SECC Glasgow, UK

23 Jun 2004: 08.30 - 16.30 GMT

Notes: NAW Draft 23 Jun 2004

#### Present:

Chenzhou Cui	<ccz@bao.ac.cn></ccz@bao.ac.cn>	CC	China-VO
Dave deYoung	<deyoung@noao.edu></deyoung@noao.edu>	DY	NVO
Markus Dolensky	<mdolensk@eso.org></mdolensk@eso.org>	MD	AVO
Francoise Genova	<pre><genova@astro.u-strasbg.fr></genova@astro.u-strasbg.fr></pre>	FG	F-VO
Bob Hanisch	<pre><hanisch@stsci.edu></hanisch@stsci.edu></pre>	BH	NVO
Andrew Lawrence	<al@roe.ac.uk></al@roe.ac.uk>	AL	AstroGrid
Reagan Moore	<pre><moore@sdsc.edu></moore@sdsc.edu></pre>	RM	NVO
Masatoshi Ohishi	<pre><masatoshi.ohishi@nao.ac.jp></masatoshi.ohishi@nao.ac.jp></pre>	MO	JVO
Peter Quinn	<pjq@eso.org></pjq@eso.org>	PQ	AVO
Paolo Padovani	<paolo.padovani@eso.org></paolo.padovani@eso.org>	PP	AVO
Fabio Pasian	<pre><pasian@ts.astro.it></pasian@ts.astro.it></pre>	FP	DRACO
David Schade	<david.schade@nrc.ca></david.schade@nrc.ca>	DS	CVO
Ethan Schreier	<schreier@stsci.edu></schreier@stsci.edu>	ES	NVO
Nic Walton	<naw@ast.cam.ac.uk></naw@ast.cam.ac.uk>	NW	AstroGrid

## Apologies:

Istvan Csabai	<pre><csabai@ludens.elte.hu></csabai@ludens.elte.hu></pre>	IC	HVO
Ajit Khembavi	<akk@iucaa.ernet.in></akk@iucaa.ernet.in>	AK	I-VO
Marco Leoni	<mleoni@eso.org></mleoni@eso.org>	ML	AVO
Tony Linde	<tol@star.le.ac.uk></tol@star.le.ac.uk>	$\mathtt{TL}$	AstroGrid
Oleg Malkov	<malkov@inasan.ru></malkov@inasan.ru>	OM	RVO
Wolfgang Voges	<pre><wvoges@mpe.mpg.de></wvoges@mpe.mpg.de></pre>	VW	GAVO
Rachael Webster	<pre><rwebster@physics.unimelb.edu.au></rwebster@physics.unimelb.edu.au></pre>	RaW	Australia-VO
Roy Williams	<roy@cacr.caltech.edu></roy@cacr.caltech.edu>	RW	NVO

#### 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

PDS - AAS Division of Planetary Sciences

RVO - Russian Virtual Observatory www.inasan.rssi.ru/eng/rvo/

IVOA - International Virtual Observatory Alliance

# Agenda:

- Review of open action items from previous meetings and their new status
- 1. Roll Call
- 2. Reports from the VO Projects
- 3. Reports from the Boston InterOp meeting
- 4. IVOA architecture review
- 5. IVOA roadmap
- 6. New WG/IG proposals.
- 7. IVOA Strategic Review and Plan
- 8. IVOA Calendar 2005, 2006
- 9. AOB
- 10. New (at end of list) and Outstanding Action Item Review
- 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.

ACTION FM7-4.1A PQ/ES/DS: develop a paper that defines what interfacing to a VO means from the point of view of a large project. Cases studies to include OWL, LOFAR etc.

CLOSED: PQ had started discussions with a number of large projects. Recent discussions with SKA and will be at a meeting of theirs in July. PQ + Szalay will be interacting with LSST.

AL noted that the OECD (following input from PQ, AL, BH) have issued a number of recommendations which are supportive of the IVOA and the Virtual Observatory concept. The final report will be added to the IVOA wiki when ready (July 2004).

