



International

Virtual

Observatory

Alliance

The IVOA in 2011: Technical Assessment and Roadmap

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This version:

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Latest versions:

<http://www.ivoa.net/Documents/Notes/IVOATechRoadmap2010/>

<http://www.ivoa.net/Documents/Notes/IVOATechRoadmap2009/>

<http://www.ivoa.net/Documents/latest/IVOARoadMap-2008.html>

<http://www.ivoa.net/Documents/latest/IVOARoadMap-2007.html>

<http://www.ivoa.net/Documents/latest/RoadMap-2006.html>

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Abstract

This note describes the main technical achievements of the IVOA for the last year as well as the updated roadmaps for each Working Group and Interest Group for the upcoming year, detailing plans and associated milestones. Furthermore, it identifies specific issues that may require more focus coordination between some working groups and interest groups.

This notes focuses on the technical aspects of the IVOA work and does not cover the more general executive, organization and overall strategy areas of the IVOA.

Status of This Document

This is an IVOA Note expressing suggestions from and opinions of the authors. It is intended to share best practices, possible approaches, or other perspectives on interoperability with the Virtual Observatory. It should not be referenced or otherwise interpreted as a standard specification.

Once formally issued, it will be reviewed and accepted by the IVOA Executive Committee.

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1 IVOA Main Achievements since October 2010

1.1 General

The TCG released in October 2010 the “The IVOA in 2011: Technical Assessment and Roadmap” that can be found at:

<http://www.ivoa.net/Documents/Notes/IVOATechRoadmap2010/>

Following the request of having more TCG gatherings, we’ve continued to have various teleconferences through the year, and to establish more systematically the TCG Face to Face Meeting prior to each interoperability meeting. In particular, we hold TCG meeting in December 2010, May 2011 and October 2011:

<http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/TCGMeeting20101206>

<http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/InterOpMay2011TCG>

<http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/InterOpOct2011TCG>

These gave the opportunity to review the status of various IVOA standards, and to promote discussion across WG/IG for technical matters that affect widely the IVOA.

The TCG has been more proactive to prepare the programme of the interoperability meetings, well in advance and to ensure internal coordination so parallel WG / IG sessions are organized at best.

Systematic usage of the IVOA Architecture has been pursued for each of the existing and upcoming IVOA standards to ensure interdependencies with other IVOA standards are well understood by all WG and IG chairs.

1.2 Science use cases and Science Priorities

Following on the process setup the previous year, TCG work has continued to be partly driven by the science use cases set by the Committee on Science Priorities. These have been regularly reported and discussed at the TCG meetings and interoperability meetings.

The ObsTAP science use case is coming close to completion with the ObsCoreDM well advanced in the REC process. This will mark the first example of IVOA standards being full driven by a science case.

On the SED builder science case, significant progress has also been made, the necessary IVOA standards have been identified, and work within the corresponding WG have been performed accordingly. That should soon be completed by late 2011, early 2012.

It is expected that the CSP will define some new science cases in the coming months.

1.3 List of IVOA Standards produced in the last year

Various standards have reached the REC status in the last year:

2010			
Standards	WG	Date	Comments
SSLDM 1.0 Simple Spectra Line DM	DM	November 2010	
SLAP 1.0 Simple Line Access Protocol	DAL	November 2010	
WS BP 1.0 Web Service Basic Profile	GWS	December 2010	
SAMP 1.2 Simple Application Messaging Protocol	Apps	December 2010	Minor updates from SAMP 1.11
2011			
Standards	WG	Date	Comments
VOSI 1.0 IVOA Support Interface	GWS	May 2011	
VOEvent 2.0	VOEvent	July 2011	

Significant progress has also been made in a variety of standards that are currently in their Recommendation process so they should soon become a Recommendation (before the end of 2010), in particular:

- ObsCoreDM 1.0
- SSAP 1.1 together with SpectrumDM 1.1
- StandardsRegExt 1.0
- SimDM 1.0

ObsCoreDM 1.0 will represent the first example of fully science case driven IVOA standards, which had been defined as one of the Science Priorities by the CSP. Furthermore, extensive work has been done for the definition of the other science case, SED Data Model, where SSAP, SpectrumDM and PhotDM play an important part.

2 IVOA Architecture

The IVOA Architecture defined in 2010 has proven to be very stable since then. Minor updates have taken place for some of the IVOA standards, but overall, level 0 and level 1 have remained unchanged. We felt that there was no need for an update through 2011, but this should be envisaged for 2012, when even more IVOA standards have become Recommendations.

As a reminder and to ease the reading of the rest of the document, we present here the latest version of Level 2 of the IVOA Architecture.

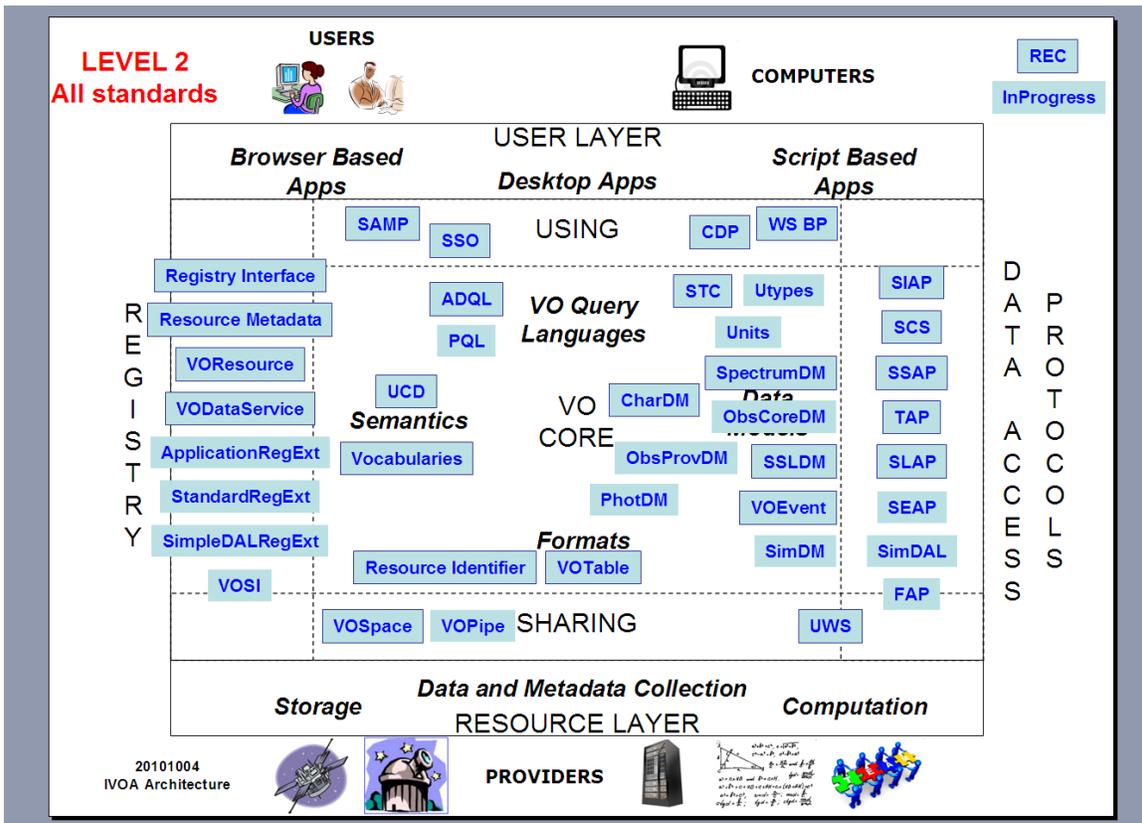


Figure 1: IVOA Architecture Level 2

Full note on IVOA Architecture from November 2010 can be found at:
<http://www.ivoa.net/Documents/Notes/IVOAArchitecture/20101123/>

3 IVOA Roadmap for the Upcoming Year

3.1 TCG general

Coordination amongst various WG and IG remains one of the main task of the TCG and proves to be necessary for many of the upcoming standards (eg SimDM, *RegExt, SEAP, etc...).

The completion of the IVOA standards required for the SED builder science case will be the top priority of the TCG in the coming year.

An update of the IVOA Architecture should also take place, reflecting all the new IVOA standards and other updates, two years after its initial version.

Now that many of the building blocks of the IVOA Architecture have been defined, we can see more and more data providers and application writers willing to implement IVOA standards and protocols. This sometimes generates the need from these groups to have “VO publishing tools”. Although some efforts had been done in that context in the previous years through national VO projects, the maintenance and updates of these tools is not really secured. The TCG has naturally been asked to look into this, although its exact role and mandate here is not that clear.

Another area where the TCG will probably take a more active role is to systematically seek for implementation feedback from IVOA standards. This will start at the Pune interoperability meeting where a dedicated session has been organized on that subject.

