VAMDC

Virtual Atomic and Molecular Data Centre

D2.3

–

Science/Technical Report 2

Version 0.2

Grant agreement no: 239108

Combination of Collaborative Projects & Coordination and Support Actions

Project Information

Project acronym:	VAMDC
Project full title:	Virtual Atomic and Molecular Data Centre
Grant agreement no.:	239108
Funding scheme:	Combination of Collaborative Projects & Coordination and Support Actions
Project start date:	01/07/2009
Project duration:	42 months
Call topic:	INFRA-2008-1.2.2 Scientific Data Infrastructure
Project web sites:	http://www.vamdc.eu
	http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/WebHome

Consortium:

Beneficiary Number *	Beneficiary name	Beneficiary short name	Country	Date enter project**	Date exit project**
1(coordinator)	Centre National de la Recherche Scientifique	CNRS	France	Month 1	Month 42
2	The Chancellor, Masters and Scholars of the University of Cambridge	CMSUC	UK	Month 1	Month 42
3	University College London	UCL	UK	Month 1	Month 42
4	Open University	OU	UK	Month 1	Month 42
5	Universitaet Wien	UNIVIE	Austria	Month 1	Month 42
6	Uppsala Universitet	UU	Sweden	Month 1	Month 42
7	Universitaet zu Koeln	KOLN	Germany	Month 1	Month 42
8	Istituto Nazionale di Astrofisica	INAF	Italy	Month 1	Month 42
9	Queen's University Belfast	QUB	UK	Month 1	Month 42
10	Astronomska opservatorija	AOB	Serbia	Month 1	Month 42
11	Institute for Spectroscopy RAS	ISRAN	Russian Federation	Month 1	Month 42
12	Russian Federal Nuclear Centre All-Russian Institute of Technical Physics	RFNC-VNIITF	Russian Federation	Month 1	Month 42
13	Institute of Atmospheric Optics	IAO	Russian Federation	Month 1	Month 42
14	Corporacion Parque Tecnologico de Merida	CTPM	Venezuela	Month 1	Month 42
15	Institute of Astronomy of the Russian Academy of Sciences	INASAN	Russian Federation	Month 1	Month 42

This project is funded under *"Combination of Collaborative Projects and Coordination and Support Actions"* Funding Scheme of The Seventh Framework Program of the European Union

Document

Deliverable number:	D2.3
Deliverable title:	Science/Technical Report 2
Due date of deliverable:	
Actual submission date:	
Authors:	N. Walton, F. Kosmala, M.L. Dubernet and WP2 team
Work Package no.:	WP2-NA1
Work Package title:	Scientific/Technical Coordination of the network
Work Package leader:	CMSUC/CNRS
Lead beneficiary:	CMSUC/CNRS
Dissemination level:	PU
Nature:	Report
No of pages (incl. cover):	

Abstract	The objective of D2.3 is to describe VAMDC Science/Technical Report for Cycle 2. This report corresponds to Activities in WP2: NA1 "Scientific/Technical Coordination of the network". This report will be included in the VAMDC Periodic Report for Cycle 2.

Versioning and Contribution history

Version	Date	Reason for modification	Modified by
V0.1	June 2011	Compilation of WP2 nodes activities	F. Kosmala
V0.1	July 2011	WP2 Report P2	N. Walton
V0.1	July 2011	Draft D2.3	F. Kosmala
V0.2	August 2011	Reformating D2.3 after check by ML Dubernet	F. Kosmala

Final Version (v0.2) released by		Circulated to	
Name	Date	Recipient	Date
M.L. Dubernet	24th August 2011	Mrs Asero	24th August 2011

D2.3 Science/Technical Report 2

WP2 ACTIVITIES DESCRIPTION

Work package number	2	Start date or starting event:					1		
Work package title	NA1: Science/Technical Coordination of the network								
Activity Type	COORD								
Participant id	1	2	3	4	6	7	9	14	15
Person-months per beneficiary: (Total = EU + Node Contributions)	12	9	9	2	6	6	6	6	6

Table of Content

1. WP2 Objectives

NA1 provides the scientific and technical work necessary for the operation of the VAMDC e-infrastructure developing its structures and integrating with other data services and placing the VAMDC in a more global context. NA1 will also provide effort for VAMDC to participate and interact with external infrastructure and standards groups such as EGEE, Euro-VO and the IVOA.

