



**IVOA November 2024 Interoperability Meeting**  
**15-17 November 2024**  
**La Valletta, Malta**

# TCG Opening

**IVOA**

**Marco Molinaro [INAF]**

**Tom Donaldson [MAST/STScI]**

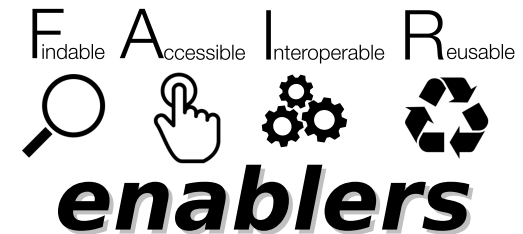


**L-Università  
ta' Malta**

# Technical Coordination Group (TCG)



- **The TCG is made up of the chairs and vice-chairs of Working Groups (WG), Interest Groups (IG), and Committees (~30 individuals in all)**
- **TCG responsibilities:**
  - Build consensus within WGs and with the community
  - Assure coordination between WG/IGs & CSP
  - Liaison with IVOA Executive Committee
  - Play key role in the documents & standards process(es)
  - Support authors, co-authors, contributors, reviewers
  - Organize the programme for InterOp meetings



# Technical Coordination Group (TCG)



## TCG roles

- appointed by the IVOA Executive Committee
- nominal 3 years term
- 1 year possible extension

	Chair	Vice-Chair
TCG	<a href="#">Marco Molinaro</a>	<a href="#">Tom Donaldson</a>
<b>Working Groups</b>		
<a href="#">Applications</a>	<a href="#">Pierre Le Sidaner</a>	<a href="#">Adrian Damian</a>
<a href="#">Data Access Layer</a>	<a href="#">Gregory Mantelet</a>	<a href="#">Joshua Fraustro</a>
<a href="#">Data Model</a>	<a href="#">Mark Cresitello-Dittmar</a>	<a href="#">Mathieu Servillat</a>
<a href="#">Grid and Web Services</a>	<a href="#">Jesus Salgado</a>	<a href="#">Sara Bertocco</a>
<a href="#">Registry</a>	<a href="#">Renaud Savalle</a>	<a href="#">Tess Jaffe</a>
<a href="#">Semantics</a>	<a href="#">Baptiste Cecconi</a>	<a href="#">Sebastien Derriere</a>
<b>Interest Groups</b>		
<a href="#">Data Curation &amp; Preservation</a>	<a href="#">Gilles Landais</a>	<a href="#">Gus Muench</a>
<a href="#">Education</a>	<a href="#">Shanshan Li</a>	OPEN
<a href="#">Knowledge Discovery</a>	<a href="#">Yihan Tao</a>	OPEN
<a href="#">Operations</a>	<a href="#">Steve Groom</a>	<a href="#">Tamara Civera</a>
<a href="#">Radio Astronomy</a>	<a href="#">Mark Kettenis</a>	<a href="#">Ricardo Rizzo</a>
<a href="#">Solar System</a>	<a href="#">Anne Raugh</a>	<a href="#">Markus Demleitner</a>
<a href="#">Time Domain</a>	OPEN	<a href="#">Pierre Fernique</a>
<b>IVOA Committees</b>		
<a href="#">Exec</a>	<a href="#">Simon O'Toole</a>	<a href="#">JJ Kavelaars</a>
<a href="#">Science Priorities</a>	<a href="#">Francesca Civano</a>	<a href="#">Vandana Desai</a>
<a href="#">Standard and Processes</a>	<a href="#">Patrick Dowler</a>	

# IVOA Architecture



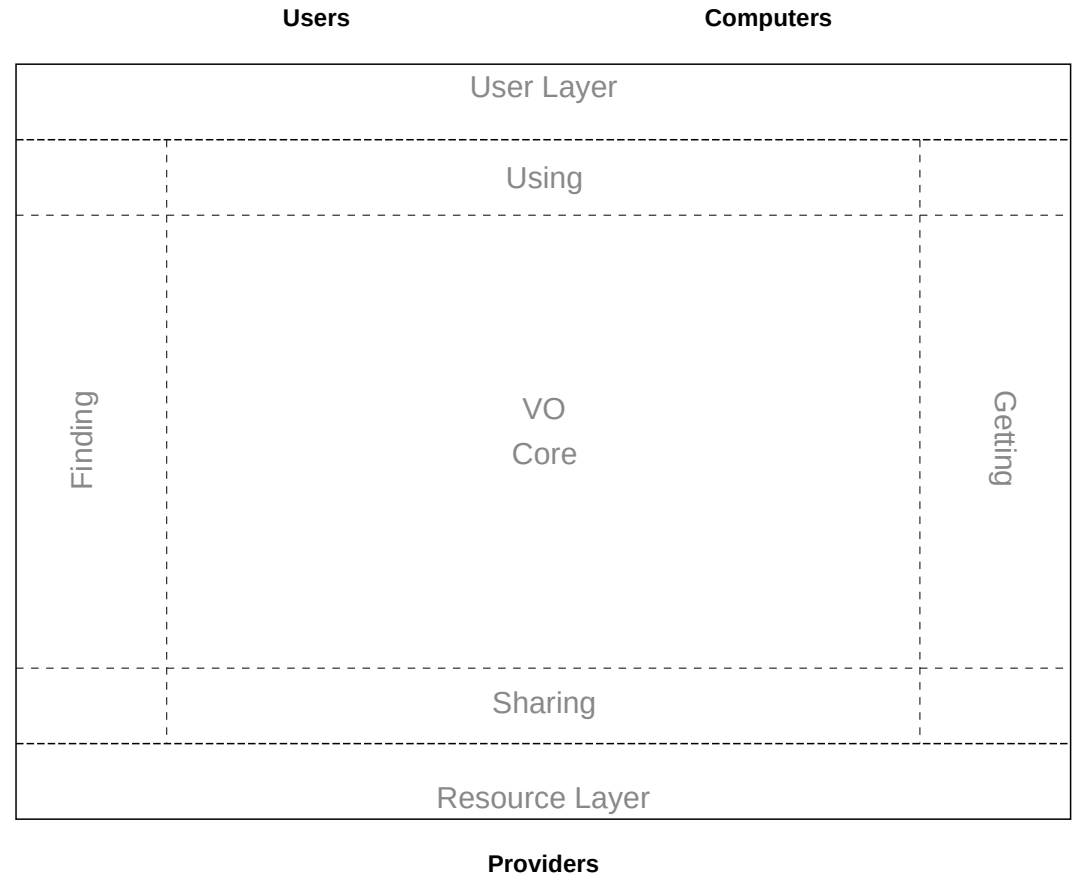
## IVOA Architecture (Endorsed Note)

