



International

Virtual

Observatory

Alliance

The IVOA in 2009: Technical Assessment and Roadmap

Version 1.0

IVOA Note 2009-10-01

This version:

Version 1.0- 1st of October 2009

Latest versions:

<http://www.ivoa.net/internal/IVOA/IvoaTCG/IVOARoadMap-2008-v1.0.pdf>

<http://www.ivoa.net/internal/IVOA/TechnicalMilestones/IVOARoadMap-2007-final.pdf>

<http://www.ivoa.net/Documents/Notes/RoadMap/IVOARoadMap-2006.pdf>

<http://www.ivoa.net/Documents/Notes/RoadMap/IVOARoadMap-20050808.pdf>

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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 spring 2008

1.1 General

The TCG released in August 2008 the “The IVOA in 2008: Technical Assessment and Roadmap” than can be found at:

<http://www.ivoa.net/internal/IVOA/IvoaTCG/IVOARoadMap-2008-v1.0.pdf>

The TCG met through teleconferences in September 2008 and May 2009 to review status and plans before the corresponding IVOA interoperability meetings in Baltimore and Strasbourg.

Discussion took place to determine and agree on the induction package to give to WG/IG new chairs and vice-chairs to help them familiarize with their tasks when they take up duty:

- TCG pages URL
<http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/IvoaTCG>
- TCG Charter
<http://www.ivoa.net/internal/IVOA/IvoaTCG/TCG-Charter-v1.0.pdf>
- (current) IVOA Technical Assessment and Roadmap
<http://www.ivoa.net/internal/IVOA/IvoaTCG/IVOARoadMap-2008-v1.0.pdf>
- IVOA Document Standard v1.2 (or future update)
<http://www.ivoa.net/Documents/DocStd/20090302/PR-DocStd-1.2-20090302.html>
- on-going recommendations in RFC/TCG review if any
http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/IvoaTCG#On_going_Recommendations

Extensive discussions took place to agree on the numbering nomenclature of the working drafts of IVOA standards to ensure coherency and consistency throughout the various WGs.

Significant progress has been made in a variety of standards that are currently in their Recommendation process so they should soon become a Recommendation, in particular:

- Vocabularies 1.0
- Registry Resources Interfaces 1.01
- Credential Delegation Protocol 1.01
- VOspace 1.15

Others have also recently entered and should soon enter their recommendation process so should soon become recommendation before the end of 2009, in particular:

- IVOA Document Standards 1.2
- SIAP 1.0 (legacy standard)
- TAP 1.0
- SLAP 1.0 together with SSLDM 1.0
- VOTable 1.2
- UWS 1.0
- VOSI 1.0

1.2 List of IVOA Standards produced in the last year

Two very important standards have reached the REC status in the last year:

Standards	WG	Date	Comments
ADQL v2.0 Astronomical Data Query Language	VOQL	October 2008	This is the first version of ADQL which formally has gone through the Recommendation process.
SAMP 1.11 Simple Application Messaging Protocol	Apps	April 2009	

2 IVOA Roadmap for the Upcoming Year

2.1 TCG core

Like two years ago, many IVOA standards are coming to maturity; hence significant work will be required from the TCG members as part of the IVOA recommendation process. This involvement is becoming even more important as with the increase of IVOA standards, TCG members have to ensure consistency and coherency across standards. Special care will be taken with regard to inter dependencies amongst Working Groups and Interest Groups.

A few changes are expected within the TCG with the Registry and VOQL WG chairs term coming to an end.

Some discussion are also taking place at the level of the IVOA Executive Committee, with inputs from the IVOA Take-Up Committee to determine if IVOA should put special emphasis and priority on some IVOA standards. Such discussion and potential resulting decisions could have some impacts on the priority of the work within the Working Groups.

As we could observe in the discussion about the IVOA Document standard and the recommendation process, the concept of real interoperable implementations and validators for new IVOA standards is also something that might require special effort from the TCG.

2.2 Application WG

No significant changes are anticipated in the Simple Applications Messaging Protocol during the current year and no other recommendations are currently under development. Some work continues in seeing how SAMP might be used in an environment of distributed applications. An update to the recommendation addressing this issue may be developed in the future.

Specific SAMP messages are no longer part of the protocol definition. The reference list of SAMP messages is maintained as part of the IVOA Twiki site (see <http://ivoa.net/samp>) where it may be updated without a specific formal review.

2.3 Data Access Layer WG

Many standards are being worked out in the DAL WG, and here are the main activities to be dealt with in the coming year.

The Simple Line Access Protocol (SLAP) has now been aligned with the SSLDM and is basically ready to enter the REC process. Various services implementations are already working and are being used by some applications. The schedule is then as follows:

WBS	Task Name	Duration	Start	End	2004		2005		2006		2007		2008		2009		2010		2011	
					H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
1	[DAL] SLAP	60.43 mons	Fri 01/10/04	Wed 28/10/09																
1.1	in Working Group	56.95 mons	Fri 01/10/04	Fri 17/07/09																
1.1.1	Work within WG	1152 days	Fri 01/10/04	Mon 18/05/09																
1.1.2	SLAP WD 0.1	0 days	Mon 03/10/05	Mon 03/10/05			03/10													
1.1.3	SLAP WD 0.5	0 days	Wed 17/05/06	Wed 17/05/06				17/05												
1.1.4	SLAP WD 0.6	0 days	Wed 09/05/07	Wed 09/05/07					09/05											
1.1.5	SLAP WD 0.7 with AMLDM 0.7	0 days	Wed 15/10/08	Wed 15/10/08								15/10								
1.1.6	SLAP WD 0.9 with SSLDM 0.9	0 days	Tue 19/05/09	Tue 19/05/09									19/05							
1.1.7	Final review within WG	44 days	Tue 19/05/09	Fri 17/07/09									19/05							
1.2	SLAP 1.0 for PR	0 days	Fri 17/07/09	Fri 17/07/09									17/07							
1.3	RFC period within interop	42 days	Mon 20/07/09	Tue 15/09/09									20/07							
1.4	TCG review	1 mon	Wed 16/09/09	Wed 14/10/09									16/09							
1.5	PR submission to Exec	0 days	Wed 14/10/09	Wed 14/10/09									14/10							
1.6	IVOA Exec review	2 wks	Thu 15/10/09	Wed 28/10/09									15/10							
1.7	REC SLAP	0 days	Wed 28/10/09	Wed 28/10/09									28/10							