TCG Collaboration with the Committee on Science Priorities will continue, with now a clear working process which has proven to be successful for the recent science cases (ObsTAP and SED builder). New science cases might be defined and the TCG shall determine how these could be addressed with existing (or to be updated/defined) IVOA standards.

3.3 Data Access Layer WG

[TO BE CHECKED BY PAT]

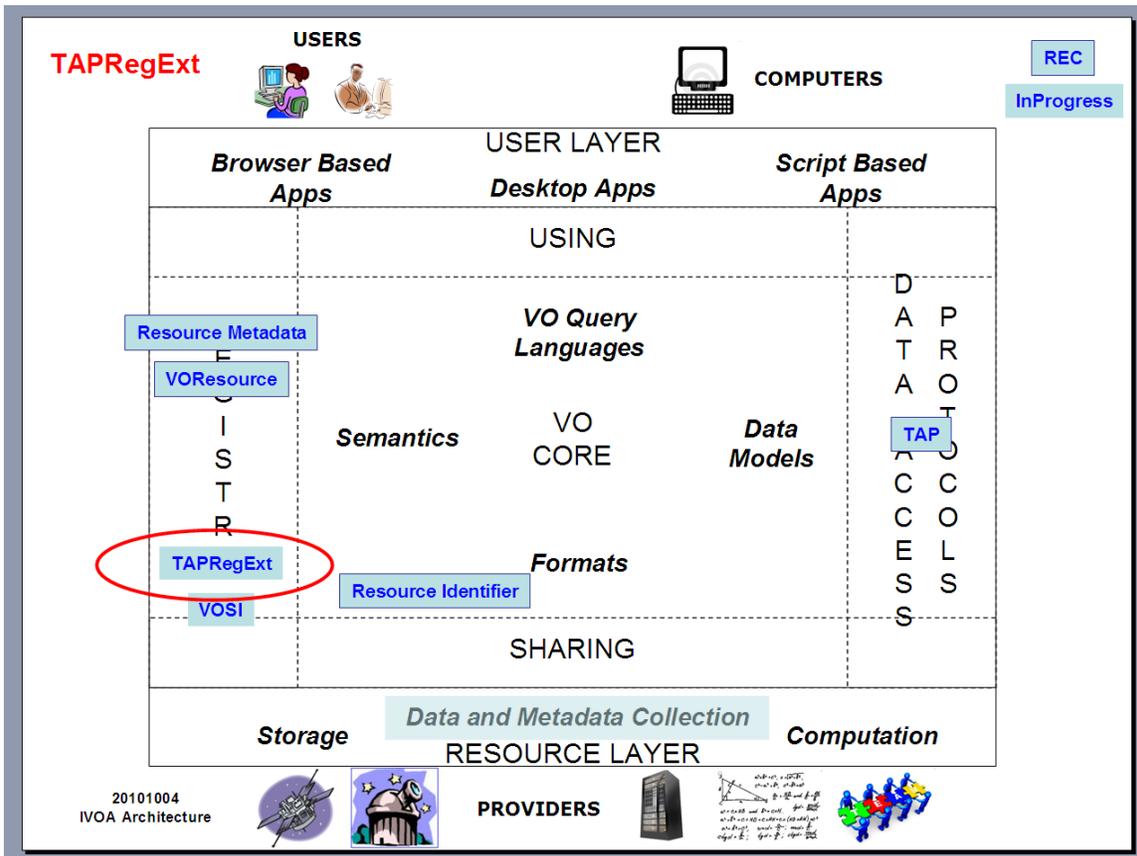
3.3.1 SSAP 1.1 (with SpectrumDM 1.1)

As implementation feedback, some inconsistencies have been found between SSAP and SpectrumDM. That has been resolved with new versions of both standards (SSAP v1.1 and SpectrumDM 1.1) which follow the same REF process to be finished in Autumn 2011:

2	[DAL] SSAP 1.1 (implementation feed)	18.95 mons	Mon 03/05/10	Wed 09/11/11	03/05	[DAL] SSAP 1.1 (implementation feedback)	09/11
2.1	in Working Group	12.38 mons	Mon 03/05/10	Fri 29/04/11	03/05	in Working Group	29/04
2.1.1	Work within WG	12.38 mons	Mon 03/05/10	Fri 29/04/11	03/05		
2.1.2	SSAP 1.1 WD	0 days	Mon 18/04/11	Mon 18/04/11	18/04	SSAP 1.1 WD	
2.2	SSAP 1.1 for PR	0 days	Wed 20/04/11	Wed 20/04/11	20/04	SSAP 1.1 for PR	
2.3	RFC period within interop	1 mon	Wed 20/04/11	Wed 18/05/11	20/04		
2.4	TCG review	5 mons	Thu 02/06/11	Wed 26/10/11	02/06		
2.5	PR submission to Exec	0 days	Wed 26/10/11	Wed 26/10/11	26/10	PR submission to Exec	
2.6	IVOA Exec review	2 wks	Thu 27/10/11	Wed 09/11/11	27/10		
2.7	REC SSAP 1.1 (implementation feedback)	0 days	Wed 09/11/11	Wed 09/11/11	09/11	REC SSAP 1.1 (implementation feedback)	

3.3.2 TAPRegExt 1.0

Since the release of TAP 1.0 in 2010, and following various service implementations, it has become necessary to define clearly how to register TAP services in IVOA Registries through the TAPRegExt standard. Although this standard belongs to the Registry area of the IVOA Architecture (see below),



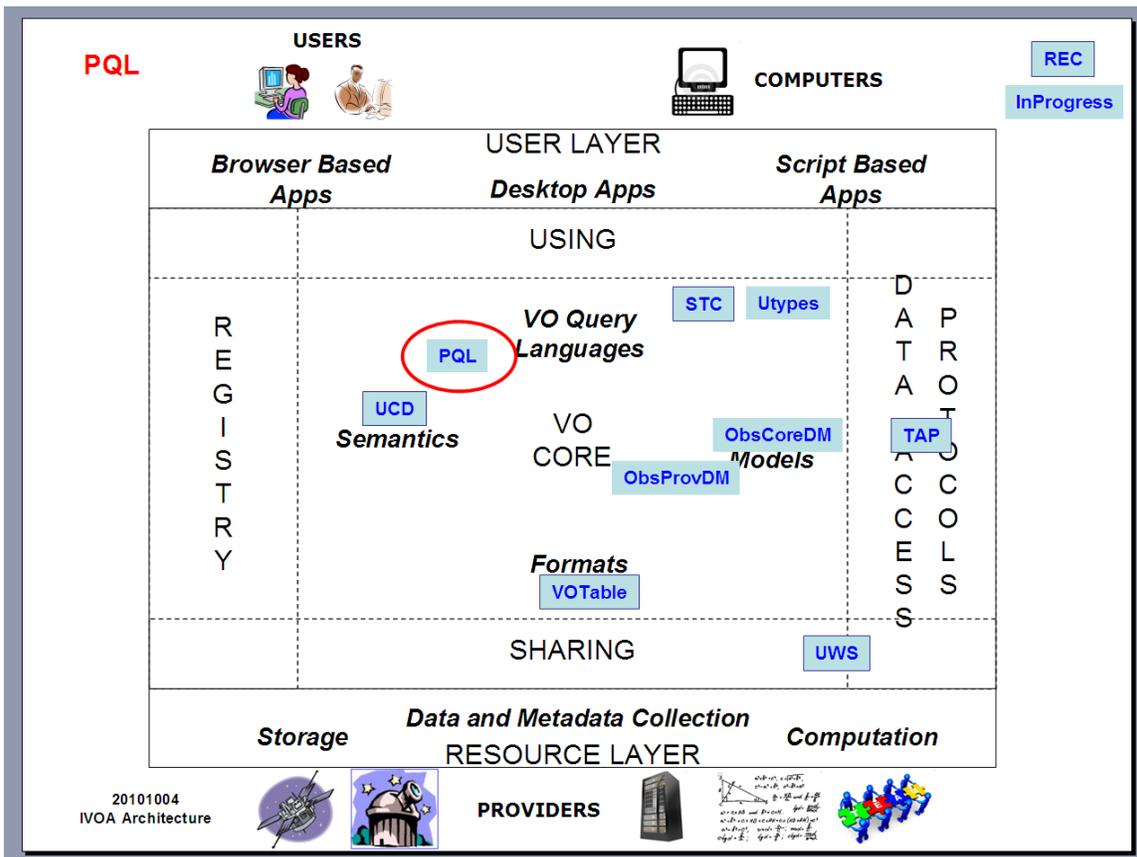
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Its definition has been taken care of by the DAL WG, following the REC process to be completed in 2011:

4	[DAL] TAPRegExt 1.0	15.95 mons	Fri 01/10/10	Thu 12/01/12	01/10	[DAL] TAPRegExt 1.0	12/01
4.1	in Working Group	13 mons	Fri 01/10/10	Tue 18/10/11	01/10	In Working Group	18/10
4.1.1	Work within WG	12.38 mons	Fri 01/10/10	Thu 29/09/11	01/10		
4.1.2	TAPRegExt 1.0 WD	0 days	Thu 27/01/11	Thu 27/01/11	27/01	TAPRegExt 1.0 WD	
4.1.3	TAPRegExt 1.0 WD	0 days	Wed 27/07/11	Wed 27/07/11	27/07	TAPRegExt 1.0 WD	
4.1.4	Final review within WG	60 days	Wed 27/07/11	Tue 18/10/11	27/07		
4.2	TAPRegExt 1.0for PR	0 days	Tue 18/10/11	Tue 18/10/11	18/10	TAPRegExt 1.0for PR	
4.3	RFC period within interop	1 mon	Wed 02/11/11	Wed 30/11/11	02/11		
4.4	TCG review	1 mon	Thu 01/12/11	Thu 29/12/11	01/12		
4.5	PR submission to Exec	0 days	Thu 29/12/11	Thu 29/12/11	29/12	PR submission to Exec	
4.6	IVOA Exec review	2 wks	Fri 30/12/11	Thu 12/01/12	30/12		
4.7	REC TAPRegExt 1.0	0 days	Thu 12/01/12	Thu 12/01/12	12/01	REC TAPRegExt 1.0	

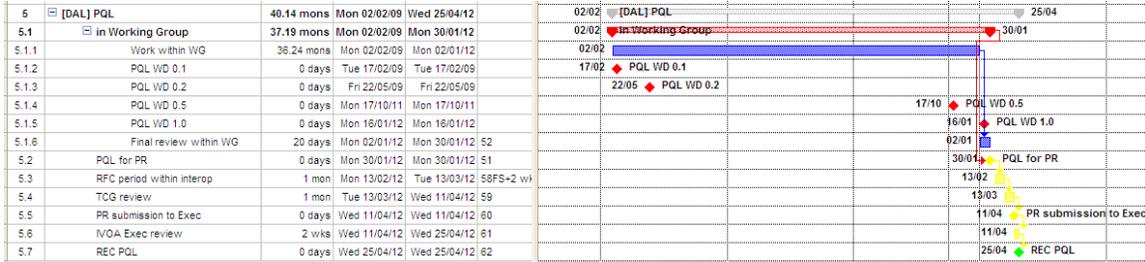
3.3.3 PQL – Parameter Query Language

PQL presents another Query Language, in particular for TAP.



PQL WD 0.2 was initially published 20th May 2009, but no tangible progress has been made since then, apart from some discussion during interoperability meetings. A new editor has been found and a new WD is expected soon so it could progress through REC early 2012:

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3.3.4 DALI – DAL Interfaces

DALI represents an effort to standardize the Interfaces for all the DAL standards. This has led to various discussions at various interoperability meetings, to try to determine its needs, its applicability to existing REC DAL standards and to future DAL standards. Its exact content should be determined by the end of 2011.

3.3.5 DataLink

Following various discussions at interoperability meeting, the concept for Datalink is now well understood, and its possibilities have been found to be of generated interest, in particular as it could be used to bridge discovery and access. Prototyping, collaboration, and practical experience are now required to push this further in 2011 and 2012.

3.3.6 DAL standards and SED builder science case

Important discussions and resulting agreements took place in 2011 with regards to the required DAL standards to support the SED building science case. It was felt that there are already several ways to access data to build SEDs:

- fully characterised photometry measurements from catalogues (using TAP + PhotDM-1.0 + STC-1.33)
- fully characterised spectrum (using SSA + SpectrumDM-1.2 or TAP + ObsCore + SpectrumDM-1.2)
- pre-built SEDs (using SSA + SED-DM-1.0 or TAP + ObsCore + SED-DM-1.0)

Hence the decision that it is currently not needed to define new nor to update existing DAL standards to access SEDs, but we can use the existing access protocols, learn from implementation experience and decide later on what is the best approach.

3.3.7 Other DAL standards

Do we want to say a word about potential work or non work in 2012 for

- SIAP 2.0 ?
- FAP ?
- Time line AP ?

3.4 Data Model WG

[TO BE CHECKED BY JESUS]

3.4.1 SpectrumDM 1.1 (with SSAP 1.1)

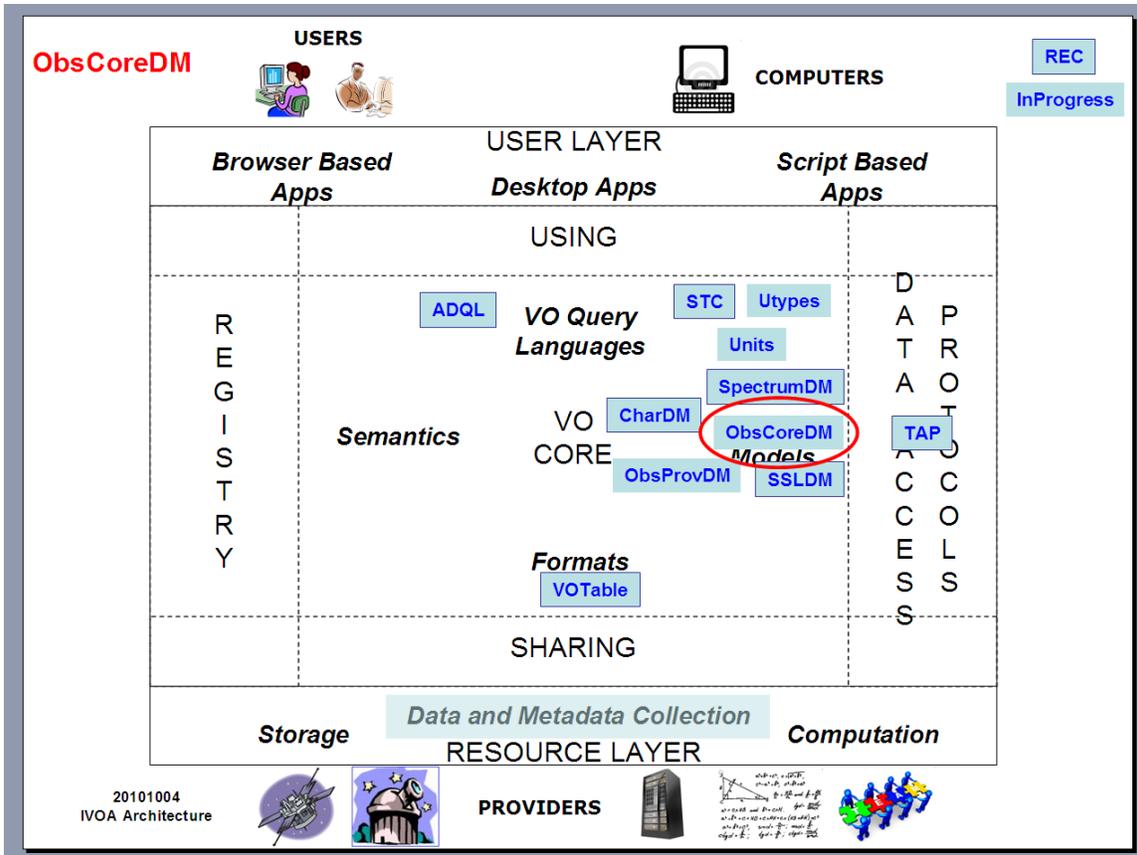
As implementation feedback, some inconsistencies have been found between SSAP and SpectrumDM. That has been resolved with new versions of both standards (SSAP v1.1 and SpectrumDM 1.1) which follow the same REF process to be finished in Autumn 2011:

3	[DM] SpectrumDM 1.1 (implementatio	18.95 mons	Mon 03/05/10	Wed 09/11/11	03/05	[DM] SpectrumDM 1.1 (implementat	09/11		
3.1	in Working Group	12.38 mons	Mon 03/05/10	Fri 29/04/11	03/05	in Working Group	29/04		
3.1.1	Work within WG	12.38 mons	Mon 03/05/10	Fri 29/04/11	03/05				
3.1.2	SpectrumDM 1.1 WD	0 days	Fri 18/03/11	Fri 18/03/11		18/03	◆ SpectrumDM 1.1 WD		
3.2	SpectrumDM 1.1 for PR	0 days	Wed 20/04/11	Wed 20/04/11		20/04	◆ SpectrumDM 1.1 for PR		
3.3	RFC period within interop	1 mon	Wed 20/04/11	Wed 18/05/11		20/04			
3.4	TCG review	5 mons	Thu 02/06/11	Wed 26/10/11		02/06			
3.5	PR submission to Exec	0 days	Wed 26/10/11	Wed 26/10/11		26/10	◆ PR submission to Exec		
3.6	IVOA Exec review	2 wks	Thu 27/10/11	Wed 09/11/11		27/10			
3.7	REC SpectrumDM 1.1 (implementati	0 days	Wed 09/11/11	Wed 09/11/11		09/11	◆ REC SpectrumDM 1.1 (implementation feedback)		

3.4.2 ObsCoreDM 1.0

ObsTAP has been the first priority of the science cases project and is now close to completion with the definition of the ObsCoreDM (Observation Core Data Model). It represents an attempt to provide a common way of accessing a wide variety of data collections through TAP and ObsCoreDM.