describes

- architecture
- standards
- how they work together
- updated every ~3 years

version 2.1

released 2024-11-14



# IVOA Architecture



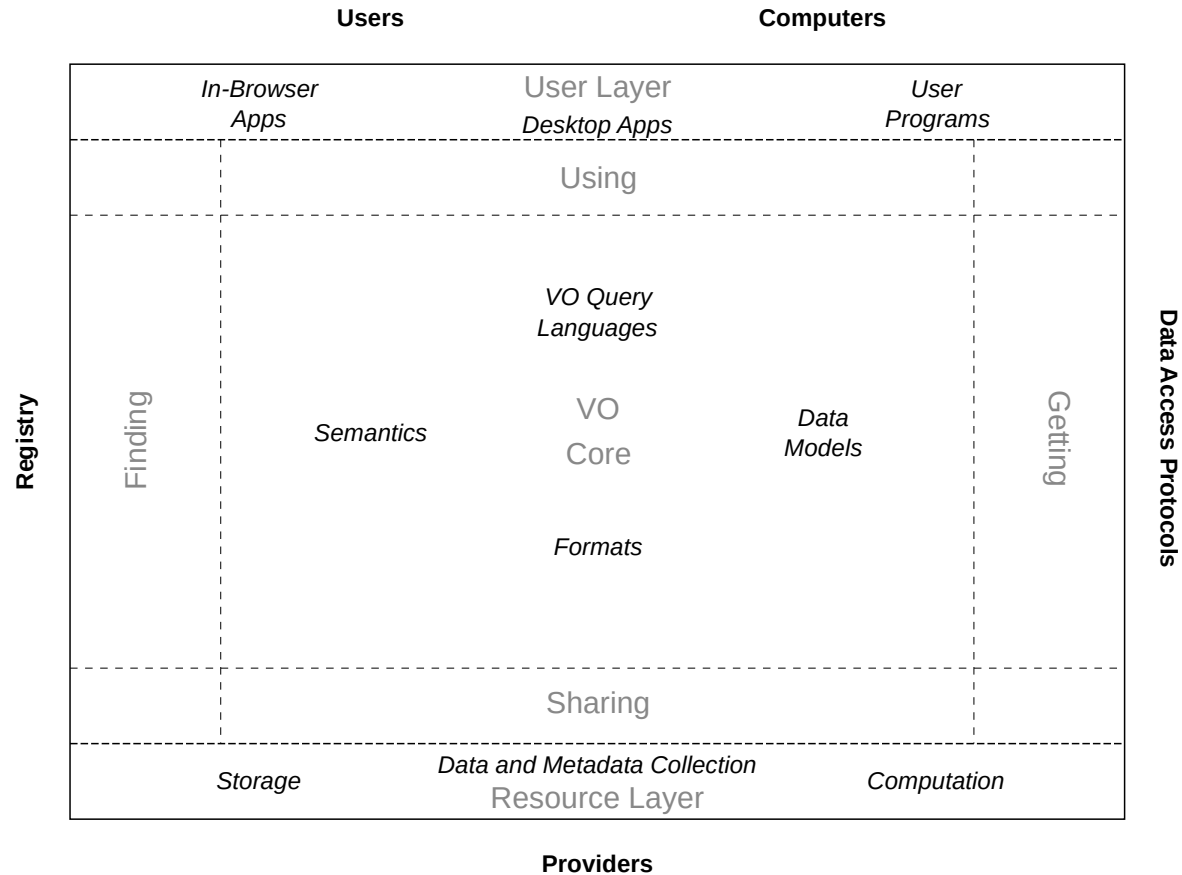
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# IVOA Architecture



