

IVOA Telecon Meeting 12: TM12
 =====

22 Nov 2004: 14.00 - 15.00 GMT

Notes: NAW

Draft 03 Jan 2005

Present:

David Barnes	<dbarnes@physics.unimelb.edu.au>	DB	Aus-VO
Chenzhou Cui	<ccz@bao.ac.cn>	CC	China-VO
Dave De Young	<deyoung@noao.edu>	DY	NVO
Markus Dolensky	<mdolensk@eso.org>	MD	AVO
Bob Hanisch	<hanisch@stsci.edu>	BH	NVO
Andrew Lawrence	<al@roe.ac.uk>	AL	AstroGrid
Masatoshi Ohishi	<masatoshi.ohishi@nao.ac.jp>	MO	JVO
Peter Quinn	<pjq@eso.org>	PQ	AVO
Enrique Solano	<Enrique.Solano@esa.int>	ESo	SVO
Nic Walton	<naw@ast.cam.ac.uk>	NW	AstroGrid
Roy Williams	<roy@cacr.caltech.edu>	RW	NVO

Apologies:

Francoise Genova	<genova@astro.u-strasbg.fr>	FG	F-VO
Ajit Khembavi	<akk@iucaa.ernet.in>	AK	I-VO
Tony Linde	<tol@star.le.ac.uk>	TL	AstroGrid
Oleg Malkov	<malkov@inasan.ru>	OM	RVO
Fabio Pasian	<pasian@ts.astro.it>	FP	DRACO
Wolfgang Voges	<wvoges@mpe.mpg.de>	VW	GAVO
David Schade	<David.Schade@nrc.ca>	DS	CVO

Glossary

AstroGrid - UK VO initiative	www.astrogrid.org
Aus-VO - Australian Virtual Observatory	www.aus-vo.org
AVO - Astrophysical Virtual Observatory	www.euro-vo.org
AVO - AVO Science Working Group	
CDS - Centre de Donnes Astronomiques de Strasbourg	www.cdsweb.u-strasbg.fr
China-VO - Chinese Virtual Observatory	www.china-vo.org
CVO - Canadian Virtual Observatory	
DRACO - The Italian Datagrid for Research in Astrophysics and Coordination with the Virtual Observatory	
F-VO - French VO	
GAVO - German Virtual Observatory	www.g-vo.org
GSC - UK Grid Steering Committee	
VO-India - Indian Virtual Observatory	
JVO - Japanese Virtual Observatory	jvo.nao.ac.jp/index-e.html
KVO - Korean Virtual Observatory	kvo.kao.re.kr
NVO - National Virtual Observatory	www.us-vo.org
PDS - AAS Division of Planetary Sciences	
RVO - Russian Virtual Observatory	www.inasan.rssi.ru/eng/rvo/
SVO - Spanish Virtual Observatory	www.laeff.esa.es/svo/

IVOA - International Virtual Observatory Alliance

Agenda:

0. Review of open action items from previous meetings and their new status
1. Roll Call
2. Reports from the VO Projects

3. Progress check for January demos
 4. Status of Prague IAU proposal
 5. New WG/IG proposals.
 6. Proposed entry of Armenian VO project
 7. Proposed liaison with ALMA project
 8. IVOA Calendar
 9. AOB
 10. New (at end of list) and Outstanding Action Item Review
- A. Appendices - reports from the VO projects.

0. Review of open action items from previous meetings and their new status

ACTION FM4-7.3.2 DS/PQ: produce a position paper on issues related to data quality and data provenance.

ONGOING: PQ will be continuing this in the near future. All input welcome. Draft for Jan 2005 IVOA Exec meeting.

ACTION FM9-3.2A Doug Tody: progress the DAL SSA std to v0.9 (thus implementable) by 1 Apr 2004.

ONGOING: Good progress is occurring. A draft v0.9 is being discussed.

NW: the Jan demos are working to known SSA drafts.

ACTION: FM9-3.3A JM: v0.9 DM std is required by 1 May 2004

ONGOING: Good progress is occurring.