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As already agreed last year about the Simple Image Access Protocol (SIAP) v1.0, it was decided to update the current WD to what has been implemented by most of the services so we can send SIAP 1.0 through the REC process while keeping most of the SIAP services compliant. The schedule is now as follows:

WBS	Task Name	Duration	Start	End	2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
					H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1
3	[DAL] SIAP 1.0	84.29 mons	Tue 01/10/02	Mon 02/11/09																				
3.1	in Working Group	78.76 mons	Tue 01/10/02	Fri 22/05/09	01/10																		02/11	
3.1.1	Work within WG	1652 days	Tue 01/10/02	Wed 20/05/09	01/10																			
3.1.2	SIAP 1.0 WD	0 days	Mon 24/05/04	Mon 24/05/04				24/05																
3.1.3	SIAP 1.01 WD	0 days	Thu 30/10/08	Thu 30/10/08														30/10						
3.1.4	SIAP 1.1 WD	0 days	Fri 22/05/09	Fri 22/05/09														22/05						
3.1.5	Final review within WG	1 day	Fri 22/05/09	Fri 22/05/09														22/05						
3.2	SIAP 1.0 for PR	0 days	Fri 22/05/09	Fri 22/05/09														22/05						
3.3	RFC period within interop	17 wks	Mon 25/05/09	Fri 18/09/09														25/05						
3.4	TCG review	1 mon	Mon 21/09/09	Mon 19/10/09														21/09						
3.5	PR submission to Exec	0 days	Mon 19/10/09	Mon 19/10/09														19/10						
3.6	IVOA Exec review	2 wks	Tue 20/10/09	Mon 02/11/09														20/10						
3.7	REC SIAP 1.0	0 days	Mon 02/11/09	Mon 02/11/09														02/11						

It has now been agreed to decouple TAP and PQL, the same way TAP is decoupled from ADQL. TAP/ADQL remains compulsory while TAP/PQL is optional. The schedule is now as follow:

WBS	Task Name	Duration	Start	End	2006		2007		2008		2009		2010		2011	
					H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	
4	[DAL] TAP	39.81 mons	Tue 01/08/06	Mon 09/11/09												
4.1	in Working Group	35.71 mons	Tue 01/08/06	Fri 10/07/09	01/08											09/11
4.1.1	Work within WG	730 days	Tue 01/08/06	Fri 12/06/09	01/08											
4.1.2	TAP WD 0.3	0 days	Thu 23/10/08	Thu 23/10/08												23/10
4.1.3	TAP WD 0.31	0 days	Mon 24/11/08	Mon 24/11/08												24/11
4.1.4	TAP WD 0.4	0 days	Thu 12/02/09	Thu 12/02/09												12/02
4.1.5	TAP WD 0.41	0 days	Tue 17/03/09	Tue 17/03/09												17/03
4.1.6	TAP WD 0.42	0 days	Mon 20/04/09	Mon 20/04/09												20/04
4.1.7	TAP WD 0.5	0 days	Sat 16/05/09	Sat 16/05/09												16/05
4.1.8	TAP WD 1.0	0 days	Mon 08/06/09	Mon 08/06/09												08/06
4.1.9	Final review within WG	20 days	Mon 15/06/09	Fri 10/07/09												15/06
4.2	TAP for PR	0 days	Fri 10/07/09	Fri 10/07/09												10/07
4.3	RFC period within interop	11 wks	Mon 13/07/09	Fri 25/09/09												13/07
4.4	TCG review	1 mon	Mon 28/09/09	Mon 26/10/09												28/09
4.5	PR submission to Exec	0 days	Mon 26/10/09	Mon 26/10/09												26/10
4.6	IVOA Exec review	2 wks	Tue 27/10/09	Mon 09/11/09												27/10
4.7	REC TAP	0 days	Mon 09/11/09	Mon 09/11/09												09/11

In addition, PQL WD 0.2 was published 20th May 2009 and should go through the standard review and discussion within the DAL WG. It is important we make progress leading up to and at the November Interop and so the discussion should be stimulated once TAP has finished RFC.

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Work on SIAP v2.0 has taken place, and the first WD should be issued very soon. A tentative schedule could be the following:

WBS	Task Name	Duration	Start	End	2004		2005		2006		2007		2008		2009		2010		2011		2012	
					H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1
6	[DAL] SIAP 2.0	65 mons	Wed 01/09/04	Tue 09/02/10																		
6.1	in Working Group	62.52 mons	Wed 01/09/04	Mon 30/11/09																		
6.1.1	Work within WG	1270 days	Wed 01/09/04	Tue 29/09/09																		
6.1.2	SIAP 2.0 WD 0.1	0 days	Wed 30/09/09	Wed 30/09/09																		
6.1.3	SIAP 2.0 WD 0.2	0 days	Mon 30/11/09	Mon 30/11/09																		
6.1.4	Final review within WG	25 days	Wed 30/09/09	Tue 03/11/09																		
6.2	SIAP 2.0 for PR	0 days	Mon 30/11/09	Mon 30/11/09																		
6.3	RFC period within interop	1 mon	Mon 30/11/09	Mon 28/12/09																		
6.4	TCG review	1 mon	Tue 29/12/09	Tue 26/01/10																		
6.5	PR submission to Exec	0 days	Tue 26/01/10	Tue 26/01/10																		
6.6	I/OA Exec review	2 wks	Wed 27/01/10	Tue 09/02/10																		
6.7	REC SIAP 2.0	0 days	Tue 09/02/10	Tue 09/02/10																		

Work has also started on the definition on Footprint services with some notes coming from various VO projects early in 2008. More detailed planning will be defined throughout the year.