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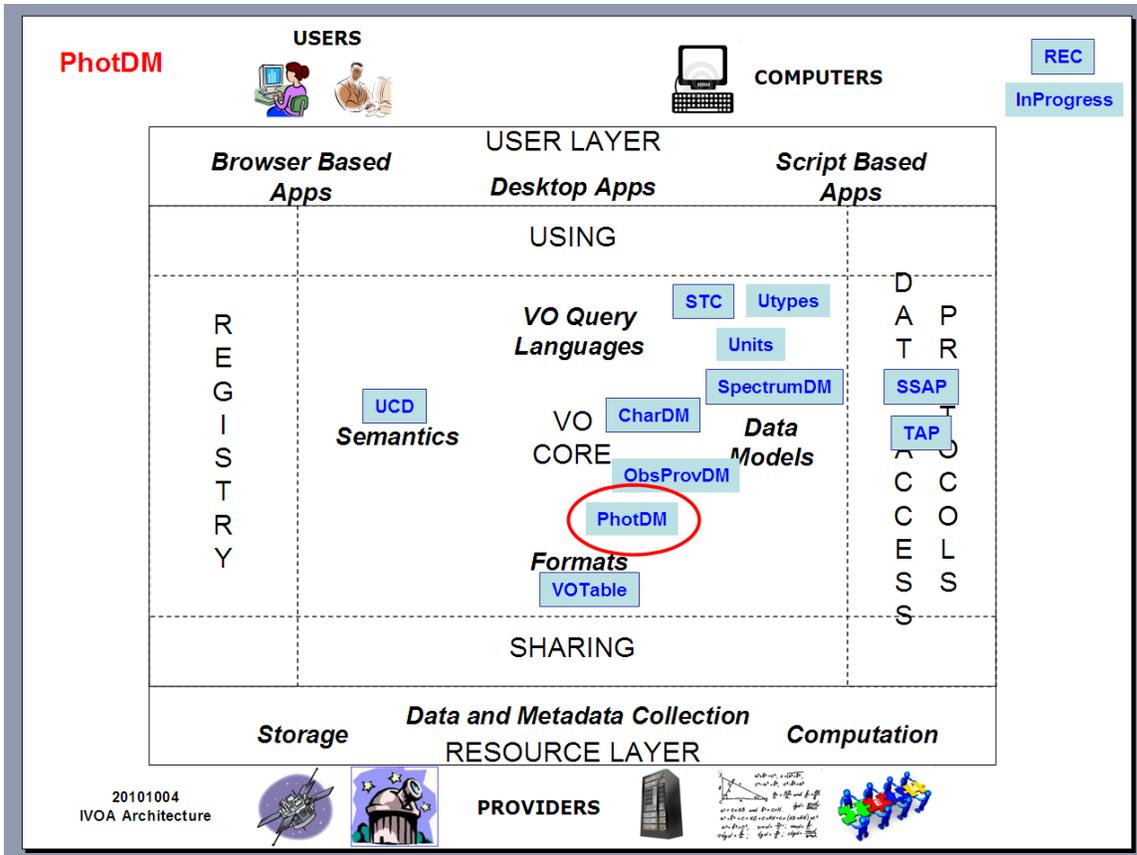
It required significant discussion and iterations, as well as various implementations to make sure the definition of the common parameters of ObsCoreDM was correct. Progress has been made and it is now close to the final REC process, as follows:

ID	Task	Duration	Start	End	Notes
4	[DM] ObsCoreDM 1.0	30.58 mons	Fri 01/05/09	Mon 17/10/11	
4.1	in Working Group	24.81 mons	Fri 01/05/09	Thu 28/04/11	
4.1.1	Work within WG	501 days	Fri 01/05/09	Thu 31/03/11	
4.1.2	ObsCoreDM 1.0 WD	0 days	Tue 15/06/10	Tue 15/06/10	
4.1.3	ObsCoreDM 1.0WD	0 days	Mon 07/03/11	Mon 07/03/11	
4.1.4	Final review within WG	20 days	Fri 01/04/11	Thu 28/04/11	
4.2	ObsCoreDM 1.0WD for PR	0 days	Mon 02/05/11	Mon 02/05/11	
4.3	RFC period within Interop	5 wks	Mon 02/05/11	Fri 03/06/11	
4.4	ObsCoreDM 1.0 WD	0 days	Tue 12/07/11	Tue 12/07/11	
4.5	TCG review	2.48 mons	Thu 21/07/11	Mon 03/10/11	
4.6	PR submission to Exec	0 days	Mon 03/10/11	Mon 03/10/11	
4.7	IVOA Exec review	2 wks	Mon 03/10/11	Mon 17/10/11	
4.8	REC ObsCoreDM WD	0 days	Mon 17/10/11	Mon 17/10/11	

3.4.3 PhotDM 1.0 and SpectrumDM 1.2

PhotDM 1.0 and an updated SpectrumDM 1.2 have been defined as essential standards for the implementation of the priority science case SED builder.

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Significant work has been done in this context, in particular in the elaboration of the Photometry DM 1.0 which should soon enter the REC process as per the following schedule:

ID	Task	Duration	Start	End	Notes
11	[DM] PhotDM 1.0	45.95 mons	Thu 15/05/08	Tue 24/01/12	
11.1	in Working Group	43 mons	Thu 15/05/08	Fri 28/10/11	
11.1.1	Work within WG	883 days	Thu 15/05/08	Fri 30/09/11	
11.1.2	PhotDM 1.0 WD	0 days	Mon 29/11/10	Mon 29/11/10	
11.1.3	PhotDM 1.0 WD	0 days	Wed 11/05/11	Wed 11/05/11	
11.1.4	PhotDM 1.0 WD	0 days	Thu 07/07/11	Thu 07/07/11	
11.1.5	PhotDM 1.0 WD	0 days	Fri 22/07/11	Fri 22/07/11	
11.1.6	Final review within WG	20 days	Mon 03/10/11	Fri 28/10/11	
11.2	PhotDM 1.0 for PR	0 days	Fri 28/10/11	Fri 28/10/11	
11.3	RFC period within interop	1 mon	Mon 14/11/11	Mon 12/12/11	
11.4	TCG review	1 mon	Tue 13/12/11	Tue 10/01/12	
11.5	PR submission to Exec	0 days	Tue 10/01/12	Tue 10/01/12	
11.6	IVOA Exec review	2 wks	Wed 11/01/12	Tue 24/01/12	
11.7	REC PhotDM 1.0	0 days	Tue 24/01/12	Tue 24/01/12	

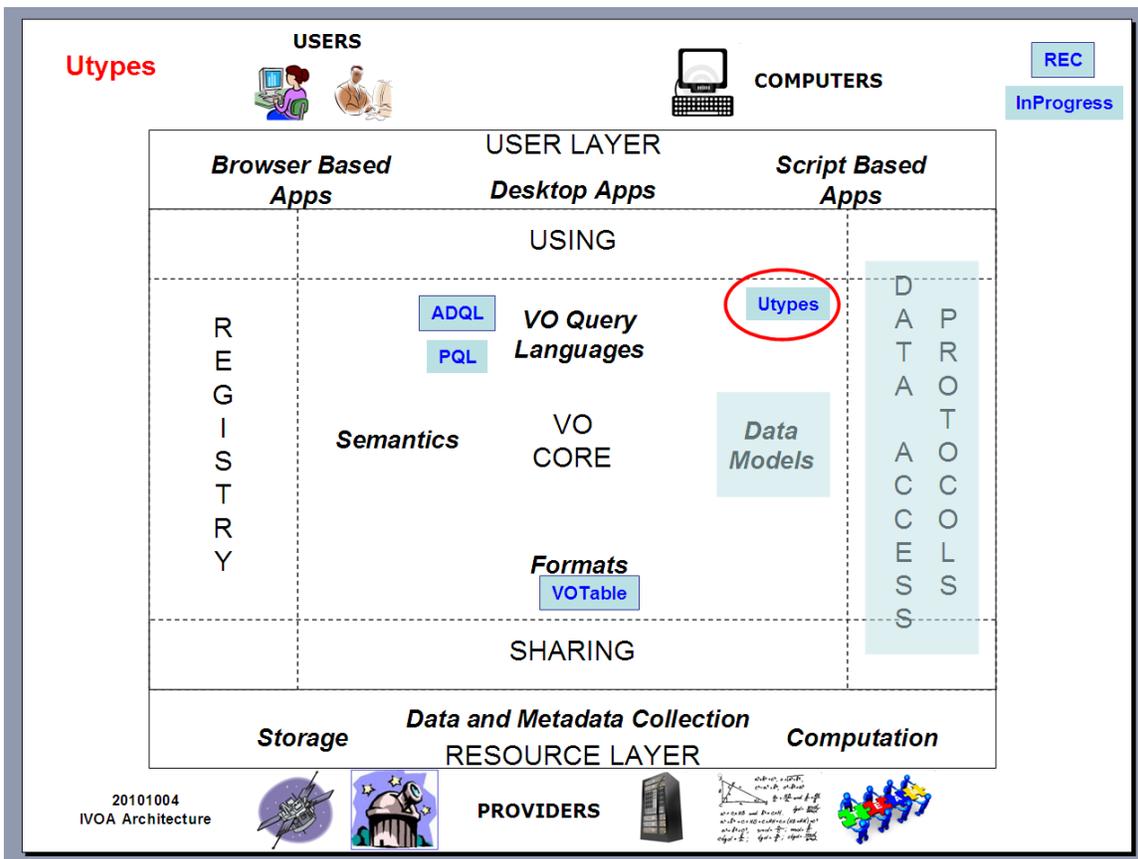
As explained earlier on, SpectrumDM would also need to be updated to support PhotDM and the SED builder science use case. It needed to wait for SpectrumDM 1.1 REC process to be finalized before initiating more in details the updates for SpectrumDM 1.2 to try to follow a schedule close the one of PhotDM 1.0:

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12	[WG] SpectrumDM 1.2 (PhotDM suppo	23 mons	Mon 03/05/10	Wed 07/03/12	03/05	[WG] SpectrumDM 1.2 (PhotDM suppo	07/03
12.1	in Working Group	20.05 mons	Mon 03/05/10	Mon 12/12/11	03/05	in Working Group	12/12
12.1.1	Work within WG	19.67 mons	Mon 03/05/10	Thu 01/12/11	03/05		
12.1.2	SpectrumDM 1.2 WD	0 days	Tue 15/11/11	Tue 15/11/11	15/11	SpectrumDM 1.2 WD	
12.1.3	Final review within WG	20 days	Tue 15/11/11	Mon 12/12/11	15/11		
12.2	SpectrumDM 1.2 for PR	0 days	Mon 12/12/11	Mon 12/12/11	12/12	SpectrumDM 1.2 for PR	
12.3	RFC period within interop	1 mon	Tue 27/12/11	Tue 24/01/12	27/12		
12.4	TCG review	1 mon	Wed 25/01/12	Wed 22/02/12	25/01		
12.5	PR submission to Exec	0 days	Wed 22/02/12	Wed 22/02/12	22/02	PR submission to Exec	
12.6	IVOA Exec review	2 wks	Thu 23/02/12	Wed 07/03/12	23/02		
12.7	REC SpectrumDM 1.2	0 days	Wed 07/03/12	Wed 07/03/12	07/03	REC SpectrumDM 1.2	

3.4.4 Utypes 1.0

As an important building block for all Data Models, two WDs for UTYPES have already been produced.



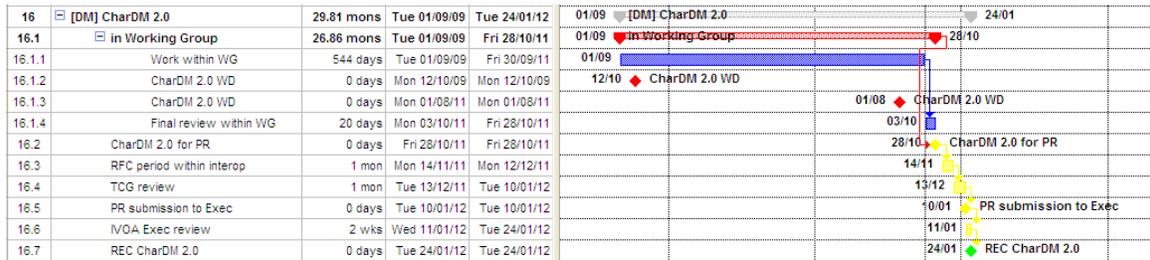
Concept and need are well identified, but progress has been hampered due to lack of resources. Hopefully, work can resume for it to enter the REC process by mid 2012 as per the following schedule:

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3.4.5 CharDM 2.0

Characterization DM will be updated, with a new corrected schema Characterisation.v2.0, developing sensitivity and variability maps, and rationalizing the Utypes list generation. A new WD was recently produced and will be discussed at the Pune interoperability meeting, so it could eventually progress into REC soon after as per the following schedule:



Provenance will be modeled as a package of the full Observation DM. It will gather finer instrumental and processing provenance descriptions. This will be called ObsProvDM and will be an extension to the more “simple” ObsCoreDM. This will be exposed in a separate WD: WD-ObsDM-Provenance-v0.1 with a first internal draft to be issued at the Nara December 2010 interop and an expected first WD by the May 2011 interop. REC schedule still needs to be determined.

Work on the definition of the UNITS Data Model had been put on hold within the DM WG due to lack of resources. Hence, it has been decided to transfer the definition of this standard to the Semantics WG. Close coordination between the DM and Semantics WG will still take place for this standard.

3.4.6 Other DM Standards

Jesus : anything on ObsProvDM ?

3.5 Grid and Web Services WG

[TO BE CHECKED BY ANDREAS]

3.5.1 VOSpace 2.0

Lots of discussions have taken place for VOSpace 2.0 and generated various WD updates. It now seems to be ready to enter the REC process as per the following schedule:

17	[GWS] VOSpace 2.0	44.38 mons	Tue 01/07/08	Wed 25/01/12	01/07	[GWS] VOSpace 2.0	25/01
17.1	in Working Group	41.43 mons	Tue 01/07/08	Mon 31/10/11	01/07	in Working Group	31/10
17.1.1	Work within WG	40.48 mons	Tue 01/07/08	Mon 03/10/11	01/07		
17.1.2	VOSpace 2.0 WD	0 days	Fri 15/05/09	Fri 15/05/09	15/05	VOSpace 2.0 WD	
17.1.3	VOSpace 2.0 WD	0 days	Tue 23/03/10	Tue 23/03/10	23/03	VOSpace 2.0 WD	
17.1.4	VOSpace 2.0 WD	0 days	Fri 12/11/10	Fri 12/11/10	12/11	VOSpace 2.0 WD	
17.1.5	VOSpace 2.0 WD	0 days	Tue 28/06/11	Tue 28/06/11	28/06	VOSpace 2.0 WD	
17.1.6	Final review within WG	20 days	Mon 03/10/11	Mon 31/10/11	03/10		
17.2	VOSpace 2.0 for PR	0 days	Mon 31/10/11	Mon 31/10/11	31/10	VOSpace 2.0 for PR	
17.3	RFC period within interop	1 mon	Mon 14/11/11	Tue 13/12/11	14/11		
17.4	TCG review	1 mon	Tue 13/12/11	Wed 11/01/12	13/12		
17.5	PR submission to Exec	0 days	Wed 11/01/12	Wed 11/01/12	11/01	PR submission to Exec	
17.6	IVOA Exec review	2 wks	Wed 11/01/12	Wed 25/01/12	11/01		
17.7	REC VOSpace 2.0	0 days	Wed 25/01/12	Wed 25/01/12	25/01	REC VOSpace 2.0	

3.5.2 Other GWS standards

There have been many implementation feedbacks on UWS 1.0, which have been discussed in the WG and in the mailing lists. Discussion will take place at Pune interoperability meeting to agree the way forward and a potential update for UWS 1.1.

Additionally, work is progressing towards a new standard REST Basic Profile, although a detailed schedule is still to be determined in 2011.