MD: reported that there is a 0.92 SED DM at the moment.

ACTION FM9-3.5: issue registry harvesting std (schema) v0.9 by 1 Sep 2004.

CLOSED: v0.9 agreed post Pune InterOp.

ACTION TM10-5 FG/NW - look at steps required to get IAU Symp approval for 2006 meeting.

CLOSED: AL has submitted a Symposium proposal to the IAU proposing a Science focused meeting in Prague. We are yet to hear the outcome of this proposal.

ACTION ARCH01-3 Reagan Moore/ Françoise Genova - propose a Interest Group for Data Preservation and Curation at the Sep 2004 InterOp meeting. Circulate draft charter before that meeting.

CLOSED: A formal proposal has yet to be issued. Decided to remove the action and await a proposal.

ACTION ARCH01-5: Jonathon McDowell - define Data Model work group area. This action reflects the need to fully define the scope of this work area.

CLOSED: this is still being developed, but there is a plan as developed in the Pune InterOp meeting.

ACTION ARCH01-6: Roy Williams - bring forward a revised UCD-WG Charter by the Sep 2004 InterOp meeting to incorporate ontologies and semantics

CLOSED: This is still being developed. This will be an agenda item for the Jan 2005 Exec meeting to check as to progress here.

ACTION ARCH01-8: FG/BH/NW/Ajit Khembavi - generate draft schedule for Sep 2004 InterOp meeting. This is ongoing - see <http://www.ivoa.net/twiki/bin/view/IVOA/InterOpSep2004>

CLOSED: The meeting proved to be well attended and productive. See wiki site for report.

ACTION FM11-2.4 DS to produce a write up CVO experience of placing a SIAP access on top of the CVO archive data sets.

ONGOING: report to be issued.

ACTION FM11-3.1.1 NW/MO/RM/GR to bring a position paper on workflow (covering script-ability and compose ability) to the Jan 2005 IVOA Exec meeting. Canvas also Thomas Boch at CDS.

ONGOING: This is being developed for presentation at the Jan 2005 IVOA Exec meeting.

ACTION FM11-4 Roy Williams: to work with the 'architecture group' to produce a publication, based on the architecture document, that describes the make up of the VO for a wider audience.

ONGOING: This is being developed.

ACTION FM11-5.2A PQ/AL/BH/MO to issue the 2005-2007 milestones based on the above list for comment.

ONGOING: The 'working' roadmap (as updated after the Pune InterOp meeting Sep 2004) is available at <http://www.ivoa.net/twiki/bin/view/IVOA/IvoaRoadmap>

AL noted that the external roadmap requires updating at <http://www.ivoa.net/pub/info/#statement> - this will be done for the IVOA Jan 2005 Exec meeting.

BH noted that the OECD White Paper could be a starting point - linked to data quality/provenance issues.

(Note AL/BH/MO added to the action list with PQ leading)

ACTION FM11-5.2B PQ/NW - add in milestones explicitly reference to IVOA standards being designed to enable large scale manipulations (so numbers, size of data, resources). This should be a key indicator back from the implementations.

ONGOING: Being developed for discussion at the Jan 2005 IVOA Exec meeting.

ACTION FM11-5.2C PQ/NW - look at issuing an amended version of the 2005-2007 roadmap to the external community (define community).

CLOSED: To be issued early 2005. - see above at ACTION FM11-5.2A
PQ/AL/BH/MO

ACTION FM11-6 RM/FG - Set up Curation and Preservation IG. Charter to be presented at the Pune Sep 2004 meeting.

CLOSED: Charter to be presented in Jan 2005.

ACTION FM11-7.2: PQ - prepare a draft document that defines the strategic overview of IVOA activities covering the medium term (3-6 yrs) based on the agreed positions in FM11-7.2. Input invited.

ONGOING: Draft required for Jan 2005. Further input requested by PQ (preferably by Xmas 2004). (Additional input to draft from AL and MO).