2.4 Data Model WG

It was decided to separate the Simple Spectra Line Data Model (SSLDM) from the complete Atomic and Molecular Line Data Model (AMLDM). The SSLDM has now been aligned with SLAP and has recently entered RFC as per the following schedule:

WBS	Task Name	Duration	Start	End	2009				2010											
					Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
2	[DM] SSLDM	13.57 mons	Wed 01/10/08	Mon 02/11/09																
2.1	in Working Group	9.95 mons	Wed 01/10/08	Fri 17/07/09																
2.1.1	Work within WG	164 days	Wed 01/10/08	Sat 16/05/09																
2.1.2	SLAP WD 0.9 with SSLDM 0.9	0 days	Tue 19/05/09	Tue 19/05/09																
2.1.3	Final review within WG	45 days	Mon 18/05/09	Fri 17/07/09																
2.2	SSLDM 1.0 for PR	0 days	Fri 17/07/09	Fri 17/07/09																
2.3	RFC period within interop	9 wks	Mon 20/07/09	Fri 18/09/09																
2.4	TCG review	1 mon	Mon 21/09/09	Mon 19/10/09																
2.5	PR submission to Exec	0 days	Mon 19/10/09	Mon 19/10/09																
2.6	IVOA Exec review	2 wks	Tue 20/10/09	Mon 02/11/09																
2.7	REC SSLDM	0 days	Mon 02/11/09	Mon 02/11/09																

The Observation data model effort has been reorganized:

A set of use-cases focusing heterogeneous data discovery has been prepared by the IVOA Uptake committee and archive representatives.

From these requirements, we'll design an ObservationCoreComponents Data Model to be prepared before end of July 09.

The goal is to deliver the frame work of an Observation DM easy to implement at the archives' level using TAP queries based on Utypes.

This will be tested for a set of archives and help to improve/validate the ObservationCoreComponents data model and quantify the data-engineering costs for different data centers.

The exercise includes DM and DAL people within a focused team in order to deliver a first implementation prototype by the next interop meeting in November 09.

A working draft describing this effort will be distributed by end of October : WD-ObsDM-CoreComponents-v0.1

Provenance will be modeled as a package of the full Observation DM. It will gather finer instrumental and processing provenance descriptions.

This will be exposed in a separate WD : WD-ObsDM-Provenance-v0.1 that will be issued at the end of January 2010.

Finally after these 2 drafts will be examined and discussed, they will be gathered in a master document WD-ObservationProvenanceDM integrating both modeling effort: the ObsDMCoreComponents and the ObsDMProvenance in a single document.

We hope this will prevent us from diverging between 2 distinct attempts for an Observation DM, leave enough time to stabilize the Core components and the Provenance effort on a 2-track basis and spare time for the PR document writing.

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WBS	Task Name	Duration	Start	End	2007		2008		2009		2010		2011		2012	
					H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
10	[DM] ObsProvDM	28.33 mons	Thu 15/05/08	Tue 24/08/10												
10.1	in Working Group	25.86 mons	Thu 15/05/08	Fri 11/06/10												
10.1.1	Work within WG	523 days	Thu 15/05/08	Fri 14/05/10												
10.1.2	WD-ObsDM-Core-v0.1	0 days	Fri 30/10/09	Fri 30/10/09												
10.1.3	WD-ObsDM-Prov-v0.1	0 days	Mon 01/02/10	Mon 01/02/10												
10.1.4	WD-ObsDMFull-v1.0	0 days	Mon 17/05/10	Mon 17/05/10												
10.1.5	Final review within WG	20 days	Mon 17/05/10	Fri 11/06/10												
10.2	ObsProvDM for PR	0 days	Fri 11/06/10	Fri 11/06/10												
10.3	RFC period within interop	1 mon	Mon 14/06/10	Mon 12/07/10												
10.4	TCG review	1 mon	Tue 13/07/10	Tue 10/08/10												
10.5	PR submission to Exec	0 days	Tue 10/08/10	Tue 10/08/10												
10.6	IVOA Exec review	2 wks	Wed 11/08/10	Tue 24/08/10												
10.7	REC ObsProvDM	0 days	Tue 24/08/10	Tue 24/08/10												

The Photometry Data Model is another Package of the Observation DM, to be developed following this schedule:

WBS	Task Name	Duration	Start	End	2007		2008		2009		2010		2011		2012	
					H1	H2	H1	H2	H1	H2	H1	H2	H1	H2		
11	[DM] PhotDM	25.81 mons	Thu 15/05/08	Thu 10/06/10												
11.1	in Working Group	23.33 mons	Thu 15/05/08	Tue 30/03/10												
11.1.1	Work within WG	470 days	Thu 15/05/08	Tue 02/03/10												
11.1.2	PhotDM WD v0.1	0 days	Thu 01/10/09	Thu 01/10/09												
11.1.3	PhotDM WD v0.2	0 days	Tue 02/03/10	Tue 02/03/10												
11.1.4	Final review within WG	20 days	Wed 03/03/10	Tue 30/03/10												
11.2	PhotDM for PR	0 days	Tue 30/03/10	Tue 30/03/10												
11.3	RFC period within interop	1 mon	Wed 31/03/10	Wed 28/04/10												
11.4	TCG review	1 mon	Thu 29/04/10	Thu 27/05/10												
11.5	PR submission to Exec	0 days	Thu 27/05/10	Thu 27/05/10												
11.6	IVOA Exec review	2 wks	Fri 28/05/10	Thu 10/06/10												
11.7	REC PhotDM	0 days	Thu 10/06/10	Thu 10/06/10												