3.6 Registry WG

[TO BE CHECKED BY GRETCHEN]

3.6.1 StandardsRegExt 1.0

Following the standard nomenclature for Registry Extension standard, StandardsRegExt is now going to its REC process and should soon become a REC as per the following schedule:

WBS	Task Name	Duration	Start	End	2008	2009	2010	2011	2012	2013
6	[Registry] StandardsRegExt 1.0	51.81 mons	Mon 03/09/07	Wed 02/11/11						
6.1	in Working Group	43.38 mons	Mon 03/09/07	Tue 01/03/11						
6.1.1	Work within WG	42.43 mons	Mon 03/09/07	Tue 01/02/11						
6.1.2	StandardsRegExt 1.0 WD	0 days	Wed 19/05/10	Wed 19/05/10						
6.1.3	Final review within WG	20 days	Tue 01/02/11	Tue 01/03/11						
6.2	StandardsRegExt 1.0 for PR	0 days	Wed 16/03/11	Wed 16/03/11						
6.3	RFC period within interop	5 mons	Wed 13/04/11	Tue 06/09/11						
6.4	StandardsRegExt 1.0 for PR	0 days	Wed 21/09/11	Wed 21/09/11						
6.5	TCG review	1 mon	Wed 21/09/11	Wed 19/10/11						
6.6	PR submission to Exec	0 days	Wed 19/10/11	Wed 19/10/11						
6.7	IVOA Exec review	2 wks	Thu 20/10/11	Wed 02/11/11						
6.8	REC StandardsRegExt	0 days	Wed 02/11/11	Wed 02/11/11						

3.6.2 SimpleDALRegExt 1.0

SimpleDALRegExt has had an internal WD, but some more editing (and adding SLAP extension) is required for a public WD and later on to start its REC process in December 2010 as per the following schedule:

WBS	Task Name	Duration	Start	End	2008	2009	2010	2011	2012	2013
23	[Registry] SimpleDALRegExt	29.9 mons	Wed 01/10/08	Thu 24/02/11						
23.1	in Working Group	26.95 mons	Wed 01/10/08	Tue 30/11/10						
23.1.1	Work within WG	26 mons	Wed 01/10/08	Tue 02/11/10						
23.1.2	SimpleDALRegExt WD	0 days	Fri 15/10/10	Fri 15/10/10						
23.1.3	Final review within WG	20 days	Wed 03/11/10	Tue 30/11/10						
23.2	SimpleDALRegExt WD for PR	0 days	Tue 30/11/10	Tue 30/11/10						
23.3	RFC period within interop	1 mon	Wed 15/12/10	Wed 12/01/11						
23.4	TCG review	1 mon	Thu 13/01/11	Thu 10/02/11						
23.5	PR submission to Exec	0 days	Thu 10/02/11	Thu 10/02/11						
23.6	IVOA Exec review	2 wks	Fri 11/02/11	Thu 24/02/11						
23.7	REC SimpleDALRegExt	0 days	Thu 24/02/11	Thu 24/02/11						

3.6.3 Other Registry Standards

In 2010, ApplicationRegExt had been to put on hold this was not felt to be high priority, but work should resume late 2011, early 2012, with the production of an internal WD within the Registry WG.

In the context of VOEvent 2.0, some discussions took place about VOEventRegExt that will also need to be better defined in the coming months, to enable the registration of VOEvent 2.0 services in the IVOA Registries. Exact schedule still need to be defined though.

Discussion is also taking place within the Registry WG about the definition of an IVOA standard for Registry REST Interface, that should become clearer within 2011.

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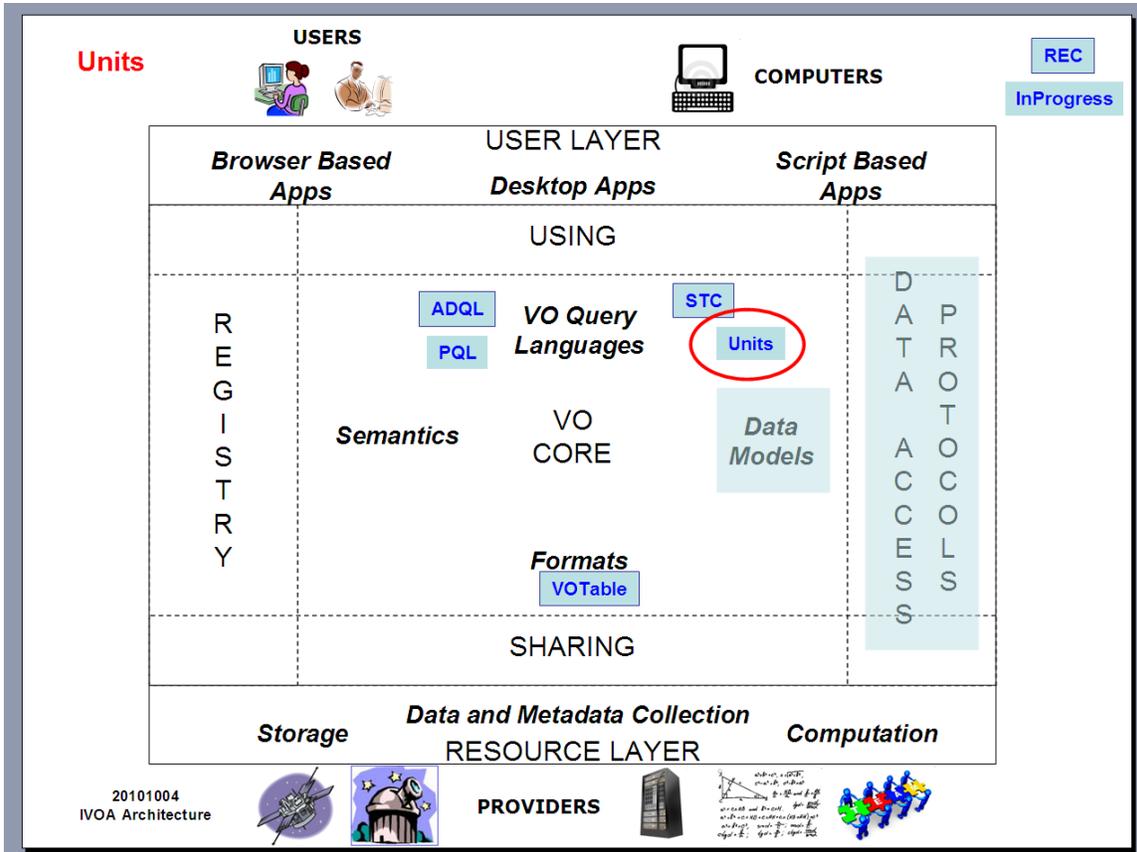
The Registry WG continues to drive regular discussions during interoperability meetings about IVOA Registries operations, including curation of VO Resources and validation of DAL services.

3.7 Semantics WG

[TO BE CHECKED BY SEBASTIEN]

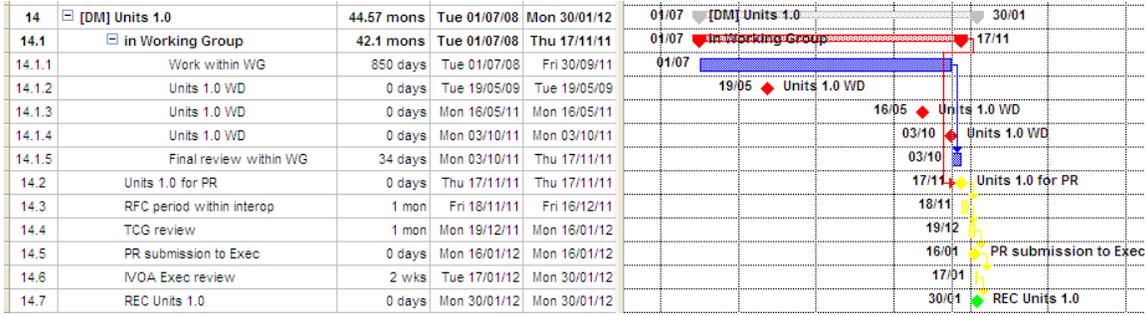
3.7.1 Units 1.0

Last year, Units 1.0 Data Model had been transferred from the DM WG to the Semantics WG. It represents one of the critical and long awaited VO Core components, to be used by most of other IVOA standards.



A very 1st draft had been produced in May 2009, but lack of resources prevented real progress on this. There was a big step forward in May 2011 with the production of a new Units 1.0 WD, providing a comparison table of most used units and a proposal for the IVOA. After a round of feedbacks and further discussion at the Pune interoperability meeting, Units 1.0 should be able to progress into the REC process soon after as per the following schedule:

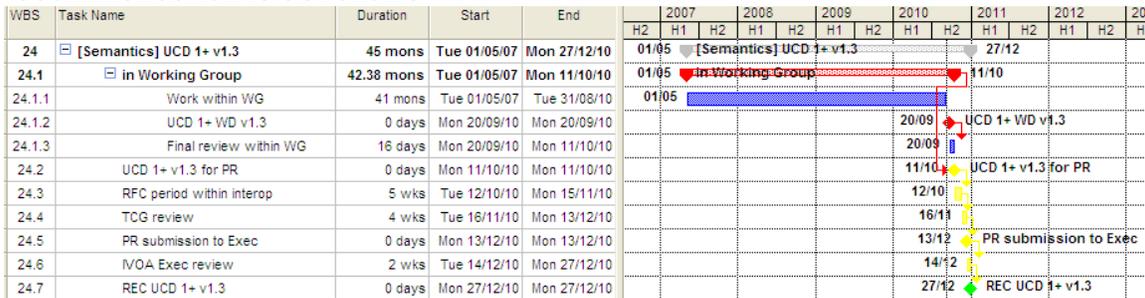
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3.7.2 UCD1+ v1.3

[IS THIS STILL RELEVANT ?]