1. Roll Call

The participants - as listed above - introduced themselves.

1.1 Previous minutes.

Notes from meeting 2004-06-23 - at
<http://www.ivoa.net/internal/IVOA/IvoaRepMin/ivoa-fm10-20040623.pdf> -
AGREED

2. Reports from the VO Projects

2.1 AVO

PQ: AVO project closed formally 31 Oct 2004 - it was a phase A programme leading to Euro-VO. VOTECH is the first major part of Euro-VO - a technology development programme - 50%EU funded, 50% funded by the VOTECH partners. 3.3M euros over the next three years. see <http://www.eurovotech.org>

AL: the kickoff meeting was held at the IoA, Cambridge 18+19 Nov 2004. see <http://eurovotech.org/twiki/bin/view/VOTech/VOTechKickoff> for agenda and online presentations.

2.2 China

[update: see appendix]

CC: Developing new web services. Wrapper for simple Java programmes automatically. Eases developer effort. Release to community by end of 2004.

2.3 India-VO

No report received.

2.4 CVO

No report received.

2.5 DRACO

[update: see appendix]

2.6 F-VO [update: see appendix]

2.7 JVO [update: see appendix]

MO: busy implementing prototype 3.

2.8 NVO [update:see appendix]

BH: preparing for the science demo in January - ensuring that the apps shown to astronomers are intelligible to astronomers (remove VOspeak).

At the NVO team meeting last week - Jeff Cantor (data manager for LSST) and Tim Axelrod will collaborate with the NVO. Thus this brings the VO into the time domain.

2.9 HVO

no report received.

2.10 Korea VO

no report received.

AL: San Chul Kim spent three months in Edinburgh. Helped to develop a version of the s/w (AstroGrid in the Box).

CC: A grad student from the Chinese National Observatory joined the KVO project in October.

2.11 Bulgaria

no report received.

2.12 RVO

no report received.

2.13 AstroGrid

AL: AstroGrid completes Dec 2004. AstroGrid 2 commences then for the period Jan 2005 to Dec 2007.

December 14+15th 2004 is the next consortium meeting and s/w release - see for details.

2.14 Australia-VO [update: see appendix]

DB: Unfortunately the funding for next year (2005) is reduced c.f. the previous two years, New avenues for financial support are being explored. participation in the WG's/IG's is hopefully going to be increased.

DB: Radio data was integrated into a SC2004 demo showing high speed data transfer from Australia to Pittsburgh, USA.

2.15 SVO [update: see appendix]

ESo: see report.

3. Progress check for January demos

AL: Are there any standards bottlenecks that may impede the Jan 2005 VO demos.

BH: The US-VO are working to registry std v0.10 for their Jan demo. They are expecting to harvest at the v0.10 std.

MD: The AVO are working to 0.9. AstroGrid supports both v0.9 and v0.10 - requires a clean up to the registry.

MO: the JVO are implementing v0.10 and are expecting that version.

ACTION TM12-3 Tony Linde: call a telecon of registry leaders to resolve this issue ASAP (BH, MD, etc). Probably need to be using v0.10.

4. Status of Prague IAU proposal

AL: A draft proposal was submitted earlier in the year. Letters of support from the supporting divisions/commissions were required by the IAU a few days ago. Division 12 proposal plus supporting letters go from Virginia Trimble Dec 15 2004 to the IAU President to say that this is a full Div 12 Symposium proposal.

AL: Thus between now and Dec 15 2004 is the time to make last changes to the draft proposal. An outline speaker list is required.

BH: Should letters of support be sought from NSF, PPARC, NASA, CNRS etc? Probably only the IAU division heads are important in this. Thus support from the President, incoming President is helpful.

BH: Speakers need to be carefully thought about now, drawing from the non-VO community.

AL: Jim Peebles could review progress since the 2002 Garchin VO conference.

ACTION TM12-4A AL: draft proposal distributed to the Symposium organising committee, and cc'd to the IVOA Exec, for last comments.