As an important building block for all Data Models, the UTPES Note will go forward with the following schedule:

WBS	Task Name	Duration	Start	End	2007		2008		2009		2010		2011		2012	
					H2	H1	H2	H1	H2	H1	H2	H1	H2			
12	[DM] UTPES	29.95 mons	Mon 03/09/07	Thu 28/01/10												
12.1	in Working Group	27.48 mons	Mon 03/09/07	Tue 17/11/09												
12.1.1	Work within WG	540 days	Mon 03/09/07	Fri 25/09/09												
12.1.2	UTPES WD 0.3	0 days	Fri 22/05/09	Fri 22/05/09												
12.1.3	UTPES WD 0.5	0 days	Wed 30/09/09	Wed 30/09/09												
12.1.4	Final review within WG	35 days	Wed 30/09/09	Tue 17/11/09												
12.2	UTPES for PR	0 days	Tue 17/11/09	Tue 17/11/09												
12.3	RFC period within interop	1 mon	Wed 18/11/09	Wed 18/12/09												
12.4	TCG review	1 mon	Thu 17/12/09	Thu 14/01/10												
12.5	PR submission to Exec	0 days	Thu 14/01/10	Thu 14/01/10												
12.6	IVOA Exec review	2 wks	Fri 15/01/10	Thu 28/01/10												
12.7	REC UTPES	0 days	Thu 28/01/10	Thu 28/01/10												

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Work has started on the definition of the UNITS with the following tentative schedule:

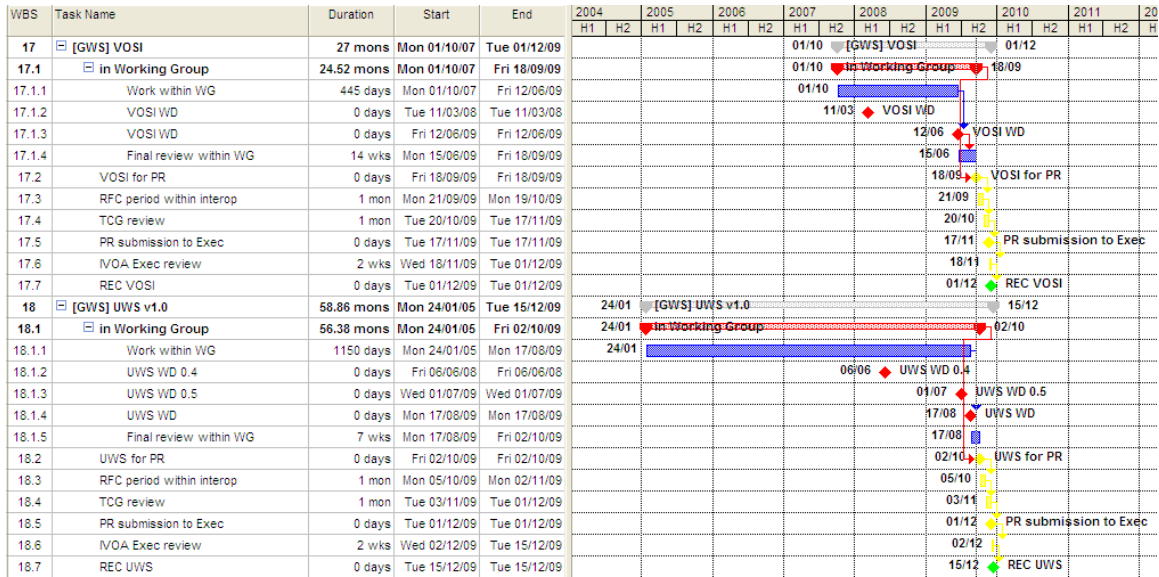
WBS	Task Name	Duration	Start	End	2007		2008		2009		2010		2011		2012
					H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	
13	[DM] UNITS	19.71 mons	Tue 01/07/08	Thu 28/01/10											
13.1	in Working Group	17.24 mons	Tue 01/07/08	Tue 17/11/09											
13.1.1	Work within WG	328 days	Tue 01/07/08	Wed 30/09/09											
13.1.2	UNITS WD 0.1	0 days	Tue 19/05/09	Tue 19/05/09											
13.1.3	UNITS WD 0.5	0 days	Wed 30/09/09	Wed 30/09/09											
13.1.4	Final review within WG	34 days	Thu 01/10/09	Tue 17/11/09											
13.2	UNITS for PR	0 days	Tue 17/11/09	Tue 17/11/09											
13.3	RFC period within interop	1 mon	Wed 18/11/09	Wed 16/12/09											
13.4	TCG review	1 mon	Thu 17/12/09	Thu 14/01/10											
13.5	PR submission to Exec	0 days	Thu 14/01/10	Thu 14/01/10											
13.6	IVOA Exec review	2 wks	Fri 15/01/10	Thu 28/01/10											
13.7	REC UNITS	0 days	Thu 28/01/10	Thu 28/01/10											

Characterization DM will be updated, with a new corrected schema Characterisation.v2.0, developing sensitivity and variability maps, and rationalizing the Utypes list generation. This will be presented in a new document WD-CharacterisationDM.v2.0 to go for PR by end of May 2010.