The organisation of WP2/NA1, and the technical coordination of the network, is overseen by the VAMDC Executive Project Team (EPT)

The EPT includes WPs leaders (WP2 to WP8). The EPT will have monthly teleconference meetings as well as bi-annual face-to-face meetings. It will collect reports from the SAs and JRAs and prepare the annual technical reports for the VPB. The EPT will be chaired by the VAMDC Deputy (Technical) Coordinator who is a member of the VAMDC Project Board and will advise the VPB on the technical validity and relevance of the project strategic plans.

WP2 leader is CMSUC (2), with co-leadership by CNRS(1)

2. WP2 Milestones and Deliverables

Milestones

M2.1	Approval of WP Plan	WP2	CMSUC/CNRS	Month 3	
M2.2	EPT meetings	WP2	CMSUC/CNRS	Months 3, 10, 16, 22, 28, 34, 38, 42	
M2.3	Approval of Revised WP WorkPlan	WP2	CMSUC/CNRS	Months 10, 22, 34	
M2.4	Approval of Final WP Reports	WP2	CMSUC/CNRS	Month 42	

Deliverables

D2.1 Science / Technical (S/T) Plan (PM 3)

Annual reports will provide publicly available summaries of the activity of the EPT for each project year.

D2.2 S/T Report to be included in report to EU– Year 1 (PM 10)
D2.3 S/T Report to be included in report to EU– Year 2 (PM 22)
D2.4 S/T Report to be included in report to EU – Year 3 (PM 34)
D2.5 Final S/T Report to be included in final report to the EU (PM41)
Annual S/T Plan revisions included in Revised Annual VAMDC Project Plans – Year 1,2,3

Internal deliverables for year 2 activities are listed below.

3. WP2 Tasks Description

WP2 Leader	N. Walton (CMSUC(2)), J. Bureau (CNRS/LPMAA)	
Task Number	Leader	Other Partners
1	N. Walton (CMSUC)	All others
2	N. Walton (CMSUC)	All others
3	T. Ryabchikova (INASAN)	All others
4	E. Roueff (CNRS/LUTH)	All others
5	E. Roueff (CNRS/LUTH)	All others

Task 1: Internal Technical Activities (lead by CMSUC(2), all partners)
Task 1 deals with cross disciplinary technical coordination, identification and evaluation of proposed generic tools, preparation of plans for testing and benchmarking activities. This task also includes the organisation of the EPT meetings.

D2.3 Science/Technical Report 2

Task 2: Connection to External Technical Project (lead by CMSUC(2), partners 1,3,4,14)
Task 2 deals with coordination with IVOA (International Virtual Observatory Alliance), Euro-VO, the IDIS Data service of the Europlanet EU Research Infrastructure, EGEE (European Grid E-science Environment). The EPT will host annual small focussed meetings/workshops where relevant people from the external projects will be invited to present the status of their achievements. The EPT will assess the degree of interoperability with those projects, which will in turn influence the output of task 1.

Task 3: Collect the users and producers specifications (lead by INASAN(15), all partners)
The EPT will gather users/producers requirements by a number of techniques such as questionaires, small face-to-face meetings and so forth.

Task 4: Policies concerning Standards (lead by CNRS(1), all partners)
Task 4 will define, review and update the way standards will be adopted and to that effect it will interact with organisations promoting standards, e.g. external projects cited in task 2, NIST project for defining units in XML schema. Other organisations will be identified during the project if they happen to be relevant to VAMDC.

Task 5: Policies concerning publication in VAMDC (lead by CNRS(1), all partners)
Other missions of the EPT are to define, update and maintain the policies concerning the publication of resources in VAMDC.

4. WP2 Tasks Plans for Period 2

This activity provides scientific and technical coordination for VAMDC. It interacts closely with NA2, with cross membership of the EPT and CTC.