Developments on the new UCD1+ v1.3 document have been mostly idle since the last Strasbourg interoperability meeting. Most of the time has been spent upgrading the existing web service, and performing checks on existing implementations of UCD in existing services. The updated schedule for recommendation is as follows:



3.7.3 Other Semantics WG activities

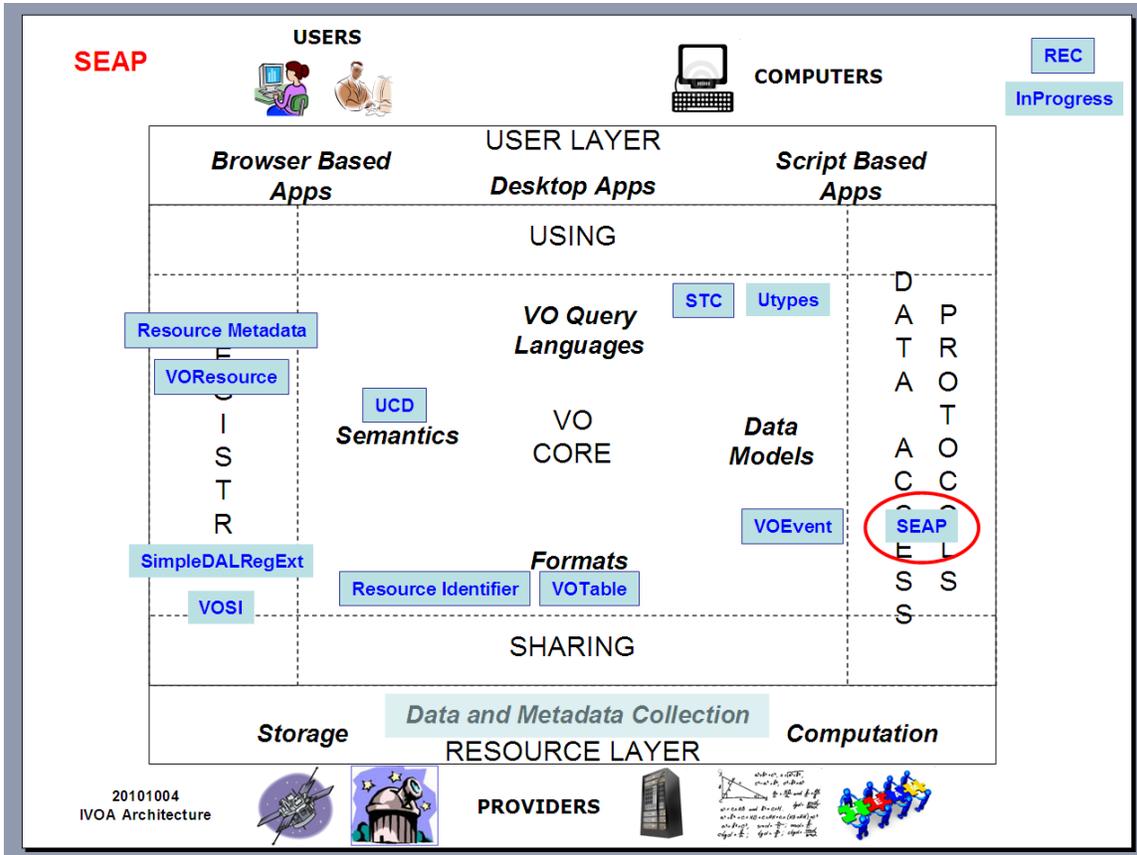
[Sebastien, do you want to mention anything about Ontology, Vocabularies, Long URIs ?]

3.8 VOEvent WG

[TO BE CHECKED BY MATTHEW]

3.8.1 SEAP 1.0 – Simple Event Access Protocol

The definition of the Simple Event Access Protocol (SEAP) started soon after VOEvent 2.0 became a REC. This work should be coordinated with the DAL WG, but the schedule is still to be determined.



3.8.2 Other VOEvent standards

VOEventRegExt 1.0 will be discussed in coordination with the Registry WG to determine how to register VOEvent 2.0 into IVOA Registries.

Early discussions have taken place within the VOEvent WG to create a Simple Light Curve Access Protocol (SLiCAP). Close coordination will be required within the TCG and with the DAL WG in particular, to decide the best approach between creating a new standard or extending the functionalities of an existing one (e.g. support to light curves within SSAP).

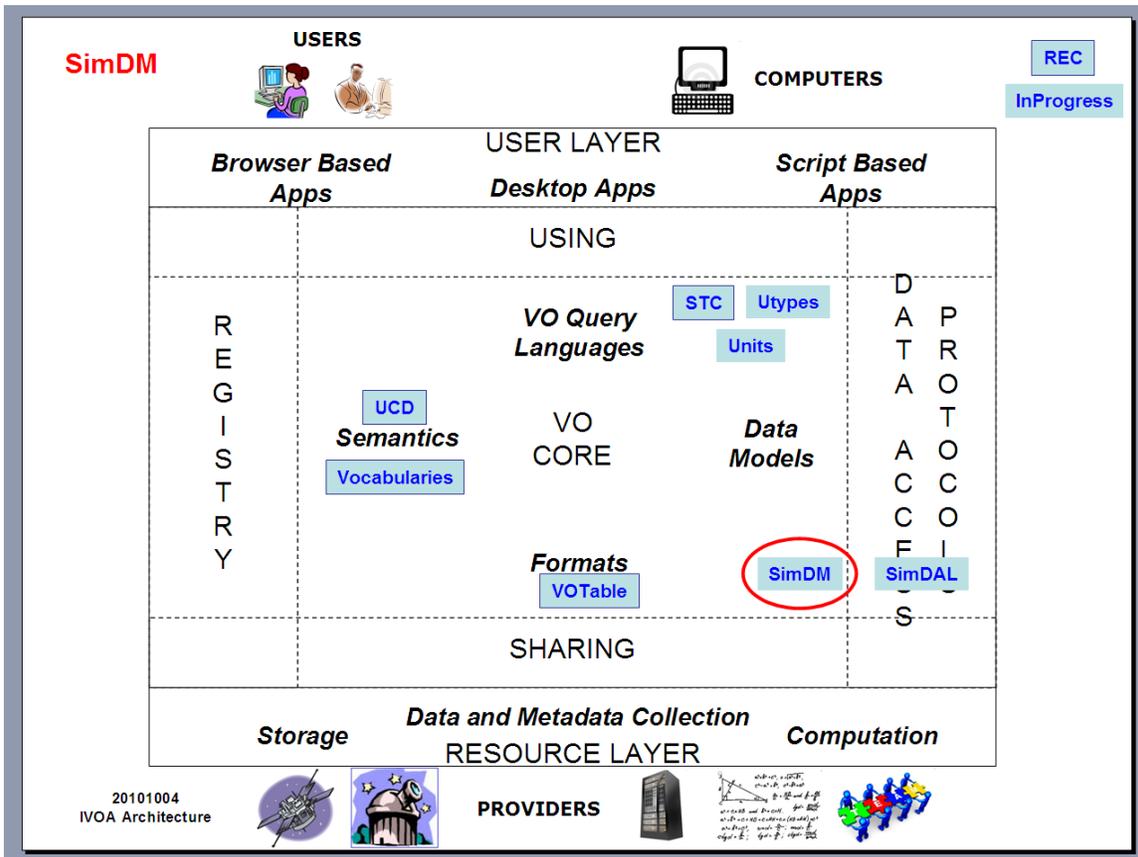
[Any update on this ?]

3.9 Theory IG

[TO BE CHECKED BY HERVE]

3.9.1 SimDM – Simulation DM

After many years of discussions, agreement have become a reality for the definition of the SimDM, its concept and purpose within the IVOA Architecture.