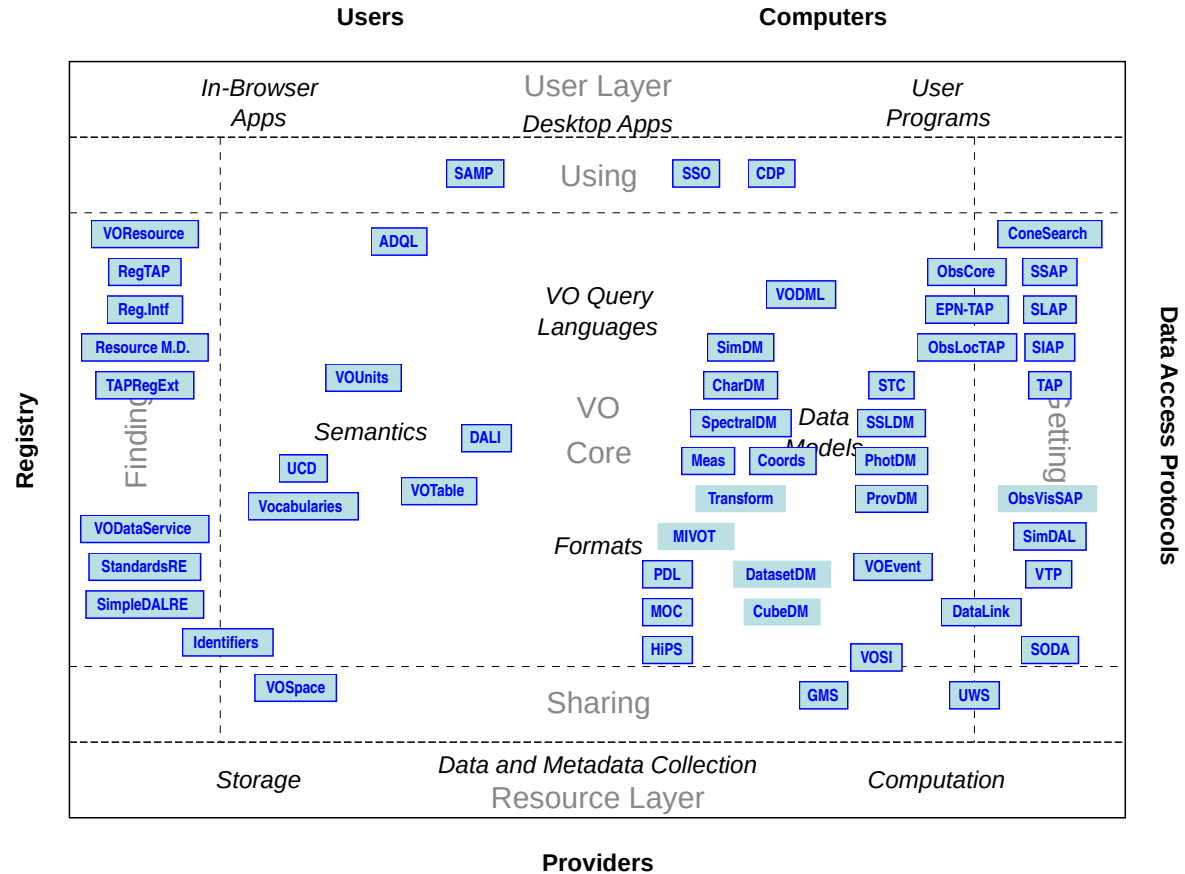
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- updated every ~3 years

