WP3/ NA2:
Dissemination and Training

Our objective is to attract new participants to the e-infrastructure, i.e. producers and users of data
The key objective of the training and dissemination activity is to ensure that principle stakeholde
are engaged in the development and implementation of the VAMDC E-infrastructure. This Wo
package will therefore provide for:
a) Dissemination of VAMDC services at national, EU and non-EU levels
b) Training of producers & users at master, PhD and professional levels (both academic and no
academic users)
Specifically this work package provides for:
1) An annual meeting, which showcases the work of the e-infrastructure, supports networking a
scientific
communication, and becomes the conference of choice for users and providers of atomic a
molecular data
2) Host topic based scientific workshops, twice a year, to bring together proposers, users a
providers of A&M data to discuss data needs and how VAMDC can meet those needs.
3) Arrange teaching tutorials (on-line and face to face) on the VAMDC e-infrastructure

WP3/ NA2:
Dissemination and Training

Four tasks

1. Coordination
2. Annual meeting and representation at other meetings
3. Themed workshops
4. Training tutorials

WP3/ NA2:
Dissemination and Training

Communication and Training Committee

Chair; N J Mason	**OU**
Vice Chair; Kupka	**Vienna (replacing Werner Weiss)**
Dimitrijevic	**IOA Serbia**
(Kevin Benson & Peter Yuen)	

CTC will prepare suitable display material (in electronic format and hard copy) for meetings/publicity.

WP3/ NA2:
Dissemination and Training

Annual Meetings

1. Open University April 18-22, 2010
2. Cambridge April (?) 2011
3. Vienna 2012 (with ICAMDATA)

WP3/ NA2: Dissemination and Training

Representation at other meetings

Aimed at meetings of producers and users

AOB responsible for collating the information and VAMDC presence.

Examples (pre-kick off)

EPSC (Europlanet) 2009 (Potsdam) – link to IDIS

EIPAM/PEIC Trieste 2009

Radam Frankfurt 2009 (agree w/shop in 2010)

COST CM0601 (ECCL) CM0805 (Chemical Cosmos)

Lassie (ITN) in astrochemistry (website to link)

IAEA Trieste 2009

WP3/ NA2: Dissemination and Training

Representation at other meetings

Examples (2010)

EPSC (Europlanet) Sept 2010 (Rome) – link to IDIS

Escampig Belgrade July 2010 (2 workshops)

Radam Madrid 2010 (w/shop)

ECAMP Salamanca July 2010

Astrochemistry (COST (Grenoble October 2010)

Lighting (Eindhoven) July 2010

Cospar (Bremen) June 2010

EGL ?

WP3/ NA2:
Dissemination and Training

Regional meetings (IVIC,INASAN, IAO, AOB)

Venezuela already held

21-25 September 2009. The 2nd Latin American Conference on High Performance Computing (CLCAR-II)

WP3/ NA2:
Dissemination and Training

Scientific meetings

1. Plasma – as part of ESCAMPIG Belgrade, July 2010
2. Lighting – as part of ESCAMPIG Belgrade, July 2010
3. Radiation damage – RADAM Madrid June 30-July 3,2010

To arrange;

Fusion; OU and UNIVIE

Atmospheric science (HITRAN) UCL and IAO ;

Astronomy & planetary science CMSUC, AOB, CNRS (Europlanet/IDIS)

WP3/ NA2:
Dissemination and Training

Training tutorials

1. Material to be prepared by CMSUC and UCL

2. All partners will be required to nominate one member who will be able to 'train' and/or provide support for their national users.

3. OU & UCL will prepare an e-tool for general public/more general stakeholders such that they can take a virtual guided tour of VAMDC

WP3/ NA2:
Dissemination and Training

Training tutorials --- Pierre Le Sidaner Observatoire de Paris

We intend to produce a self-studying e-tutorial that can be incorporated in university courses on molecular and atomic physics, astronomy, energy systems, environment (etc). Also we intend to operate an e-tool for general public to take a virtual guided tour of VAMDC: statistics, content, geography of clients and producers, databases locations.

Dissemination and Tutorials organized in WP3 will show and teach how to implement and use theinfrastructure, will advertise all those tools. Note that the actual generation of the training materials and support events will be organised by WP3 (NA2).