It was noted the OECD recommendations will be very useful in support of VO related funding applications.

It was AGREED to take this action from the list as this is an important ongoing activity of the IVOA.

ACTION FM9-3A ML and WG Chairs: ensure full availability of IVOA WG drafts and agreed standards on the IVOA wiki and web site.

CLOSED: PQ noted that document preparation process was working well now, with a note issued explaining how the document coordinator supports the document preparation process.

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

ONGOING: Good progress occurred at InterOp May 2004. MD reported that the deadline for the v0.9 SSA std is 15 Jul 2004 at which time it will appear on the wiki.

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

ONGOING: Good progress occurred at InterOp May 2004. MD expects  $v0.9\ DM$  std 15 July 2004.

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

ONGOING: Good progress occurred at InterOp May 2004. PQ reported that 15 July 2004 will be date for the v0.9 registry harvesting schedule.

ACTION FM9-5 PQ, BH, NW: generate a revised Roadmap by end March 2004.

CLOSED: will be discussed later in this meeting.

ACTION FM9-8.2 NW: contact WG Chairs re GGF Astro-RG interaction.

CLOSED: Planning underway - send email to ivoa exec as well.

ACTION FM9-10 ALL: Send to PQ ideas for engaging PhD students in the context of the VO and the IVOA.

CLOSED: PQ reported that good progress in this area was being made.

BH: reported that the Aspen NVO summer workshop planning is progressing well. The scheme was fully booked, with all 40 places being filled (of which 10 are graduate students, the rest are software developers, with perhaps 50% being from outside of the US). The programme and faculty is in place, with work well advanced with pre meeting material being developed now.

PQ: ESO will host a workshop in July 2005 in Munich focused on VO technology and Data Centre take up. This will be a timely chance to expose Data Providers to new VO technologies.

PP: reported that there will be some VO orientated lectures at the next NEON archive school in Munich.

AL: The UK eScience PhD studentship scheme has been running for the last three years. However, the scheme has been closed for future years because the projects - on balance - tended to have too little 'e' in them. However, the funding stream is still there to be exploited.

PQ: Thus the recommendation is that VO projects should organise workshops or summer schools to engage students. Projects should note student related activities as part of their project reports.

ACTION TM10-0A: PQ to send out email to the WG Chairs that they need to return roadmap input to PQ by end April. (followup on ACTION FM9-3B)

CLOSED: PQ sent out email. Mixed response, little post Boston input, thus roadmap is not fully updated to reflect latest std developments.

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

ONGOING: FG reported that this action is still to be carried out.

ACTION ARCH01-1 Roy Williams/ Doug Tody/ Masatoshi Ohishi - report back on the need or otherwise to specifically accommodate VOQL and DAL areas as separate entities within the overall Architecture - this refers to the v0.4 document generate by RW for the May 2004 meeting.

CLOSED: PQ - much discussion - see later item.

ACTION ARCH01-2 Roy Williams - bring forward update v0.9 IVOA architecture draft for the June 2004 Exec meeting.

CLOSED: RW did produce a v1.0 document for the architecture.

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

ONGOING: RM has circulated a pre-draft charter.

ACTION ARCH01-4 Guy Rixon - propose a revised Charter for the Grid and Web Service WG for the June Exec meeting. This to clarify the current scope of the G&WS-WG - especially as to workflow, authentification, virtual storage.

CLOSED: PQ reported that discussion happened during the Boston meeting. Item discussed later in this meeting.

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.

ONGOING: this is still being developed.

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

ONGOING: This is still being developed.

ACTION ARCH01-7: PQ - distribute the draft IVOA Business/Strategy Plan. This was done end May 2004.

CLOSED: Document for discussion later in this meeting.

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

ONGOING: FG reported that the registration site was open. To date three WG chairs will be attending,. The status of other chairs not yet know. Critical areas are Registry, ADQL, DAL.

CC: the regional meeting after the IVOA Pune meeting is currently being organised.