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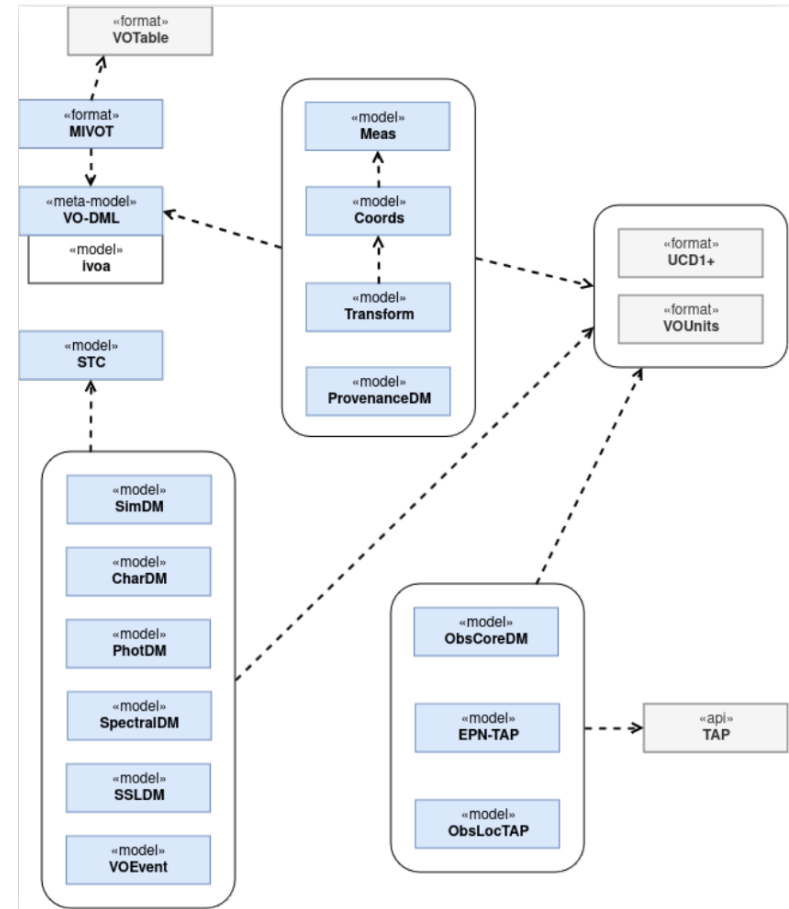
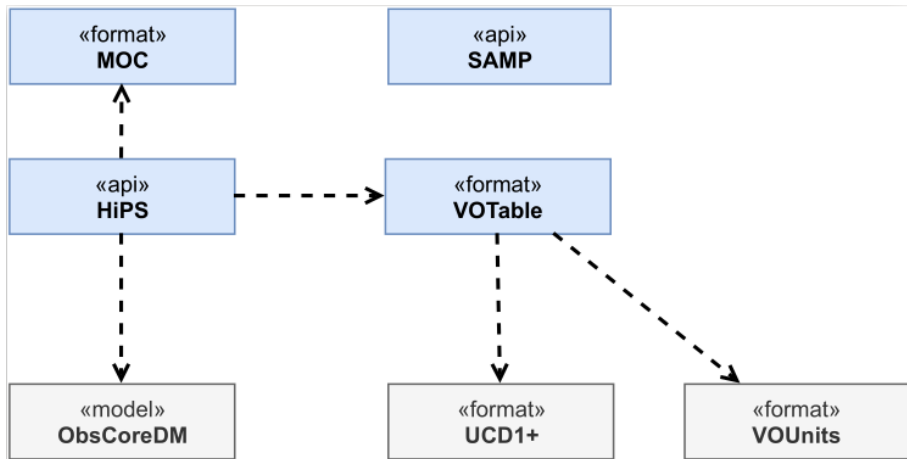
released 2024-11-14



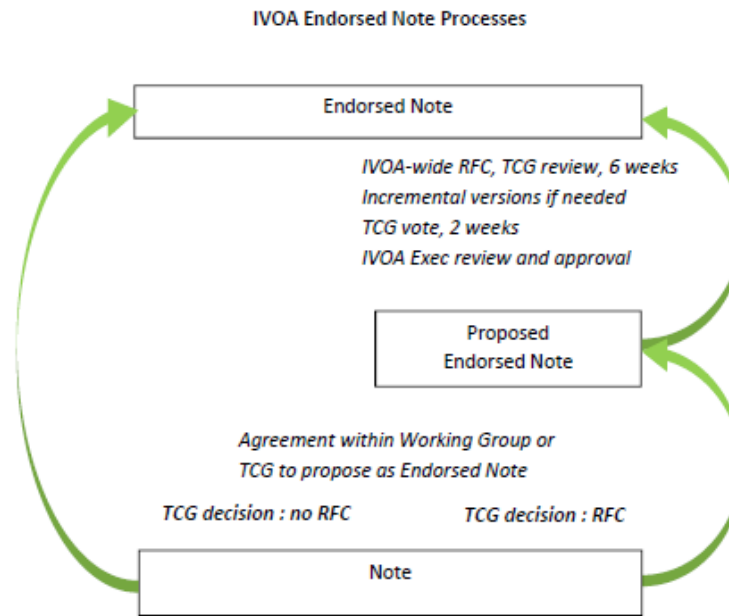
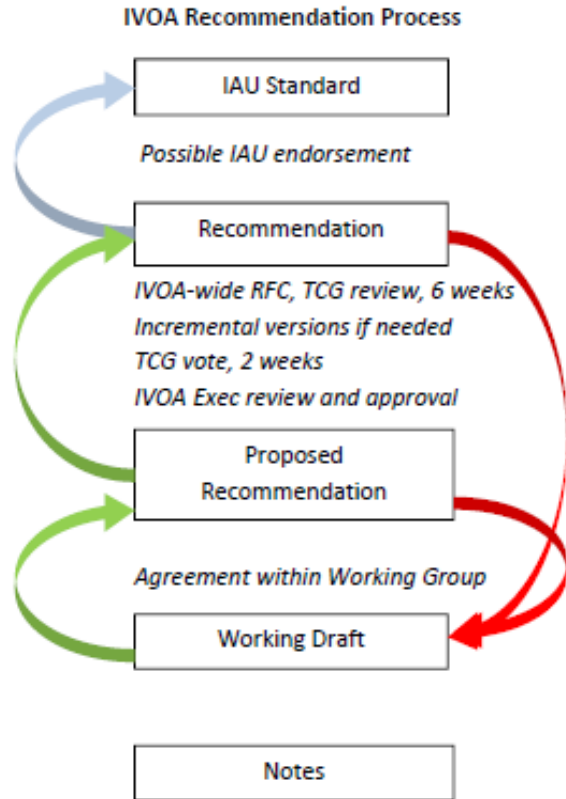
# IVOA Architecture