ACTION TM12-4B BH, PQ, AL: send letters to Catherine Cesarsky and Ron Ekers noting that this proposal is to be submitted as a Symposium.

5. New WG/IG proposals.

AL: The VOEvent WG has been proposed by Roy Williams et al. At the Pune meeting many considered this should be an Interest Group.

AL: This is still an open question as to whether this should now be constituted as a working group or an interest group.

BH: noted that there is a certain urgency because groups such as the LSST are now requiring work in this area, and will progress systems outwith the IVOA stds progress if a WG is not initiated soon.

NW/PQ: Happy for VOEvent to go forward as a WG - but need to ensure that the scope is well defined, and that it is clear where the boundary between Observatory and VO is clear.

DY: Should the US solar VSO be made aware of the VOEvent working group.

AL: yes, as need to include demands from Solar, STP communities.

DB: This could be compared to the Theory IG, and thus is not clear why a VOEvent IG is not more appropriate.

AL: The proponents have answered this by pointing to clear technical problems which require solutions.

ACTION TM12-5A AL: Recommend initiation of the VOEvent-WG - Marco Leoni to set up mailing list, forum etc. Charter to be uploaded to the IVOA web site. Chair to be decide upon, report plus workplan to the IVOA Exec in Jan 2005.

ACTION TM12-5B DY: Contact US VSO as to the status of this group.

6. Proposed entry of Armenian VO project

AL reported on the request from Areg Mickaelian of the Armenian Virtual Observatory (ArVO) requesting to become members of the IVOA. Their first project has a web presence at <http://astrol.phys.uniroma1.it/DFBS/fbs.htm>

There was some concern as to the internal community backing of this national VO project (thus concerning staff, funds, planning for the future).

There was a split in supporting this group's contribution to the IVOA (those arguing for projects bringing data to the VO, and those with the ability to contribute to the standards process).

MO: suggested a new category of IVOA membership: Associate membership. This would allow those projects wishing to uptake VO technology or integrate resources into the VO.

ACTION TM12-6A AL/MO/DY/PQ/BH/NW: bring forward possible definitions of new classes of membership - associate, partner membership etc.

ACTION TM12-6B AL: Contact Areg Mickaelian ArVO that a decision on this will be taken after the IVOA Jan 2005.

7. Proposed liaison with ALMA project

AL reported that BH and MO were approached by the ALMA project at the Oct 2004 ADASS meeting in Pasadena.

BH: a number of projects wish to be connected to the IVOA, not necessarily as full members, but do want to be informed as to IVOA progress.

BH: Thus the IVOA needs a mechanism to allow liaison with large external projects - this will be good for both them and the IVOA.

AL: so need to engage projects such as Planck, ALMA, LSST etc.

See ACTION TM12-6A above.

8. IVOA calendar

8.1 Jan 2005 Exec Meeting

BH: Access grid room at SDSC for the sunday IVOA exec meeting

8.2 May 2005 InterOp in Kyoto

MO: Kyoto planning is underway. The conference venue has been booked, with one large room and three meeting areas reserved. Hotel block booking for 30 rooms, with more to come.

NW: reported that the meeting page is at <http://www.ivoa.net/twiki/bin/view/IVOA/InterOpMay2005>

MO: JVO will provide a small amount of financial assistance. Is there additional support coming?

It was AGREED that there would be a full Exec Meeting at the May InterOp.

ACTION FM12-8 AL: Contact VO projects as to possibilities for a financial support package for attendees.

8.3 Jun 2005 Technical Meeting in Garching.

PQ: 27 Jun - 1 Jul 2005 - workshop for large projects and archives to see standards in action through the demos. 80 people in total as the audience - web site available soon. International focus.

8.4 Autumn 2005 ADASS/InterOp meeting.

Agreed that there would be a two day InterOp associated with the ADASS meeting. BH to lead the Interop programme. perhaps a IVOA Exec telecon associated with this meeting.

8.5 2006 Activities.

AL: The Prague IAU Symposium.

