version 2.0

IVOA Recommendation 17 May 2017

Current and previous versions:
<http://www.ivoa.net/documents/DocStd>

Editor:
 F. Genova

Authors:
 F. Genova, C. Arviset, M. Demleitner, B. Glendenning, M. Molinaro, R. J. Hanisch, B. Rino

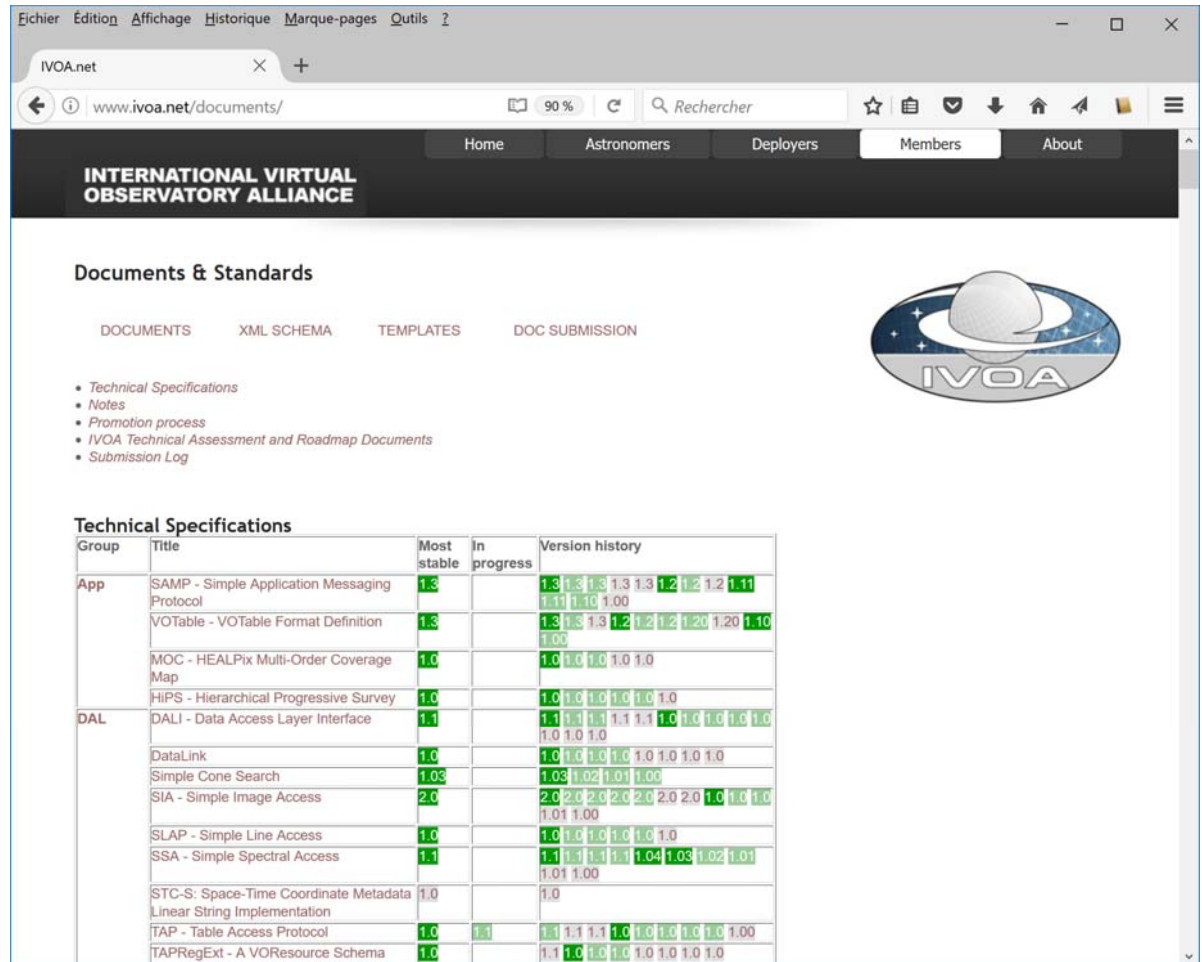
Abstract

This document describes the types of official IVOA documents and the process by which documents are advanced from Working Drafts to formal Recommendations and from Notes to Endorsed Notes.

Status of this document

This document has been produced by the IVOA Standing Committee on Standards and Processes. It has been reviewed by IVOA Members and other interested parties, and has been endorsed by the IVOA Executive Committee as an IVOA Recommendation. It is a stable document and may be used as reference material or cited as a normative reference from another document. IVOA's role in making the Recommendation is to draw attention to the specification and to promote its widespread deployment. This enhances the functionality and interoperability inside the Astronomical Community

A list of [current IVOA Recommendations and other technical documents](http://www.ivoa.net/documents/) can be found at <http://www.ivoa.net/documents/>.



INTERNATIONAL VIRTUAL OBSERVATORY ALLIANCE

DOCUMENTS XML SCHEMA TEMPLATES DOC SUBMISSION

- *Technical Specifications*
- *Notes*
- *Promotion process*
- *IVOA Technical Assessment and Roadmap Documents*
- *Submission Log*

Technical Specifications

Group	Title	Most stable	In progress	Version history
App	SAMP - Simple Application Messaging Protocol	1.3		1.3 1.3 1.3 1.3 1.3 1.2 1.2 1.2 1.1 1.1 1.0 1.0
	VOTable - VOTable Format Definition	1.3		1.3 1.3 1.3 1.2 1.2 1.2 1.2 1.2 1.0 1.10 1.0
	MOC - HEALPix Multi-Order Coverage Map	1.0		1.0 1.0 1.0 1.0 1.0
	HIPS - Hierarchical Progressive Survey	1.0		1.0 1.0 1.0 1.0 1.0 1.0
DAL	DALI - Data Access Layer Interface	1.1		1.1 1.1 1.1 1.1 1.1 1.0 1.0 1.0 1.0 1.0 1.0
	DataLink	1.0		1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
	Simple Cone Search	1.03		1.03 1.02 1.01 1.00
	SIA - Simple Image Access	2.0		2.0 2.0 2.0 2.0 2.0 2.0 2.0 1.0 1.0 1.0 1.0 1.00 1.00
	SLAP - Simple Line Access	1.0		1.0 1.0 1.0 1.0 1.0 1.0
	SSA - Simple Spectral Access	1.1		1.1 1.1 1.1 1.1 1.04 1.03 1.02 1.01 1.01 1.00
	STC-S: Space-Time Coordinate Metadata Linear String Implementation	1.0		1.0
	TAP - Table Access Protocol	1.0	1.1	1.1 1.1 1.1 1.1 1.0 1.0 1.0 1.0 1.00
	TAPRegExt - A VOResource Schema	1.0		1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0

IVOA status

- A fully operational framework for data and tool interoperability
- Building blocks reused by data providers in their systems
- Fully open, distributed and inclusive system, no centre
- 100+ « authorities » declared at least a resource in the registry
- Hidden from end-users, because it works!
- Current priorities (also ASTERICS' !)
 - Large project (ESFRI et al) needs
 - Multi-D – first 'caravan of standards' completed >>> implementation and feedback phase
 - Time domain