## IVOA Architecture (Endorsed Note)



# Documents, Process(es), & TCG



- Vocabularies management
- vocabulary enhancement request
  - Semantics WG management  
UCD board (for UCD changes)  
community discussion
  - submission to TCG
  - TCG approval/rejection

- Erratum process
- Erratum identification
  - proposal submission to relevant WG
  - WG discussion
  - submission to TCG
  - TCG approval/rejection

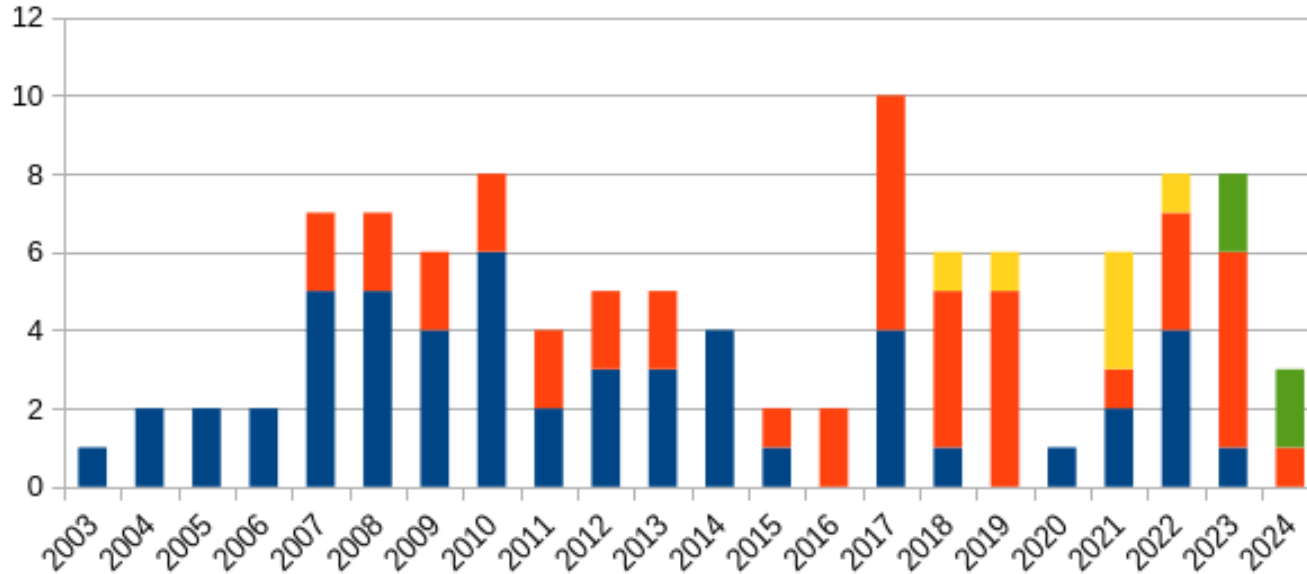


# Historical record

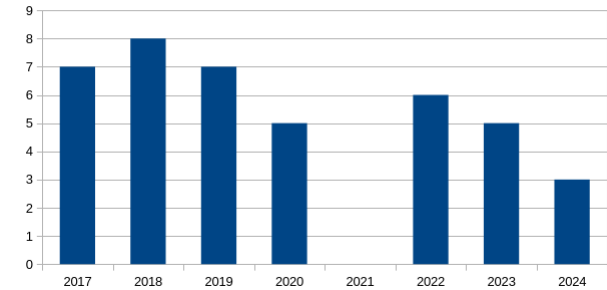


## Recommendations & Endorsed Notes

■ REC ■ REC updates ■ EN ■ EN updates

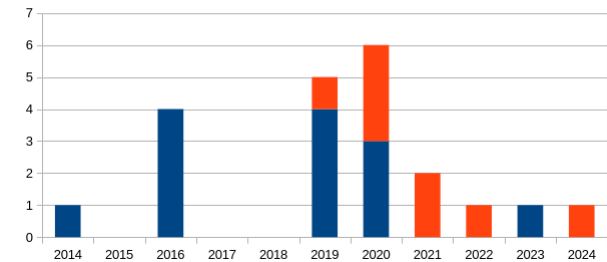


## Errata



## Vocabularies & updates

■ Vocabularies ■ Voc. Enhancements



REC

RegTAP-1.2

EN

UDFCatalogue-1.2

Architecture-2.1

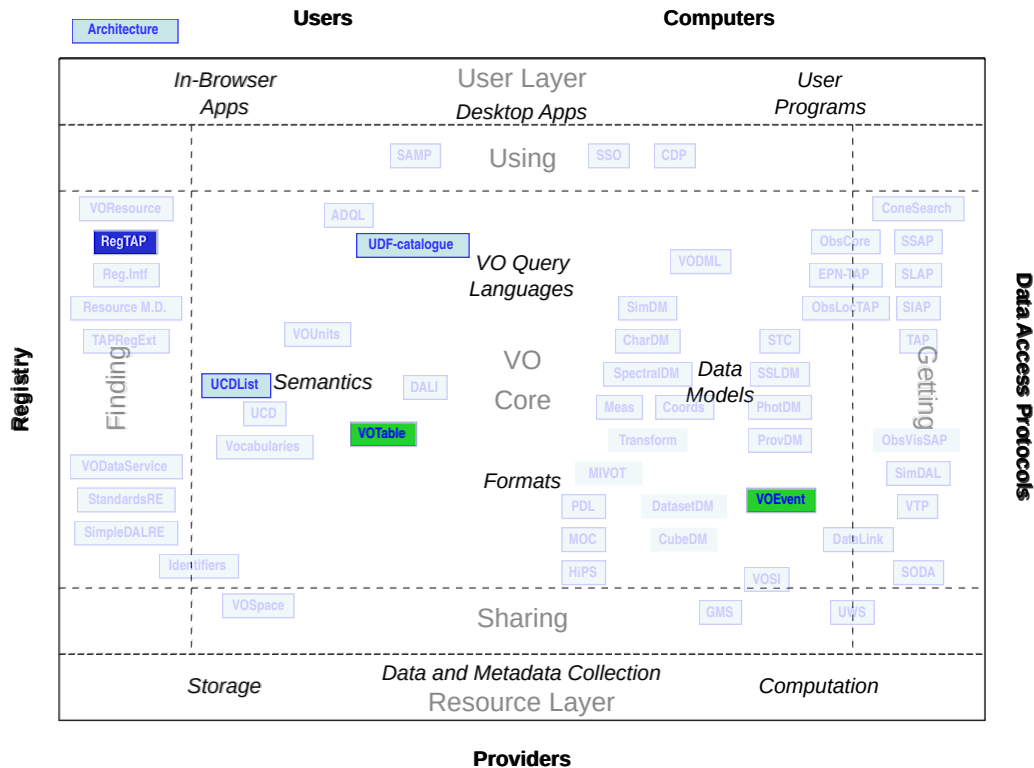
RFC

VOTable-1.5

VOEvent-2.1

PEN

UCDList-1.6



Current & Recent Standards



# Technical Roadmap



- **WGs and IGs create and maintain roadmaps**
- **Covers period from one Interop to the next**
- **Provides direction**
- **Summary of activity**
- **Projects future work**

## Technical Coordination Group - Roadmaps

This page lists all the roadmaps the TCG updated over time. There are usually two roadmaps per year, spanning the activities planned for the time span between two subsequent Interoperability Meetings (roughly 6 months).

### Current Roadmap

Development activities by the various IVOA working and interest groups in 2024 between the May 2024 Interoperability (Sydney) and November 2024 Interoperability (Malta).

- [2024A Roadmap](#)

### Previous Roadmaps

Year	~May to November	~November to May (year+1)
2023	<a href="#">2023A Roadmap</a>	<a href="#">2023B Roadmap</a>
2022	<a href="#">2022A Roadmap</a>	<a href="#">2022B Roadmap</a>
2021	<a href="#">2021A Roadmap</a>	<a href="#">2021B Roadmap</a>
2020	<a href="#">2020A Roadmap</a>	<a href="#">2020B Roadmap</a>
2019	<a href="#">2019A Roadmap</a>	<a href="#">2019B Roadmap</a>
2018	<a href="#">2018A Roadmap</a>	<a href="#">2018B Roadmap</a>
2017	<a href="#">2017A Roadmap</a>	<a href="#">2017B Roadmap</a>