AL: locations for the Interop meetings - Moscow for the Oct Interop with a small projects meeting. Europe or North America for the May Interop meeting. Canada suggested.

BH: Dec 2005 for another graduate school with the NVO.

ACTION FM12-8.5 AL: issue a call for InterOp, VO workshop possibilities in 2006.

9. AOB

None

10. New (at end of list) and Outstanding Action Item Review

ACTION FM4-7.3.2 DS/PQ: produce a position paper on issues related to data quality and data provenance.

ONGOING: PQ will be continuing this in the near future. All input welcome. Draft for Jan 2005 IVOA Exec meeting.

ACTION FM9-3.2A Doug Tody: progress the DAL SSA std to v0.9 (thus implementable) by 1 Apr 2004.

ONGOING: Good progress is occurring. A draft v0.9 is being discussed.

ACTION: FM9-3.3A JM: v0.9 DM std is required by 1 May 2004

ONGOING: Good progress is occurring. There is a 0.92 SED DM at the moment.

ACTION FM11-2.4 DS to produce a write up CVO experience of placing a SIAP access on top of the CVO archive data sets.

ONGOING: report to be issued.

ACTION FM11-3.1.1 NW/MO/RM/GR to bring a position paper on workflow (covering script-ability and compose ability) to the Jan 2005 IVOA Exec meeting. Canvas also Thomas Boch at CDS.

ONGOING: This is being developed for presentation at the Jan 2005 IVOA Exec meeting.

ACTION FM11-4 Roy Williams: to work with the 'architecture group' to produce a publication, based on the architecture document, that describes the make up of the VO for a wider audience.

ONGOING: This is being developed.

ACTION FM11-5.2A PQ/AL/BH/MO to issue the 2005-2007 milestones based on the above list for comment.

ONGOING: The external roadmap still requires updating

(Note AL/BH/MO added to the action list with PQ leading)

ACTION FM11-5.2B PQ/NW - add in milestones explicitly reference to IVOA standards being designed to enable large scale manipulations (so numbers, size of data, resources). This should be a key indicator back from the implementations.

ONGOING: Being developed for discussion at the Jan 2005 IVOA Exec meeting.

ACTION FM11-7.2: PQ - prepare a draft document that defines the strategic overview of IVOA activities covering the medium term (3-6 yrs) based on the agreed positions in FM11-7.2. Input invited.

ONGOING: Draft required for Jan 2005. Further input requested by PQ (preferably by Xmas 2004). (Additional input to draft from AL and MO).

----- NEW ACTIONS FROM THIS MEETING -----

ACTION TM12-3 Tony Linde: call a telecon of registry leaders to resolve this issue ASAP (BH, MD, etc). Probably need to be using v0.10.

ACTION TM12-4A AL: draft proposal distributed to the Symposium organising committee, and cc'd to the IVOA Exec, for last comments.

ACTION TM12-4B BH, PQ, AL: send letters to Catherine Cesarsky and Ron Ekkers noting that this proposal is to be submitted as a Symposium.

ACTION TM12-5A AL: Recommend initiation of the VOEvent-WG - Marco Leoni to set up mailing list, forum etc. Charter to be uploaded to the IVOA web site. Chair to be decide upon, report plus workplan to the IVOA Exec in Jan 2005.

ACTION TM12-5B DY: Contact US VSO as to the status of this group.

ACTION TM12-6A AL/MO/DY/PQ/BH/NW: bring forward possible definitions of new classes of membership - associate, partner membership etc.

ACTION TM12-6B AL: Contact Areg Mickaelian ArVO that a decision on this will be taken after the IVOA Jan 2005.

ACTION FM12-8 AL: Contact VO projects as to possibilities for a financial support package for attendees.

ACTION FM12-8.5 AL: issue a call for InterOp, VO workshop possibilities in 2006.

GMT 15:40 - Close of meeting

----- APPENDICES -----

A2.2 China

From CC

'During the last two months since Pune meeting, we obtained some progresses in the following areas:

China-VO summit meeting

To plot out a long-term roadmap for the China-VO, a closed-door high-end meeting was held at National Astronomical Observatory of China on Nov. 14. More than ten leading astronomers in China and two computer experts attended the meeting. A China-VO steering committee was established, some technique working groups were proposed.