PQ: strongly encouraged good project representation at this meeting. It is an important date in the IVOA calendar, and supports the development of regional activities in that area.

#### 1. Roll Call

The participants - as listed above - introduced themselves.

#### 1.1 Previous minutes.

Notes from telecon 2004-04-08 - at http://www.ivoa.net/internal/IVOA/IvoaRepMin/ivoa-tm10-20040408.pdf - AGREED

## 2. Reports from the VO Projects

## 2.1 AVO

PQ: The AVO project formally closes Dec 2004. An extension to later into 2005 has been requested. Jan 2005 demo will take place in Vilspa (ESAC).

PP: reported that the AVO SWG met mid June, and has made good progress in developing the science drivers for the Demo.

PQ: The VO-TECH proposal made to EU (Mar 04) has been successful - it is now in the negotiation stage. Funding for the Facility Centre and Data centre activities are being sought from other sources. ESA is funding VO activities in the ST-ECF and ESAC (Vilspa). A first science paper was published June 2004 based on results from the Jan 2004 demo work on Type 2 QSO's.

# 2.2 China

CC: Reported that new data sets are now being mirrored via the China-VO (including a local copy of SDSS DR2). A number of papers describing scientific and technical activities of the China-VO have and are being published.

A GT3 based registry has been implemented, with an upgrade to WS-RF based system being planned for early 2005.

MD noted that the VOTFilter (ver 1.0) developed by China-VO (see http://services.china-vo.org/vofilter/) has been successfully tested in ESO.

# 2.3 India-VO

No report received.

## 2.4 CVO

DS: In the last few months an additional programme has been hired (so two now). A graduate student is now doing VO related PhD level research (looking at a galaxy cluster problem).

A second generation VO query prototype is almost ready, along with a

VOPlot interface into Aladin. SDSS DR1 has been available at CADC since Dec 2003. This is available via the CVO data model.

SIAP has been placed onto of the CVO system so that access could be made to all content - but this exposed a number of technical issues.

CVO will participate in the Jan 2005 demos.

NW: suggested that the CVO write up (and place on the IVOA wiki) their experiences in carrying out this investigation.

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.

#### 2.5 DRACO

FP: The Italian VO initiative relies on 'grid' funds. DRACO is exploring funding lines that will be more VO directed.

Funding for the LBT (large binocular telescope) instrument archive in Trieste is about to appear, this will enable data content into DRACO. Results from the survey will be held in Rome.

Application work on multi-visualisation and data mining is being interfaced vai VO standards. This will be demonstrated at the Pasedena ADASS in Nov 2004.

#### 2.6 F-VO

FG: Meetings of the science committee have begun, this is clarifying the goals of the F-VO. The members are keen to provide science cases. The F-VO will act as a 'light-touch' umbrella above specific application projects. Last week a presentation was made at the National French astronomy meeting.

F-VO will participate in the IVOA TIG.

F-VO is applying for funds to allow a science school in 2005.

F-VO funds are now being used to enable collaboration meetings, a poster is being presented at the SPIE 5493 describing the F-VO activities.

F-VO includes solar and space physics as well as dark time astronomy.

#### 2.7 JVO

MO: a larger budget funding requests are now being prepared. Additionally a specific VO technology department of the National Observatory (NAOJ) is proposed. Contact has been made with ISAS, and collaboration with NAOJ/ISAS is now agreed. This will enable VO technology uptake by ISAS.

MO: reported that solar scientists are now becoming more interested in the VO activities and beginning to talk to the JVO.

The NAOJ will appoint a JVO dedicated 3-yr PDRA from Sept 2004.

The May 2005 InterOp meeting is being now considered for Kyoto, possibly Kyoto University. MO will announce venue soon.

## 2.8 NVO

BH: implementation of registries. The Caltech implementation involves use of XPATH.

Members of the NVO have won significant TeraGrid computation time, and 5 applications will exploit this.

NVO have appointed Carol Christian who will coordinate EPO activities out of STScI. Project Lite at Boston Uni is a major EPO NVO project, SIAP will enable access to many thousands of spectra.