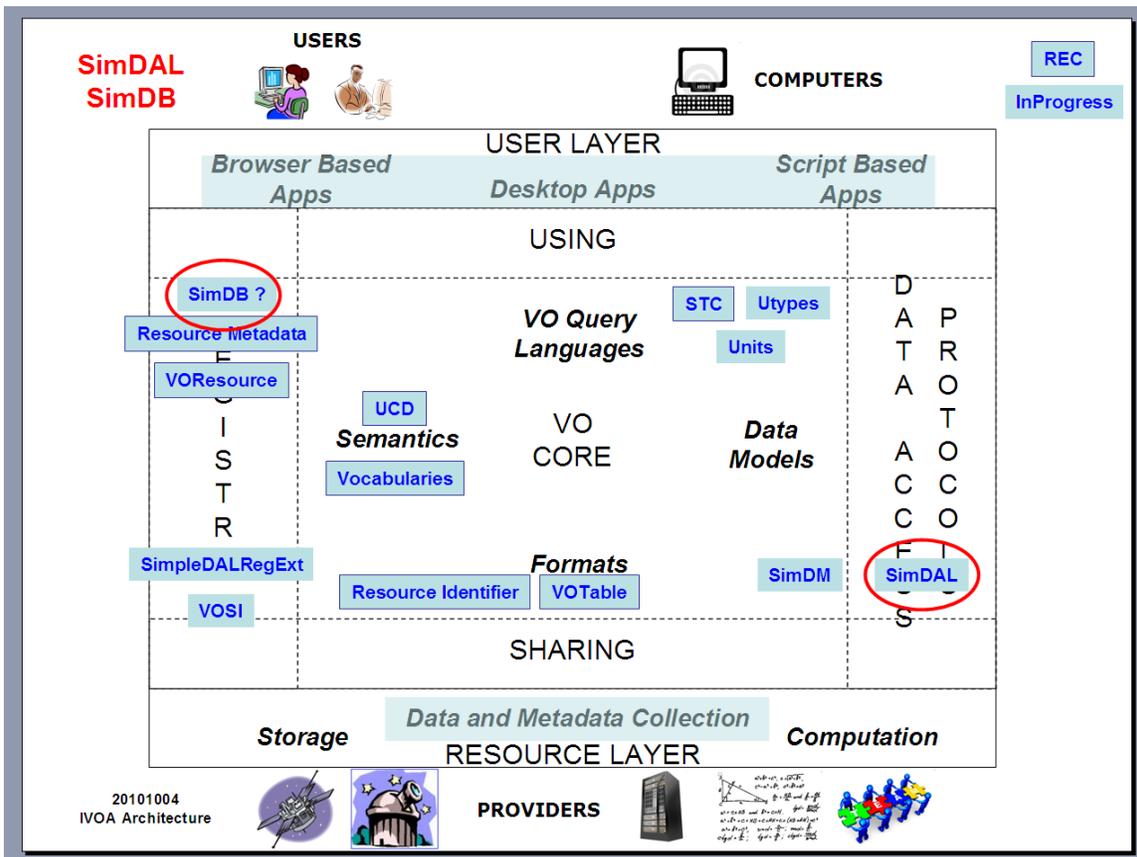
Through the DM WG, the Theory IG hence has brought forward SimDM through its REC process that should complete in 2011 as follows:

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Task ID	Task Name	Duration	Start Date	End Date	Dependencies
5	[DM] SimDM 1.0	69.1 mons	Mon 03/04/06	Fri 18/11/11	
5.1	in Theory Interest Group	51.86 mons	Mon 03/04/06	Wed 30/06/10	
5.1.1	Discussion about SNAP	503 days	Mon 03/04/06	Tue 01/04/08	
5.1.2	Split SNAP into SimDB, SimC	0 mons	Tue 01/04/08	Tue 01/04/08	40
5.1.3	Define PR track and tiger te	0 days	Fri 01/08/08	Fri 01/08/08	
5.1.4	SimDB v0.1 Technical Note	0 days	Fri 01/08/08	Fri 01/08/08	
5.1.5	Discussion within IG	500 days	Fri 01/08/08	Wed 30/06/10	
5.1.6	Agree SimDM Roadmap	0 days	Wed 19/05/10	Wed 19/05/10	
5.1.7	SimDM WD	0 days	Wed 30/06/10	Wed 30/06/10	
5.2	in Working Group	10.81 mons	Wed 30/06/10	Thu 12/05/11	
5.2.1	Work within WG	197 days	Wed 30/06/10	Thu 31/03/11	46
5.2.2	SimDM 1.0 WD	0 days	Mon 01/11/10	Mon 01/11/10	
5.2.3	Final review within WG	30 days	Fri 01/04/11	Thu 12/05/11	48
5.3	SimDM 1.0 WD for PR	0 days	Wed 27/04/11	Wed 27/04/11	
5.4	RFC period within interop	6 mons	Wed 27/04/11	Wed 19/10/11	51
5.5	SimDM 1.0 WD for PR	0 days	Tue 10/05/11	Tue 10/05/11	
5.6	SimDM 1.0 WD for PR	0 days	Fri 09/09/11	Fri 09/09/11	
5.7	SimDM 1.0 WD for PR	0 days	Fri 07/10/11	Fri 07/10/11	
5.8	TCG review	1 mon	Fri 07/10/11	Fri 04/11/11	55
5.9	PR submission to Exec	0 days	Fri 04/11/11	Fri 04/11/11	56
5.10	IVOA Exec review	2 wks	Mon 07/11/11	Fri 18/11/11	57
5.11	REC SimDM 1.0	0 days	Fri 18/11/11	Fri 18/11/11	58

3.9.2 SimDAL and SimDB

Simulation Data Access Layer (SimDAL) now includes the previously named SimDAP and S3 standards. Simulation Data Base (SimDB) is a specification that defines the interface to a database containing meta data describing simulations. To this end it contains two main parts, one is a model for the metadata (the so-called Simulation Data Model, see above), the other a protocol for interacting with the database (TAP-like services).



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Significant progress on both standards has been made in 2011 both at interoperability meetings and dedicated face to face meeting.

More detailed schedules for both standards still need to be established, with a goal to have then entering the REC process in 2012.

3.10 Data Curation and Preservation IG

[To be provided by Alberto]

3.11 Knowledge Discovery in Databases IG

[To be provided by Pepe]

References

[1] C.Arviset, R.Williams, S.Gaudet *Charter for the IVOA TCG*
<http://www.ivoa.net/Documents/Notes/TCG-Charter/>

[2] IVOA TCG web pages
<http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/IvoaTCG>

[3] R. Hanisch, *IVOA Document Standards Process*,
<http://www.ivoa.net/Documents/DocStd/20100413/>

[4] C.Arviset, S.Gaudet and the TCG, *IVOA Architecture v1.0*
<http://www.ivoa.net/Documents/Notes/IVOAArchitecture/20101123/>

Annex A: List of existing IVOA standards as of October 2011

For global reference, here is the list in chronological order of all existing RECOMMENDED IVOA standards.

More details can be found on the IVOA Document pages at:

<http://www.ivoa.net/Documents/>

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 2011
STC v1.33 Space-Time Coordinate Metadata for the VO	DM	October 2007	
SpectraDM v1.01 Spectral Data Model	DM	October 2007	

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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	SAMP 1.2 is expected late 2010
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	

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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
UWS 1.0 Universal Worker Service	GWS	October 2010	
VODataService 1.1	Registry	October 2010	
SSLDM 1.0 Simple Spectra Line DM	DM	November 2010	
SLAP 1.0 Simple Line Access Protocol	DAL	November 2010	
WS BP 1.0 Web Service Basic Profile	GWS	December 2010	
SAMP 1.2 Simple Application Messaging Protocol	Apps	December 2010	Minor updates from SAMP 1.11
VOSI 1.0 IVOA Support Interface	GWS	May 2011	
VOEvent 2.0	VOEvent	July 2011	

Annex B: List of IVOA standards in development as of October 2011

More details can be found on the IVOA Document pages at:

<http://www.ivoa.net/Documents/>

Standards	WG	Date	Comments
2011 (RFC started and later)			
ObsCoreDM 1.0 Observation Core DM	DM		
SSAP 1.1 Simple Spectra Access Protocol	DAL		Update from SSAP 1.04
SpectrumDM 1.1	DM		Update from SpectrumDM 1.03
StandardRegExt 1.0	Registry		
SimDM 1.0 Simulation DM	Theory / DM		

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2011 (in progress)			
SAMP 1.3	Apps		Updates from SAMP 1.2
DALI 1.0 DAL Interfaces	DAL		
PQL 1.0 Parameter Query Language	DAL		
DataLink 1.0	DAL		
TAPRegExt 1.0	DAL		
SIAP 2.0 Simple Image Access Protocol	DAL		Update from SIAP 1.0 [note for Pat : is this still active?]
PhotDM 1.0 Photometry DM	DM		
Spectrum DM 1.2	DM		Update from Spectrum DM 1.1 to accommodate PhotDM
Utypes 1.0	DM		
CharDM 2.0 Characterization DM	DM		Update from CharDM 1.0
ObsProvDM 1.0 Observation and Provenance DM	DM		
VOEventRegExt 1.0	Registry		
SEAP 1.0 Simple Event Access Protocol	VOEvent / DAL ?		
Units 1.0	Semantics		
VOSpace 2.0	GWS		Update from VOSpace 1.15
REST BP 1.0	GWS		
UWS 1.0	GWS		Update from UWS 1.0
UCD 1+ 1.3	Semantics		Update from UCD 1+ 1.23 [note for Sebastien : is this still active?]
Ontology	Semantics		[note for Sebastien : is this still active?]
SimDAL and SimDB Simulation Data Access Layer	Theory		

Annex C: IVOA standards per year