2016	<a href="#">2016A Roadmap</a>	<a href="#">2016B Roadmap</a>
2015	<a href="#">2015A Roadmap</a>	<a href="#">2015B Roadmap</a>
2014	<a href="#">2014A Roadmap</a>	<a href="#">2014B Roadmap</a>
2013	<a href="#">2013A Roadmap</a>	<a href="#">2013B Roadmap</a>

<https://wiki.ivoa.net/twiki/bin/view/IVOA/TCGRoadmaps>

# This Interop



we are here

Friday November 15, 2024				
session	Time	Room	Topic	lead/speaker
	9:45-10:30		State of the TCG	Marco Molinaro
			Charge to the Working Groups	Working Group/Interest Group Chairs
	10:30-11:00		<b>coffee/tea break</b>	
2	11:00-12:30	Aula Magna	High Energy and Time Domain	Francesca Civano - Janet Evans
	12:30-14:00		<b>lunch break</b> (local restaurants)	
3	14:00-15:30	Aula Magna	Protocol Transitioning Tiger Team	Janet Evans
	15:30-16:00		<b>coffee/tea break</b>	
4	16:00-17:30	Aula Magna	Applications WG 1	PierreLesidaner / AdrianDamian
Saturday November 16, 2024				
session	Time	Room	Session	lead/speaker
5	9:00-10:30	Aula Magna	Data Access Layer WG	GregoryMantelet / JoshuaFraustro
		room 103	GWS WG	JesusSalgado / SaraBertocco
	10:30-11:00		<b>coffee/tea break</b>	
6	11:00-12:30	Aula Magna	Data Models	Mark Cresitello-Dittmar / MathieuServillat
		room 103	Data Curation & Preservation IG	GillesLandais / GusMuench
	12:30-14:00		<b>lunch break</b> (local restaurants)	
7	14:00-15:30	Aula Magna	GWS WG & Knowledge Discovery IG	JesusSalgado / SaraBertocco + YihanTao
		room 103	Registry WG	Renaud Savalle/Tess Jaffe
	15:30-16:00		<b>coffee/tea break</b>	
8	16:00-17:30	Aula Magna	Semantics WG & Solar System IG	BaptisteCecconi / SebastienDerriere + AnneRaugh / MarkusDemleitner
		room 103	Applications WG & Data Models WG	PierreLesidaner / AdrianDamian + Mark Cresitello-Dittmar / MathieuServillat
Sunday November 17, 2024				
session	Time	Room	Session	lead/speaker
9	9:00-10:30	Aula Magna	Radio Astronomy IG	Mark Kettenis/Ricardo Rizzo
		room 103	Operations IG	Steve Groom/Tamara Clivera
	10:30-11:00		<b>coffee/tea break</b>	
10	11:00-12:30	Aula Magna	Closing Plenary	
			Summary from Working Groups	WG/IG chairs
			TCG Closing Remarks	Marco Molinaro
			IVOA Executive Committee Closing Remarks	Simon O'Toole