The 3rd national China-VO workshop

Next week, from Dec. 1 to 3, the 3rd China-VO workshop will be held in Wuhan, a central China city. About 40 representatives from Chinese mainland and Taiwan have been registered to take part in the meeting. In the meeting, we will determine the name list of proposed technique working groups.

NSFC Grant to Fund "Chinese Virtual Observatory"

In the fall, the National Science Foundation of China (NSFC) announced their decision to the China-VO project. The project, "Research and Development of Chinese Virtual Observatory Testbed", will be funded by a three-year, one million RMB grant from July 2004 to June 2007. The mainly goals of the project include "an operational China-VO platform based on Grid" and "uniform data access service supporting IVOA standard interfaces".

VO Service Auto-Generator

The development of an automatic grid service wrapping environment will be completed soon. I named the environment "VO Service Auto-Generator". Through

web form, a Java program (must source code) with simple I/O interfaces can be submitted. The "generator" will wrap the Java program into GT3 (and soon GT4) service automatically. Furthermore, the system will register the generated service into GT-based China-VO Registry and then can be invoked from the webpage or through Service interface.

Many Java programs, such as for computing, unit converting, can be converted into VO services. Developers don't need to know Grid programming, but just Java programming. It will be a very useful tool for VO developers, I feel, and will greatly enrich our VO service library. Now, the environment is under inner-user test. We plan to release it to the public by the end of the year.'

A2.5 DRACO

From Fabio Pasian:

'There is an increased desire in the Italian VO community to participate in development activities, in particular to integrate applications within the VO infrastructure and to interface the VO with Grid activities.

- The demonstration of a visualisation and analysis tool (AstroMD) interfaced with VO standards was successfully made at the ADASS Conference in Pasadena. The evolution of AstroMD (VisIVO) will be integrated with the AstroMining package and provided to the VO community in the framework of the VO-Tech project.

- Collaboration of INAF and INFN staff is leading to a better integration of SQL-based DBMS's within the framework of the Globus middleware for Grid. The query language interface is flexible and can be easily adapted to the VOQL standards, when available. The activity is deemed useful to allow combining data gathering capabilities with the massive processing potential of grid: use cases are being prepared.

There is also specific interest by the Italian groups involved in theoretical simulations (mainly MFD and N-body) to join a possible Theory VO. An Italian reference person was nominated in the Theory IG.

A request to the Ministry of Research for VO-specific funding was turned down, barely missing the threshold for funded projects. Alternate routes are being investigated. Funding for the Italian data centres involved in the VO DCA was instead confirmed.'

A2.6 F-VO

From Françoise Genova:

'A short update on French VO:

- participation of several French labs interested in the VO development to Pune Interoperability meeting. Active participation to WG discussions. New items in particular on science requirements (Theory IG and planetology)

- Very successful tutorial 'Standards and tools for the VO' aimed at s/w developers (Strasbourg, 11-13 October 2004)

<http://www.france-vo.org/twiki/bin/view/ASOVFrance/Tutoriel2004>

(Web pages in French) - 21 participants

- Application for funds for organising a 'CNRS thematic school': Virtual Observatory, a new tool for scientists - aimed at discussing science usage of the VO. Target date: fall 2005'

A2.7 JVO

From Masatoshi Ohisi:

'Here is a report on activity of the JVO:

1) personnel

We employed a young and active post doctoral fellow since September 1st. He is working on developing man-machine interface of JVO prototype 3.

2) JVO prototype 3

We have been developing prototype 3 by adopting various IVOA standard interfaces, such as ADQL, SIAP, registry, etc., to participate the January 2005 demo. The development is going well, and we expect to publish our registry information before the middle of December. We also implement the "Virtual Column concept" that Yuji Shirasaki proposed at previous IVOA interoperability meetings to evaluate its functionality. We plan to report the result in the Kyoto meeting next May.