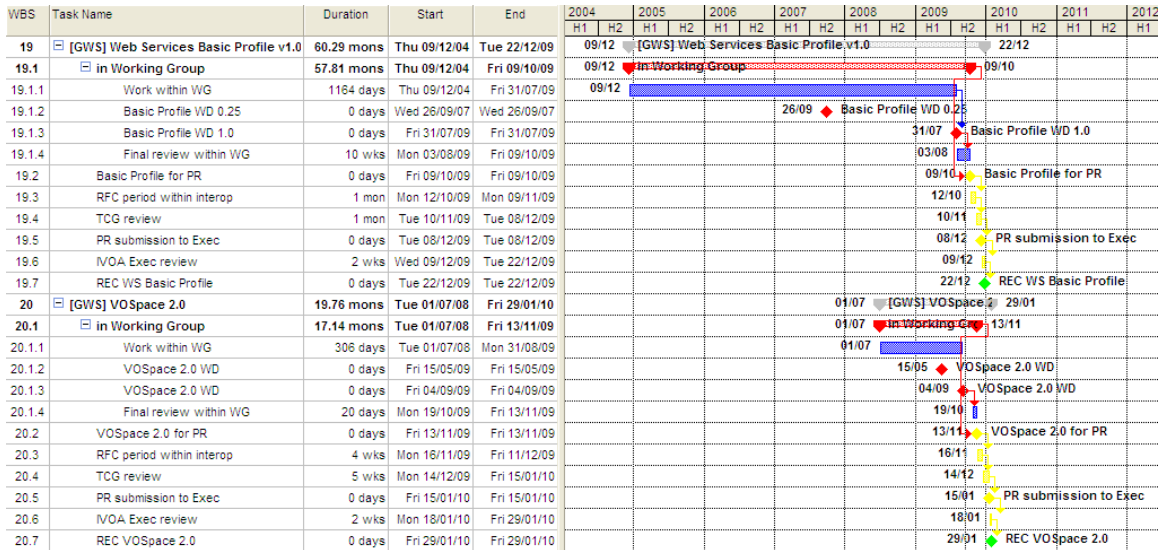
WBS	Task Name	Duration	Start	End	2007		2008		2009		2010		2011		2012
					H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	
11	[DM] CharDM 2.0	12.24 mons	Tue 01/09/09	Wed 25/08/10											
11.1	in Working Group	9.76 mons	Tue 01/09/09	Mon 14/06/10											
11.1.1	Work within WG	185 days	Tue 01/09/09	Mon 17/05/10											
11.1.2	CharDM 2.0 WD v0.1	0 days	Mon 12/10/09	Mon 12/10/09											
11.1.3	CharDM 2.0 WD v0.2	0 days	Mon 17/05/10	Mon 17/05/10											
11.1.4	Final review within WG	20 days	Tue 18/05/10	Mon 14/06/10											
11.2	CharDM 2.0 for PR	0 days	Mon 14/06/10	Mon 14/06/10											
11.3	RFC period within interop	1 mon	Tue 15/06/10	Tue 13/07/10											
11.4	TCG review	1 mon	Wed 14/07/10	Wed 11/08/10											
11.5	PR submission to Exec	0 days	Wed 11/08/10	Wed 11/08/10											
11.6	IVOA Exec review	2 wks	Thu 12/08/10	Wed 25/08/10											
11.7	REC CharDM 2.0	0 days	Wed 25/08/10	Wed 25/08/10											

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VO Service Interface VOSI 1.0 and Universal Worker Services (UWS) have been consolidated with recent TAP agreements and therefore can start the Recommendation process with the following schedule:



Other GWS standards are being worked on within the WG the following schedules:



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2.6 Registry WG

The Registry Interface (RI) standard is completing the Recommendation process with the following schedule:

WBS	Task Name	Duration	Start	End	2008				2009				2010							
					Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
21	[Registry] Registry Interface v1.01	25.95 mons	Mon 03/09/07	Fri 02/10/09	03/09 [Registry] Registry Interface v1.01 02/10															
21.1	In Working Group	13.43 mons	Mon 03/09/07	Wed 01/10/08	03/09 In Working Group 01/10															
21.1.1	Work within WG	259 days	Mon 03/09/07	Fri 29/08/08	03/09															
21.1.2	Registry Interface 1.0 WD	0 days	Fri 27/06/08	Fri 27/06/08	27/06 Registry Interface 1.0 WD															
21.1.3	Registry Interface 1.0 WD	0 days	Mon 15/09/08	Mon 15/09/08	15/09 Registry Interface 1.0 WD															
21.1.4	Final review within WG	13 days	Mon 15/09/08	Wed 01/10/08	15/09															
21.2	Registry Interface WD for PR	0 days	Wed 01/10/08	Wed 01/10/08	01/10 Registry Interface WD for PR															
21.3	RFC period within interop	5.5 wks	Thu 02/10/08	Mon 10/11/08	02/10															
21.4	Registry Interface 1.0 WD	0 days	Fri 22/05/09	Fri 22/05/09	22/05 Registry Interface 1.0 WD															
21.5	TCG review	15 wks	Mon 08/06/09	Fri 18/09/09	08/06															
21.6	PR submission to Exec	0 days	Fri 18/09/09	Fri 18/09/09	18/09 PR submission to Exec															
21.7	IVOA Exec review	2 wks	Mon 21/09/09	Fri 02/10/09	21/09															
21.8	REC Registry Interface	0 days	Fri 02/10/09	Fri 02/10/09	02/10 REC Registry Interface															

The working group recognizes that there are some shortcomings in the Registry Interface standard, particularly in the area of supporting advanced, constraint-based searching. We have recognized through the RI RFC process that its dependency on a now deprecated version of ADQL (that never made it beyond Working Draft status) is quite problematic. Thus, we see that this will need to be addressed in a subsequent version, and we are soliciting workable (and perhaps innovative) ideas.