<https://wiki.ivoa.net/twiki/bin/view/IVOA/InterOpNov2024>

TCG Opening – IVOA November 2024 Interoperability Meeting – 15.11.2024,

# This Interop



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**High Energy  
&  
Time Alerts**

		room 103	Data Curation & Preservation IG	GillesLandais / GusMuench
	12:30-14:00	<b>lunch break</b> (local restaurants)		
7	14:00-15:30	Aula Magna	GWS WG & Knowledge Discovery IG	JesusSalgado / SaraBertocco + YiHanTao
		room 103	Registry WG	Renaud Savalle/Tess Jaffe
	15:30-16:00	<b>coffee/tea break</b>		
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		room 103	Applications WG & Data Models WG	PierreLesidaner / AdrianDamian + Mark Cresitello-Dittmar / MathieuServillat

**HiPS, MOC  
parquet(&VOTable)**

**Transition Protocols**

Sunday November 17, 2024				
session	Time	Room	Session	lead/speaker
9	9:00-10:30	Aula Magna	Radio Astronomy IG	Mark Kettenis/Ricardo Rizzo
		room 103	Operations IG	Steve Groom/Tamara Civera
	10:30-11:00	<b>coffee/tea break</b>		
10	11:00-12:30	Aula Magna	Closing Plenary	
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5	9:00-10:30	Aula Magna	Data Access Layer WG	<span style="color:red">●</span> <a href="#">GregoryMantelet</a> / <a href="#">JoshuaFraustro</a>
		room 103	GWS WG	<span style="color:green">●</span> <a href="#">JesusSalgado</a> / <a href="#">SaraBertocco</a>
	10:30-11:00	<b>coffee/tea break</b>		
6	11:00-12:30	Aula Magna	Data Models	<span style="color:blue">●</span> <a href="#">Mark Cresitello-Dittmar</a> / <a href="#">MathieuServillat</a>
		room 103	Data Curation & Preservation IG	<span style="color:orange">●</span> <a href="#">GillesLandais</a> / <a href="#">GusMuench</a>
	12:30-14:00	<b>lunch break</b> (local restaurants)		
7	14:00-15:30	Aula Magna	GWS WG & Knowledge Discovery IG	<span style="color:purple">●</span> <a href="#">JesusSalgado</a> / <a href="#">SaraBertocco</a> + <a href="#">YihanTao</a>
		room 103	Registry WG	<span style="color:lightgreen">●</span> <a href="#">Renaud Savalle</a> / <a href="#">Tess Jaffe</a>
	15:30-16:00	<b>coffee/tea break</b>		
8	16:00-17:30	Aula Magna	Semantics WG & Solar System IG	<span style="color:blue">●</span> <a href="#">BaptisteCecconi</a> / <a href="#">SebastienDerriere</a> + <a href="#">AnneRaugh</a> / <a href="#">MarkusDemleitner</a>
		room 103	Applications WG & Data Models WG	<span style="color:yellowgreen">●</span> <a href="#">PierreLesidaner</a> / <a href="#">AdrianDamian</a> + <a href="#">Mark Cresitello-Dittmar</a> / <a href="#">MathieuServillat</a>

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		room 103	Operations IG	<a href="#">Steve Groom</a> / <a href="#">Tamara Civera</a>
	10:30-11:00	<b>coffee/tea break</b>		
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TAP

P3T  
SSO

CAOM

Models integration

DOI, Bib. interfaces

Benefiting of Registry

AI in astronomy  
impacts on standards

Vocabularies update  
PDS & EPNcore

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9	9:00-10:30	Aula Magna	<u>Radio Astronomy IG</u> <span style="color: green;">●</span>	Mark Kettenis/Ricardo Rizzo
		room 103	<u>Operations IG</u> <span style="color: red;">●</span>	Steve Groom/Tamara Civera
	10:30-11:00		<b>coffee/tea break</b>	
10	11:00-12:30	Aula Magna	Closing Plenary	
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**Obscore  
&  
extensions**

8	16:00-17:30	Aula Magna	Semantics WG & Solar System IG	BaptisteCecconi / SebastienDerriere + AnneRaugh / MarkusDemleitner
		room 103	Applications WG & Data Models WG	PierreLesidaner / AdrianDamian + Mark Cresitello-Dittmar / MathieuServillat