WP3/ NA2:
Dissemination and Training

VAMDC Service & Service Prototype Release

1. **CMSUC and UU will lead the coordinated release of the annual VAMDC prototype service.**

2. **The annual prototypes will be reviewed at the yearly project meetings and available for assessment alongside the VAMDC annual reports.**

WP3/ NA2:
Dissemination and Training

VAMDC Service & Service Prototype Release

The prototype services will contain the following functionality:

Level 1: Preliminary VAMDC service with simple data access to the core VAMDC data resources

Level 2: Enhanced interoperable data access to VAMDC data resources, all resources accessible

Level 3: Interoperable VAMDC data access with VAMDC tools available (client side or server side accessible via through workflow enactment engines)

VAMDC Service: Final full service, including access to resources from the wider community (through the SA1 / Task 6 community call).

WP3/ NA2:
Dissemination and Training

Publications

Needs a page on the wiki

Partners to send to post on the site

(Discussion on database referencing)

WP3/ NA2:
Dissemination and Training

Publicity

Degree of open access to the website

Publicity material/leaflet for meeting

(Discussion)

VAMDC

Virtual Atomic and Molecular Data Centre

M.-L. Dubernet[1,2] coordinator of the VAMDC Collaboration

[1]LPMAA, Université Paris 6, France, [2] Observatoire de Paris, France

An e-science Platform for the Exchange of AM Data and Services

Objectives

The Virtual Atomic and Molecular Data Centre (VAMDC) aims at building a secure, documented, flexible, easily accessible and interoperable e-infrastructure for AM data. The VAMDC will be built upon the expertise of existing AM databases, data producers and service providers with the specific aim of creating an infrastructure that on one hand can directly extract data from the existing depositories while one the other hand is sufficiently flexible to be tuned to the needs of a wide variety of users from academic, governmental, industrial communities or from general public both within and outside the ERA. The project will address the building of the core consortium, the deployment of the infrastructure and the development of specific software as well as providing a forum for training of potential users and dissemination across the ERA. It is expected that VAMDC becomes a European legal entity during the course of the project.

Service Activities

The key objective of the Service Activities is to provide access to an inclusive range of high quality data and applications services to the research community. The VAMDC partners represent major data producers. By integrating their existing and, importantly, future resources through the standard VAMDC infrastructure the wider community of diverse end users will gain enhanced access to this eco-system of fundamental scientific data. The SA activities will ensure the availability of these major data resources in interoperable formats, the maintenance of services allowing publications of small datasets by producer's teams, the maintenance of registries and dictionaries, the maintenance of nodes listing the needs for the various communities (in relation with other EU initiatives). These services will be delivered by use of the latest virtual observatory and grid e-science infrastructures.

Networking Activities

The ensemble of Networking Activities (NAs) aims to foster a culture of cooperation between A&M scientists, database providers and data users throughout Europe.

The objectives of Nas are: to coordinate the infrastructure's activities among all trans-disciplinary fields (atomic and molecular physics, users such as the astrophysics, atmospheric, fusion, ICT communities); to develop a coherent research community within the EU and to create a direct partnership to key external communities in both the Russian Federation and central and southern America via Venezuela: to link VAMDC to other international projects relevant to VAMDC; to interact with non-partner teams from other EU and non-EU countries in order to take the largest possible approach to the development of the infrastructure: to disseminate VAMDC achievements and to get feedback from data provider and users on the content and operation of VAMDC. The NAs will therefore have both a practical and a political role in defining the policies and evolution of the infrastructure.

Present Status

The Project has been submitted to the European Framework Program FP7 on the 11th of September for a funding of 3MEuros.

Local National Organisation is organized in France through the set-up of a working group.

Another European CALL for funding is opened in Spring 2010 and the project will be re-submitted if not funded this time.