Despite the shortcomings, we are now seeing greater demand for consistency in the support for the standard search interface. This has resulted in the call for the following actions:

- there will be a validator created for a standard search interface (much as there is currently exists for the harvesting interface at <http://rofr.ivoa.net>).
- a Note be created providing implementation and maintenance tips for registry providers.
- the above note include a list of common queries that all providers should try to support. This would include, for example, how to use the advanced search interface to return compliant SIA services.

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VODataService can now enter the Recommendation process with the following schedule:

WBS	Task Name	Duration	Start	End	2008				2009				2010						
					Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
22	[Registry] VODataService	28.33 mons	Mon 03/09/07	Fri 11/12/09															
22.1	in Working Group	25.86 mons	Mon 03/09/07	Wed 30/09/09	03/09														
22.1.1	Work within WG	500 days	Mon 03/09/07	Fri 31/07/09	03/09														
22.1.2	VODataService 1.0 WD	0 days	Fri 08/05/09	Fri 08/05/09															
22.1.3	Final review within WG	21 wks	Fri 08/05/09	Wed 30/09/09															
22.2	VODataService WD for PR	0 days	Wed 30/09/09	Wed 30/09/09															
22.3	RFC period within interop	1 mon	Thu 01/10/09	Thu 29/10/09															
22.4	TCG review	1 mon	Fri 30/10/09	Fri 27/11/09															
22.5	PR submission to Exec	0 days	Fri 27/11/09	Fri 27/11/09															
22.6	IVOA Exec review	2 wks	Mon 30/11/09	Fri 11/12/09															
22.7	REC VODataService	0 days	Fri 11/12/09	Fri 11/12/09															

The VODataService is important for its application to the TAP and VOSI standards; thus, the schedule is being coordinated with those other standards.

As more applications make use of the registry, the issues of service compliance stand as a major barrier to user success in the VO. Recent monitoring and validation tests from NVO indicated as few as 7% of registered standard services are fully compliant. The existing service validators are important, and more are planned. However, the more they are used to evaluate which services are most robust, the more important it is to ensure that the validators are themselves accurate and correct. From the community discussions, there have come several recommendations that we hope to give more attention to in the coming year:

- Continue current efforts to develop validators for the latest IVOA services standards.
- Coordinate across the IVO partners the design, definition, and development of service validators
- Registry providers to begin actively updating validationLevel values assigned to VO resource descriptions so that users and applications can select the most compliant and relevant services from the registries. The validationLevel values assigned would in part depend on the results of passing them through validators.
- To develop shared quality standards and metric for success on the IVOA Level.

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2.7 Semantics WG

The Vocabularies standard has been pending the final adoption of SKOS which has now happened in August 2009, so it should proceed with the recommendation process at the end of September 2009 as per the following schedule:

WBS	Task Name	Duration	Start	End	2005		2006		2007		2008		2009		2010		2011		2012
					H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1
26	[Semantics] VO-Vocabularies	48.1 mons	Mon 03/10/05	Mon 05/10/09															
26.1	in Working Group	34.9 mons	Mon 03/10/05	Fri 12/09/08															
26.1.1	Work within WG	636 days	Mon 03/10/05	Wed 30/04/08															
26.1.2	Vocabularies WD v1.0	0 days	Thu 20/03/08	Thu 20/03/08															
26.1.3	Vocabularies WD v1.1	0 days	Fri 30/05/08	Fri 30/05/08															
26.1.4	Vocabularies WD v1.13	0 days	Tue 29/07/08	Tue 29/07/08															
26.1.5	Final review within WG	34 days	Tue 29/07/08	Fri 12/09/08															
26.2	VO-Vocabularies WD 1.15 for PR	0 days	Fri 12/09/08	Fri 12/09/08															
26.3	RFC period within interop	25 days	Mon 15/09/08	Fri 17/10/08															
26.4	VO-Vocabularies PR 20090621	0 days	Mon 22/06/09	Mon 22/06/09															
26.5	TCG review pending SKOS	230 days	Tue 04/11/08	Fri 18/09/09															
26.6	Vocabularies WD v1.15	0 days	Fri 12/09/08	Fri 12/09/08															
26.7	Vocabularies WD v1.16	0 days	Tue 04/11/08	Tue 04/11/08															
26.8	Vocabularies WD v1.18	0 days	Tue 25/08/09	Tue 25/08/09															
26.9	SKOS Recommendation	0 days	Fri 28/08/09	Fri 28/08/09															
26.10	PR submission to Exec	0 days	Fri 18/09/09	Fri 18/09/09															
26.11	IVOA Exec review	11 days	Mon 21/09/09	Mon 05/10/09															
26.12	REC VO-Vocabularies	0 days	Mon 05/10/09	Mon 05/10/09															

Developments on the new UCD1+ 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:

WBS	Task Name	Duration	Start	End	2007		2008		2009		2010		2011		2012
					H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	
27	[Semantics] UCD 1+	33.67 mons	Tue 01/05/07	Wed 27/01/10											
27.1	in Working Group	30.57 mons	Tue 01/05/07	Wed 28/10/09											
27.1.1	Work within WG	30 mons	Tue 01/05/07	Mon 12/10/09											
27.1.2	UCD 1+ WD v1.3	0 days	Thu 15/10/09	Thu 15/10/09											
27.1.3	Final review within WG	10 days	Thu 15/10/09	Wed 28/10/09											
27.2	UCD 1+ v1.3 for PR	0 days	Wed 28/10/09	Wed 28/10/09											
27.3	RFC period within interop	5 wks	Thu 29/10/09	Wed 02/12/09											
27.4	TCG review	6 wks	Thu 03/12/09	Wed 13/01/10											
27.5	PR submission to Exec	0 days	Wed 13/01/10	Wed 13/01/10											
27.6	IVOA Exec review	2 wks	Thu 14/01/10	Wed 27/01/10											
27.7	REC UCD 1+ v1.3	0 days	Wed 27/01/10	Wed 27/01/10											

2.8 VOEvent WG

We continue to work through the fruits of the Hotwired II this spring (presentations and links: <http://www.cacr.caltech.edu/hotwired2>). Work continues on the book, "Hot-wiring the Transient Universe". The WG will participate in various upcoming conferences including the time domain focus at ADASS XIX and at SPIE 2010. The next Hotwired is anticipated for 2011. Extensive work is being directed toward community building and extending the VOEventNet infrastructure.

We anticipate a large participation of VOEvent at the May 2010 IVOA InterOp. Our focus at the November 2009 InterOp will focus on time domain semantics and vocabularies. All open issues for VOEvent v2.0 were resolved at Hotwired II, although discussions continue on time series expressions. We anticipate carrying this to RFC in time for final adoption of the VOEvent v2.0 standard coordinated with the May 2010 InterOp. Work also continues on SEAP v1.0. To avoid contention for resources, suggest this schedule should trail for the fall 2010 InterOp.

2.9 VOQL WG

The VOQL WG is now mainly pending to the TAP/ADQL implementations to get feedback and determine potential future evolution of ADQL.

2.10 VOTable

The version 1.2 of VOTable should establish the missing link between the data models developed by the IVOA and the serialization of the data in the form of VOTables. Once VOTable1.2 is accepted as an IVOA standard, we would consider that the VOTable WG could switch its status into a maintenance mode, i.e. its activities would essentially consist in a follow-up of IVOA activities to ensure that no conflict between the VOTable standard and the other IVOA standards would emerge.

The schedule for the upcoming VOTable 1.2 is the following:

WBS	Task Name	Duration	Start	End	2005		2006		2007		2008		2009		2010		2011	
					H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
28	[VOTable] VOTable 1.2	46.95 mons	Mon 02/01/06	Fri 06/11/09	02/01													
28.1	in Working Group	42.9 mons	Mon 02/01/06	Fri 10/07/09	02/01													
28.1.1	Work within WG	675 days	Mon 02/01/06	Fri 29/08/08	02/01													
28.1.2	VOTable 1.2 Notes	0 days	Mon 17/09/07	Mon 17/09/07				17/09										
28.1.3	VOTable 1.2 WD	0 days	Mon 15/09/08	Mon 15/09/08					15/09									
28.1.4	VOTable 1.2 WD	0 days	Tue 21/10/08	Tue 21/10/08					21/10									
28.1.5	VOTable 1.2 WD	0 days	Mon 15/06/09	Mon 15/06/09						15/06								
28.1.6	Final review within WG	20 days	Mon 15/06/09	Fri 10/07/09						15/06								
28.2	VOTable 1.2 WD for PR	0 days	Fri 10/07/09	Fri 10/07/09						10/07								
28.3	RFC period within interop	11 wks	Mon 13/07/09	Fri 25/09/09						13/07								
28.4	TCG review	20 days	Mon 28/09/09	Fri 23/10/09						28/09								
28.5	PR submission to Exec	0 days	Fri 23/10/09	Fri 23/10/09						23/10								
28.6	IVOA Exec review	2 wks	Mon 26/10/09	Fri 06/11/09						26/10								
28.7	REC VOTable 1.2	0 days	Fri 06/11/09	Fri 06/11/09						06/11								

2.11 Standards and Processes Committee

The schedule for the IVOA Document Standards v1.2 Recommendation process is going on with the following schedule:

WBS	Task Name	Duration	Start	End	2008				2009				2010					
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
31	[Stds&Process] IVOA Doc. Std	24.98 mons	Thu 01/11/07	Wed 04/11/09	01/11													
31.1	in Standing Committee	10.81 mons	Thu 01/11/07	Mon 15/09/08	01/11													
31.1.1	Work within Committee	227 days	Thu 01/11/07	Mon 15/09/08	01/11													
31.1.2	IVOA Doc. Std v1.1	0 days	Wed 16/01/08	Wed 16/01/08	16/01													
31.1.3	IVOA Doc. Std v1.1	0 days	Tue 04/03/08	Tue 04/03/08	04/03													
31.1.4	IVOA Doc. Std v1.1 for PR	0 days	Mon 15/09/08	Mon 15/09/08				15/09										
31.2	RFC period within interop	23 days	Tue 16/09/08	Thu 16/10/08				16/09										
31.3	Work within Committee	146 days	Fri 17/10/08	Fri 08/05/09				17/10										
31.4	IVOA Doc. Std v1.2 for PR	0 days	Mon 02/03/09	Mon 02/03/09					02/03									
31.5	RFC period within interop	19.5 wks	Mon 11/05/09	Tue 22/09/09					11/05									
31.6	TCG review	1 mon	Tue 22/09/09	Wed 21/10/09					22/09									
31.7	PR submission to Exec	0 days	Wed 21/10/09	Wed 21/10/09					21/10									
31.8	IVOA Exec review	2 wks	Wed 21/10/09	Wed 04/11/09					21/10									
31.9	REC IVOA Doc. Std v1.2	0 days	Wed 04/11/09	Wed 04/11/09					04/11									

2.12 Astro-RG IG

There seems a large overlap between the activities of the Grid/WS WG and the Astro-RG IG. Further the activity of the OGF (Open Grid Forum) has been greatly changing since the appearance of the "Cloud Computing".