3) Preparation for the Kyoto May meeting

We have fixed the date for the interoperability meeting -- May 16 to 20. The venue is the Kyoto International Conference Hall where the IAU general assembly was held several years ago. We reserved one large room for plenary meetings, and three midium size rooms for WG/IG meetings. We also reserved another small room for local organize committee, however, it is possible to have smaller meeting there. Wireless LAN facilities will be available in all meeting rooms.

We negotiated successfully with our observatory for (limited) finalcial support.

We made a block reservation (at this moment only 30 rooms) for a inexpensive hotel in downtown Kyoto. We will make other block reservations, however, there are plenty of accomodation facility in Kyoto city. I hear there are more than 20,000 rooms in the central Kyoto. Those we want to stay in traditional Japanese inns (Ryokans) may make their reservations by themselves.

We are preparing a web page for the meeting, and it will be opend very soon.'

A2.8 NVO

From Bob hanisch:

'NVO work since the Pune Interop meeting has been concentrated on our preparations for the January AAS meeting and our first real software release (as opposed to hand-held demonstrations). We reviewed progress last week at our fall team meeting in Socorro, and most applications seem to be on track. The major outstanding issues have to do with user interfaces, where we have to work to remove a lot of VO-jargon.

As of one week ago the NVO registries have been upgraded to V0.10 of VOResource.

ADQL V0.9 was completed and submitted for review as a Proposed Recommendation.

Work continues on the spectral data model and associated SSAP specification.

If anyone wants the real details, please see our Annual Report at <http://us-vo.org/pubs/files/fy2004AR.pdf>.

A2.14 Australia-VO

From David Barnes:

'Since the last Aus-VO report to the IVOA (~April 2004?) we have the following events / outcomes to report:

1. Aus-VO products

The Aus-VO team at the ATNF has made excellent progress with the Australia Telescope Compact Array (ATCA) Online Archive, the ATCA Online Pipeline, and the Remote Visualisation Service (RVS). All three products are due for release to the community in December 2004. Shortly thereafter, all three will be integrated to provide a full system for selecting archival visibility data, calibrating and imaging it, and displaying the resultant images remotely.

The Aus-VO teams at Melbourne and Monash have commenced early work on integrating various Monash Grid products (eg. Nimrod, GriddLeS) and third-party workflow tools (eg. Kepler, Ptolemy) with the legacy astronomy packages miriad and IRAF. Some work is beginning on adapting interactive, steered (ie. subjective) optimisation tools for astronomy inverse problems (eg. fitting gravitational lens models to observed systems).

The Aus-VO team at Swinburne have developed an initial system for obtaining pulsar timing data from their archives in VOTable format. Aus-VO teams at Sydney and UNSW continue work on telescope-specific pipelines and archive systems, and the Aus-VO team at Queensland are preparing their design for a user-level matching tool that is capable of matching billion-record databases in less than five hours.

2. Australian Partnership for Advanced Computing Grid Program

Under the APAC Grid Program, we have circa 3.4 EFTs per year in 2004, 2005 and 2006 to develop and utilise the APAC2 Grid for the astronomy community. 2.5 of these positions are filled and working towards products including a SIA service, a registry for Australian VO services (will use AstroGrid's registry), the release of the MACHO data with full VO metadata in late 2004 or early 2005, and installation and configuration of the Lightweight Data Replicator (LDR) for Gravitational Wave data products.

Additionally, 1.0 EFT in the APAC program is dedicated to Theory VO and the development of a portal for executing, monitoring, visualising, retrieving and archiving of theoretical astrophysics simulations. Work has commenced at Swinburne in the area of developing metadata tags (eg. for description of algorithms, boundary conditions, etc.) necessary for handling theory data. Our portal is presently based on GridSphere, but currently undergoing a review.