To be kept informed about the VAMDC project, send a mail to marie-lise.dubernet@obspm.fr

Participants (Contact persons)

CNRS (France): ML Dubernet, V. Boudon, C. Joblin, P. Le Sidaner, B. Schmitt, V. Tyuterev, V. Wakelam, C. Zeippen [LPMAA, ICB, CESR, VOPARIS Data Centre, LPG, GSMA, L3AB, LERMA]

UK: N. Mason (Open University), J. Tennyson, L. Culhane (UCL), T. Millar (Belfast University), H. Mason, G. Del Zanna, N. Walton, (Cambridge University)

VALD Consortium: U. Heiter, N. Piskunov (Uppsalla University, Sweden), T. Ryabchikova (INASAN, Russian Federattion), A. Ryabtsev (ISAN, Russian Federation), F. Kupka, W. Weiss, C. Stuetz (Vienna University)

Germany (Cologne Univ): S. Schlemmer

Belgrade (Astronomical Observatory): M. Dimitrijevic

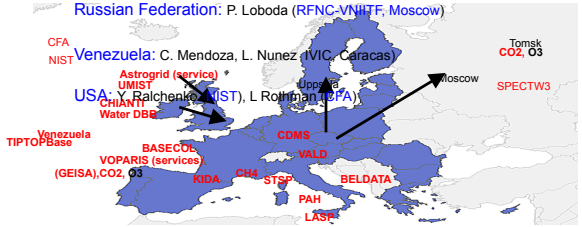
INAF (Italy): G. Mulas, G. Malloci (Observatory of Catania, of Cagliori)

Russian Federation: V. Perevalov, A. Fazliev (IAO, Tomsk),

Russian Federation: P. Loboda (RFNC-VNIITF, Moscow)

Venezuela: C. Mendoza, L. Nunez (IVIC, Caracas)

USA: Y. Ralchenko (NIST), L. Rothman (CFA)



VAMDC RESOURCES AND APPLICATION FIELDS

- UK: Cambridge + UCL + Open University + Belfast
  - Astrogrid, CHIANTI, Water DBB, UMIST
  - Fusion, Atmospheric, Solar, ISM, Planeto
- Austria, Sweden, Russia = VALD
  - Stellar, Fusion
- Serbia = BELDATA – Stellar, Solar –
- Germany = CDMS – ISM, Atmospheric
- Italy = PAH, LASP, ISM, Planetology
- France (CNRS) = - Atmospheric Databases
  - LPMAA: Coordination, ISM – BASECOL Coll. Tomsk – Atmospheric
- Venezuela, Caracas = TIPTOPBase, Stellar - GRID
  - VOPARIS Data Center: Technical Node, GRID, Archiving, Registries -
  - LERMA: TIPTOPBase – Stellar, Fusion, BELDATA - Solar
  - GSMA: O3 – Coll. Tomsk – Atmospheric
  - ICB: CH4 – Planetology – ISM –
  - LPG: Spectroscopy of Solids – Planeto –
  - L3AB: KIDA (Reactions) – ISM – Planeto
  - CESR: PAH Database – ISM – Coll. INAF

Design of the Infrastructure

- **Data Models and XML Schema**: Extension of current Schemas for example with
  - inclusion of solid, surface spectroscopy for interstellar medium and planetology
  - inclusion of larger molecules such as PAH
  - description of atomic and molecular line shapes arising from different sources
- **Dictionnaries:** In order to uniquely identify resources we will need to define and build dictionaries both general and specific to applications
- **Access Protocols and Query/Retrieval Language:** We will define protocols retrieving different types of resources: numerical data, libraries, documentation, references. In a second step we will design a general query language allowing to access and retrieve any atomic and molecular data.
- **Registries:** Registries provide a mechanism with which applications can discover and select resources--e.g. data and services--that are relevant for a particular scientific problem. We wish to implement ways of finding resources at various levels of granularity

Design of Publishing and Mining Tools

The following software are aimed at enhancing scientific research through allowing easy and secure publication and mining of A&M resources within the VAMDC infrastructure:

- ***Task 1***: Create/adapt tools to go from an DM/XML schema to a full database deploymentwith generation of automatic administrative interface.
- ***Task 2***: Create/adapt tools to build registries from the content of databases
- ***Task 3***: Create/adapt interfaces to easily update dictionaries
- ***Task 4:*** Develop software libraries using various languages allowing to easily generate output of already existing resources in standardized format
- ***Task5: Tools for Manipulation of Data*** Our queries will return data organised according to schemas defined in JRA1. Those schemas will be quite complex because they will reproduce all the scientific concept attached to the data. Therefore the handling of the XML files will be complex and will require specific tools. For now we identify too main generic tools: one performing cross-matching of data and one performing cross-federation of data.