Task 1: Internal Technical Management:

1.1) The EPT meetings continue to be held once every two months. All EPT meetings are fully minuted at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/Na1Ept
1.2) NA1 will organise representation at partner VAMDC related meetings. This will be important during year two where VSMDC will be able to demonstarte the availability of the Level One VAMDC service. All presentations at external meetinsg are available at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/TalksVamdc 1.3) In coordination with SA1, an update to the census of all VAMDC resources will be undertaken. This will be important in traking the development of deployed services against the total potential number of services available to VAMDC. It is anticipated that with the in creasing sophistication of the VAMDC service, a wider range of potential providers will become engaged.
1.4) The use of the VAMDC standard tool set and procedures will be reviewed. Full details available at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/Na1T1Tools
1.5) The quality assurance systems for VAMDC will be refined. In particular the use of defined testing procedures in the QA of deployed VAMDC services will be a focus of year 2 VAMDC technical workshops.

Task 2: External Coordination:

D2.3 Science/Technical Report 2

Project representatives will coordinate with relevant external partners, directly and through EC organised events. These partners include those from the technology area (e.g. EGI, Virtual Observatory) and the science area (e.g. Europlanet, HITRAN).

The list of external coordination meetings and notes is kept at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/Na1T2

A range of technical and scientific workshops will be organised during year 2 of VAMDC.

Task 3: User/ Producer specifications:

INASAN will continue to lead the requirements gathering activities. During year 2, the focus will move to one of refining the initial specifications which were obtained during year 1. In particular there will be a refresh of the requirements survey carried ut in year 1. The focus will be in assessing use of the year one release as measured against the requirements. Further, the community will be surveyed to gather requirements needed in developing the more advanced VAMDC data and application services required in Year 3 of the project.

Task 4: Standards Policies:

This activity will centre on the formation of a working group to access the optimum manner in which to curate standards developed within VAMDC. In particular the curation of the XSAMS standard will be decided in year 2. It is currently hosted by the IAEA, but this will change in 2011.

Task 5 Publications Policies:

The VAMDC publication policy is available at:
http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/VamdcPolPub It will be reviewed and updated as required during year 2.

5. WP2 Tasks Reports for Period 2

Period: 01/07/2010 – 30/06/2011
WorkPackage: 2: NA1: Science/Technical Coordination of the network
WorkPackage Leader and co-Leader: Nicholas Walton, Marie-Lise Dubernet
Participants in the WorkPackage: CNRS (1), CMSUC (2), UCL (3), OU (4), UU (6), KOLN (7), QUB (9), CPTM (14), INASAN (15)

Part 1

A summary of progress towards objectives and details for each tasks

NA1 provides the scientific and technical work necessary for the operation of the VAMDC e-infrastructure developing its structures and integrating with other data services and placing the
VAMDC in a more global context. NA1 also provides effort for VAMDC to participate and interact with external infrastructure and standards groups such as EGEE, Euro-VO and the IVOA

The **Executive Project Team (EPT)** is responsible for technical activities. The EPT includes WPs leaders (WP2 to WP8) – with the full membership given at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/Na1Ept

The EPT has had monthly or every other month face to face or teleconference meetings – namely EPT 6 (9 Jul 2010), EPT 7 (6 Sep 2010), EPT 8 (24 Nov 2010), EPT 9 (13 Jan 2011), EPT 10 (16 Mar 2011), EPT 11 (23 May 2011) – with minutes of each meeting available from http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/Na1Ept

The agenda at each meeting allows for reviews of activities across each WP, notes actions against plan, and records decisions on activities for the upcoming period.

During the course of the second year there have been no significant deviations from the originally planned activities in WP2. The detailed NA1 plan is available at:
 http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/CycleTwoWp2

Task 1: Internal Technical Activities: (lead by (1))

This activity deals with the cross disciplinary technical coordination, identification and evaluation of proposed generic tools, preparation of plans for testing and benchmarking activities.