Therefore it would be desirable to discuss within IVOA if we still need the Astro-RG as a separate IG.

2.13 Data Curation and Preservation IG

This Interest Group has not been very active in the past year.

A major data curation and preservation initiative in the US, NSF's Datanet program, has selected a project for funding led by The Johns Hopkins University Library and with NVO/VAO collaboration. However, an award has not yet been made and thus work has not started. Also in the US, the Smithsonian Institution and several federal agencies are beginning to make serious plans for data preservation, e.g., "Harnessing the Power of Digital Data for Science and Society" (http://www.nitrd.gov/about/harnessing_power_web.pdf).

There are similar initiatives in Europe, such as DigitalPreservationEurope (<http://www.digitalpreservationeurope.eu>). ESAC will be hosting a conference in the context of "Ensuring Long-Term Preservation and Added Value to Scientific and Technical Data," in December 2009.

2.14 Theory IG

The SimDB working draft has been split in two separated documents: SimDB data model + XML serialization, SimDB services (TAP serialization, REST). Both are now progressing in parallel. The data model part will be discussed further with the DM group during the next IVOA interoperability meeting in Garching in autumn 2009. To help convergence between the various efforts in the Theory IG, we have started studying how S3 data can be described by the SimDB DM.

SimDAP development will follow two paths. On one side a special effort will be made between Strasbourg and Garching IVOA interoperability meetings to understand how S3 could fit in a custom service of SimDAP. On the second side, a preliminary document describing the basic SimDAP functionality will be provided before the next IVOA interoperability meeting in Garching in autumn 2009 to help developers to start test implementation.

The next IVOA interoperability meeting in Garching in autumn 2009 will be a checkpoint to assess the level of convergence between SimDB/SimDAP and S3 and determine potential schedule for the release of these standards.

3 Potential discussions required across WGs/IGs

This section introduces specific topics that will require particular attention from the TCG in the coming year. They will be regularly reviewed in the context of the TCG meetings / teleconferences and should be reported upon in the technical assessment and roadmap next year.

3.1 Process for standards across WG

Through last year and still increasing with the higher number of IVOA standards, there have been several examples of the need to define an IVOA standard that spans over more than one WG (e.g. UTYPES, UNITS mentioned in other topics, but also SimDB, SimDAP). We still need to monitor if this would require a standard way to deal with these cases or whether each situation would need to be discussed and ultimately a decision made to assign responsibility to one WG. This item is linked to the inter dependencies between IVOA standards and WG / IG which then requires special attention from the TCG.

3.2 Registry curation tools and validators

As part of improving the quality of IVOA Resources in the IVOA Registries and as part of ensuring that IVOA standards are issued with real implementations, discussions have taken place with the potential needs to develop IVOA Resources curation tools or IVOA standard validators. That will most probably require some discussion and monitoring at TCG level.

3.3 WG and IG web pages

Each WG and IG has its own web pages which organization and structure vary a lot amongst them. We discussed and agreed that it would be useful to have a more commonly structured template for WG and IG web pages to ease the access to information. This could also be linked to having a secretary for each WG and IG, although it is not sure that we will find many volunteers for such task. At the TCG teleconference in February 2008, some actions were set to try to propose a "Template" for WG and IG web pages. This will make the relevant information available in a more uniform way so that people can find it more easily.

3.4 Updated Wiki system

The current IVOA wiki is running quite an old version: "This site is running Twiki version 04 Sep 2004 \$Rev: 1742 \$, Plugin API version 1.025".

Last year, we had decided to upgrade the wiki version to some newer version which also offers more user-friendly editing facilities such as WYSIWYG and other more elaborated text formatting options, but there were some hesitations around the last step due to some known bugs of recent wiki version.

We should retake this discussion to reach a final decision to upgrade or not.

References

[1] C.Arviset, R.Williams, S.Gaudet *Charter for the IVOA TCG*
<http://www.ivoa.net/internal/IVOA/IvoaTCG/TCG-Charter-v1.0.pdf>

[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/20090302/PR-DocStd-1.2-20090302.html>

Annex A: List of already existing IVOA standards

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
IVOA Document Standards v1.0	Standards & Process Committee	Oct. 2003	v1.2 expected in 2009
VOTable v1.10 VOTable Format Definition	VOTable	August 2004	VOTable 1.2 expected in 2009
UCD v1.10 An IVOA Standard for Unified Content Descriptors	Semantics	August 2005	
Maintenance of the list of UCD words v1.20	Semantics	May 2006	
VOEvent v1.11 Sky Event Reporting Metadata	VOEvent	Nov. 2006	
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	Oct. 2007	
SpectraDM v1.01 Spectral Data Model	DM	Oct. 2007	
SSO v1.03 Single-Sign-On Profile: Authentication Mechanisms	GWS	Jan. 2008	
VOSpace v1.02 VOSpace service specification	GWS	Jan. 2008	VOSpace v1.15 expected in 2009
VOResource v1.03 VOResource: an XML Encoding Schema for Resource Metadata	Registry	Feb. 2008	
SCS v1.03 Simple Cone Search	DAL	Feb. 2008	
SSAP v1.04 Simple Spectra Access Protocol	DAL	Feb. 2008	
CharDM v1.13 Data Model for Astronomical DataSet Characterization	DM	March 2008	

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Standards	WG	Date	Comments
ADQL v2.0 Astronomical Data Query Language	VOQL	October 2008	
SAMP 1.11 Simple Application Messaging Protocol	Apps	April 2009	