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**Weather report**

<https://wiki.ivoa.net/twiki/bin/view/IVOA/InterOpNov2024>

**TCG Opening – IVOA November 2024 Interoperability Meeting – 15.11.2024,**

- Get Involved – Like every organization we need new perspectives!
- We are an open community – if a standard is close but doesn't fit – implement an extension & provide feedback to influence change to the standard
- Success takes Resources. Work to implement or extend a standard as part of your project work. Your project benefits and so does Data Interoperability
- Get on the email lists - Provide feedback to WG/IG calls for input. Attend the IVOA Interops & encourage others to attend as well

**If you want to go Fast, go Alone – If you want to go Far, go Together**



**How to contribute**



- IVOA website → <https://www.ivoa.net/>
- IVOA wiki pages → <https://wiki.ivoa.net/>
- mailing lists, subscription  
interop@ivoa.net (general info) + WG- and IG-specific  
<https://ivoa.net/members>
- slack workspace → <https://ivoa.slack.com/>
- github  
<https://github.com/ivoa>: collaboration on projects, tools, ideas  
<https://github.com/ivoa-std>: standard documents development



## How to participate

# IVOA.net – rebuilding the website



## INTERNATIONAL VIRTUAL OBSERVATORY ALLIANCE

Home Astronomers Deployers Members About

The Virtual Observatory (VO) is the vision that astronomical datasets and other resources should work as a seamless whole. Many projects and data centres worldwide are working towards this goal. The International Virtual Observatory Alliance (IVOA) is an organisation that debates and agrees the technical standards that are needed to make the VO possible. It also acts as a focus for VO aspirations, a framework for discussing and sharing VO ideas and technology, and body for promoting and publicising the VO.

To learn more about the IVOA as an organisation, read the "About" section.

To learn more about the VO from a user's point of view, including how to find VO tools and services, read the "Astronomers" section. There is also a page about the VO for students and the public.

To learn how to publish VO services, or write VO-compatible software, start by reading the "Deployers/Developers" section.

Internal IVOA discussions are publicly viewable in the "Members" section.



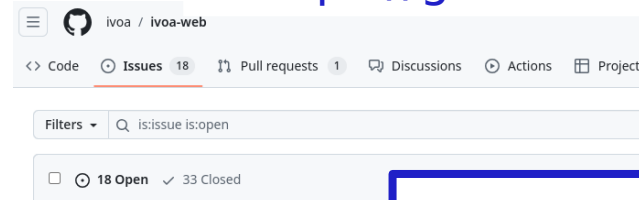
### IVOA NEWS

March 2022 Issue of the IVOA Newsletter

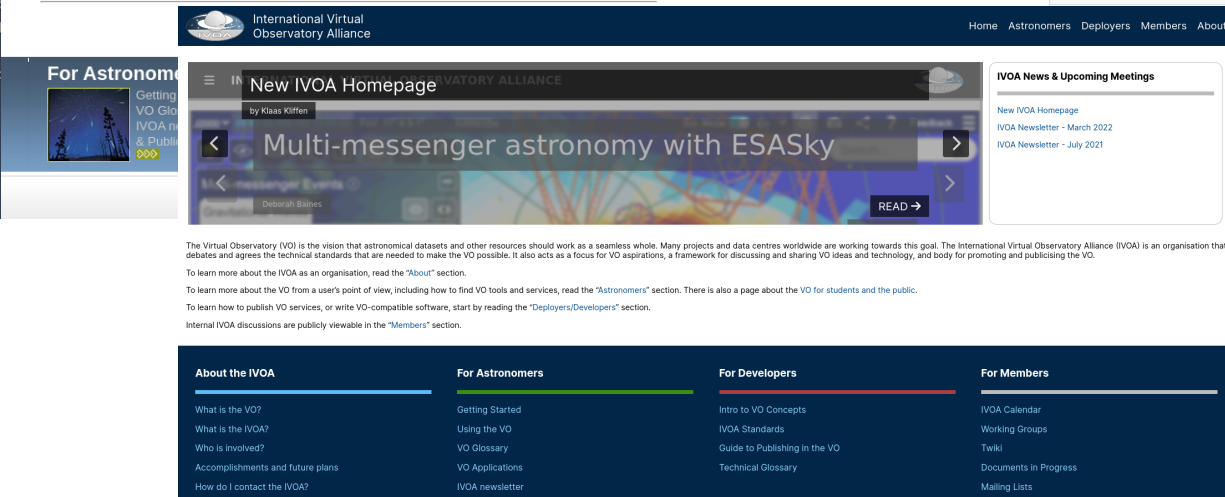
### UPCOMING MEETINGS

IVOA November 2024 Interoperability Meeting  
15-17 November 2024, La Valletta (Malta)

- <https://ivoa.net/>
- <https://webtest.ivoa.info/>
- <https://github.com/ivoa/ivoa-web>



Go find Jeremy!  
→ feedback  
→ volunteer  
any break will do!



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**La Valletta, Malta**

**Thank you & Welcome!**

**Thanks to Uni.Malta for hosting us!**

**Hope you will find the Interop engaging!**

**IVOA**

**Marco Molinaro [INAF]**

**Tom Donaldson [MAST/STSci]**



**L-Università  
ta' Malta**