3. Aus-VO workshop

Just last week (Nov 18 and 19) we held the third annual Aus-VO workshop. Many talks were given and will be made available on the web page. Bob Mann from ROE attended and gave keynote talks reviewing the AstroGrid, AstroGrid2 and VOTech programs, and the state of e-Research and e-Science in general. Smaller groups discussed visualisation on Nov 17 and catalogues and matching algorithms and infrastructure on Nov 22.

4. Funding

Funding for the Aus-VO was not secured for 2005 from the Australian Research Council. We are currently exploring other avenues of funding so that we can continue in something more than just a caretaker role during 2005. It looks like the ARC will fund an e-Research pilot scheme, so we will certainly try for that.

APAC funding continues through 2005 and 2006.'

A2.15 SVO

From Enrique Solano:

'The Spanish Virtual Observatory (SVO) joined IVOA after the IVOA Executive meeting held in Glasgow last June. SVO is a project led by LAEFF (<http://www.laeff.esa.es>) whose purpose is to provide an efficient coordination

among the different Spanish initiatives in the framework of the Virtual Observatory and to achieve an effective integration of all the expertise in this

research domain. There are presently four main participating centres:

- LAEFF (Laboratory for Space Astrophysics and Theoretical Physics)
- UNED / Madrid
- Astronomical Observatory. Valencia Univ.
- Instituto de Astrof\uffffsica de Andaluc\uffffa (IAA)

Funding: The Spanish Virtual Observatory (SVO) is funded by the Spanish Ministry of Science and Education through the National Plan for Astronomy and Astrophysics until end 2005. 5.5 EFT will be dedicated to SVO in 2005. Next month (Dec04) we will apply for the renewal of the project for three more years (2006-2008). INTA funding also continues during 2005.

ACTIVITIES

Astronomical Archives:

- Adaptation of the LAEFF astronomical archives to the VO standards, in particular,

- > IVOA SED Data Model v0.92
- > VOTable v1.1
- > SSA v0.1

a) INES (<http://sdc.laeff.esa.es/ines/>) Adaptation will be finished before end of November04

b) GAUDI (<http://sdc.laeff.esa.es/gaudi>) and OMC (<http://sdc.laeff.esa.es/omc/>): ongoing

- Inclusion of the INES Archive in the STSci-VO Registry: Done

- Development of the Scientific Data Centre of the Spanish 10-m telescope GranTeCan (Gran Telescopio Canarias). Progress has been made in the conceptual design of the archive system after meetings with GTC representatives in September and November 2004.

GRID: Participation in the presentation of the green book about the e-science in Spain.

Participation in the IVOA theory interest group, in particular in

- Definition of standard queries/protocols for theory analogous to SSA/SIAP, in particular the definitions related with galaxy population models.

- Development of analysis services in the context of stellar evolution and galaxy modeling.

Development of data-mining tools:

- OMC (Optical Monitoring Camera) is one of the on-board instruments of the INTEGRAL satellite designed to obtain V-Johnson photometry from the prime targets. An archive and access system to the OMC data (light curves) has been designed and developed at LAEFF and it is being presently adapted to the VO standards. Given the vast amount of data to be handled (more than half a million objects), classification procedures based on the visual inspection by experts are not feasible and data mining techniques must be used instead. We are working in a neural network system to classify light curves of periodic variable stars. A paper describing the classification of eclipsing binary stars will be submitted to A&A in December. An extension of the procedure to pulsating variables is now under study.

- Science Reference Mission in the EURO-VO: Development of a system to fit theoretical models (star+ circumstellar disk) to the observed spectral energy distribution using Bayesian methods. The system also incorporate and inference tool to choose among the competing models. Currently ongoing.

Development of SVO Educational Portal: in a first stage it will contain astronomical material, VO-compliant, to be used for teaching Astronomy at a graduate level. The INES archive and the data from the robotic telescope TROBAR, managed by the Astronomical Observatory of Valencia Univ, will be used.

Development of VO Science Cases

- Proposal for the Science Reference Mission in the EURO-VO:
"Circumstellar disks: from Pre-Main Sequence stars to stars harboring planets".'