The main activity in Year 2 has been in the continued technical coordination of the project, in particular the EPT, and the definition of the Year 2 programme of work. Planning for the testing and benchmarking is now underway to support the role out of the Level 2 service with details available at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/VamdcServiceLevelTwo

Task 2: Connection to External Technical Project (lead by (2) with (1),(3),(4),(14))

D2.3 Science/Technical Report 2

Coordination and interaction has taken place with a range of relevant external partners. The interaction with the International Virtual Observatory Alliance has been through participation in a number of the IVOA working groups and attendance at the twice yearly IVOA InterOp meetings (Dec 2010 at Nara, Japan - http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/InterOpDec2010 - where Le Sidaner and Akram attended and May 2011 in Naples, Italy - http://www.ivoa.net/cgi-bin/twiki/bin/view/IVOA/InterOpMay2011 - where Le Sidaner and Le Petit attended).

 IVOA interactions ensure that VAMDC s aware of developments in the standards underpinning the technologies adopted by VAMDC – primarily registry, data access and grid and web services. Additionally the experience from VAMDC in the development of AM specific standards such as XSAMS, is brought to the attention of the IVOA community. In this manner, for instance, the TAP interface has been developed by VAMDC for data presented through the XSMAS interface.

The first VAMDC/ external technical workshop will be held in the winter of 2011 – demonstrating the VAMDC level two service, and looking ahead to future interoperability.

The Cycle Two annual meeting – see http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/PmCycleTwo – included presentations from a range of external science domains.

Task 3: Collect the users and producers specifications (lead by (15))

The census of all VAMDC resources available is maintained (see http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/DeploymentResourceCensus), this includes a statement on how these resources are currently made available and used. This enables the baseline to be determined, thus gives a metric against which the VAMDC usage patterns can be compared for any individual resource accessed through its legacy interface.

In rear two – a census of high performance codes required by the A+M community, and accessed via the VAMDC grid, was carried out – see http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/GridCodesCensus This enabled the identification of a small set of high value codes for initial VAMDC deployment – e.g. PDR at ObsParis and XStar at IVIC.

Following on from the year one user requirement gathering process, a range of face-to-face meetings have been held with users, to gauge their experience of the beta release of the Level Two service release. This feedback has led to refinements in the user interface – witnessed in the release to the community scheduled for Jul 2011.

Task 4: Policies concerning Standards (lead by (1))
WP2, T4 is defining the VAMDC policy on the implementation of the standard infrastructure and interfaces. Full details can be found at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/Na1T4

Agreement has been reached with NIST as to the ownership of the XSAMS schema, whereby NIST will be the responsible body for this standard. Nevertheless the fast pace of

VAMDC implies that VAMDC defines its own standards VAMDC-XSAMS. Then once a year a meeting is organized between VAMDC consortium and XSAMS group in order that XSAMS group adopts the developments of VAMDC.

Task 5: Policies concerning publication in VAMDC (lead by (1))

The publication policy for VAMDC has been developed in WP2, T5. This covers the acknowledgement for the use of VAMDC services, principles for referencing VAMDC by referring to the initial refereed paper describing the system.

The initial meeting of the SAB ratified the VAMDC draft policy on publications (authorship and credits) and the open source license under which all VAMDC developed infrastructure software will be released to the community.

Full details can be found at:
http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/Na1T5 and the publication policy at http://voparis-twiki.obspm.fr/twiki/bin/view/VAMDC/VamdcPolPub

Significant results (Activities and Deliverables)

a) D2.1 Science / Technical (S/T) Plan

This report is available at:
http://voparis-twiki.obspm.fr/twiki/pub/VAMDC/CycleKickOffPlan/WP2-SciTech-Plan.pdf

b) D2.3 S/T Report – this annual report which includes the WP2 activities listed above, and taken together with the reporting for the technical WPs 4,5,6,7,8 forms the year one science/ technical report.

Deviations from the contract (Annex I) and reasons for them (if applicable)

Not applicable

Failures to achieve critical objectives and/or not being on schedule and reasons for them (if applicable)

Not applicable

Proposed corrective actions (if applicable)

Not applicable