BH is developing a funding plan for long term operational support for the NVO.

Originally the NVO was not seen as an organisation to store data. However, the NVO is now exploring possibilities to provide funding to allow curation of strategic data products.

A science steering committee has been formed consisting of eight members. July 2004 will be the point at which the Jan 2005 demos are defined.

A new NVO web site has been released. A special VO science session has been proposed for the Jan 2005 AAS meeting (outcome not yet known).

Logging of NVO use is now underway, to allow performance metric monitoring.

Further funding applications are under consideration.

RM attending a meeting with planetary scientists to look at joint approaches. However, collaboration between the NVO and them is now strong.

Std activities: telecon/video-cons held in the registry area. Much collaborative work in the Working and Interest Groups. The Boston interop meeting was very successful.

[Summary of NVO activities for the period Jan 2004 - June 2004 received from Bob Hanisch

#### NVO internal:

- Organizing NVO Summer School, Sept 13-17, Aspen, CO. Obtained \$60k in funding from NSF and NASA.
- Updated registry implementations, with full searchable registry at JHU/STScI and publishing registries at NCSA and Caltech. Caltech registry is in principle searchable (XML database) but performance is not very good.
- Submitted successful proposal to US TeraGrid for 257k computational units
- Appointed new EPO Coordinator (C. Christian) and developed partnership with Project Lite (K. Brecher).
- Developing NVO Facility Plan (transition from development to operations) for US funding agencies.
- Looking into partnership with digital library community for data preservation.
- Created new NVO Science Steering Group; it will meet in late July in conjunction with NVO summer team meeting.
- Redesigned and released new NVO website.
- Submitted proposal to AAS for special VO Science session at the

January 2005 AAS Meeting.

- Discussed strategies for NVO service logging and development of usage metrics.
- NVO team members submitted several proposals to NASA's Applied Information Systems Research Program.
- NVO team members submitted NSF ITR proposal for performing semi-automated classification (oblique decision trees) on 1G-object databases (SDSS).
- NVO team members met with NASA's Planetary Data System team to discuss common architecture elements.

#### IVOA related:

- Completed review period for resource metadata document; subsequently was put forward successfully for promotion to Recommendation.
- Coordinated registry video-telecon with AstroGrid prior to Interop workshop. Reached agreement on simplified resource schema, which was subsequently endorsed at the May Interop workshop.
- Led development of Quantity and Observation data models.
- Co-developed draft Simple Spectral Access Protocol and proposed to Interop in May.
- Co-developed V1.1 Simple Image Access Protocol and proposed to Interop in May.
- Co-led ADQL and OpenSkyQuery developments.
- Leading new Applications Interest Group.
- Helped prepare OECD position paper.
- Helped develop IVOA strategic plan.
- With M. Dolensky and M. Leoni, provided more specific guidelines for IVOA documents and improved document publishing.
- Organized IVOA Interop Workshop, Cambridge, MA, May 2004.

# 2.9 HVO

no report received.

#### 2.10 Korea VO

no report received.

AL note that Sang Chul Kim from the Korea-VO will visit Edinburgh for 3 months in the summer of 2004 and work with AstroGrid staff there.

# 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.

AstroGrid will release a version 1 prototype and functional system end 2004. AstroGrid 2 will focus on hardening and deploying this more

fully across the UK data centres to allow mass use by end 2007. Some elements of activity in data mining will be phased in during the AstroGrid 2 project period.

S/w components being developed. Now moving to deploy these components, in a working system allowing real data access over the AstroGrid partner data centres.

AstroGrid led the development of the VOTECH proposal to the EU FP6 programme, initial indications are that this project will be successful, dependent on a satisfactory conclusion to the negotiation stage.

Programme alignment with the VO-Tech activity will be a key priority for 2005-2007.

#### 2.14 Australia-VO

no report received.

GTR reported on a new Oz-VO plotting service - a poster is being presented at in SPIE 5493.

PQ noted that there is a Oz-VO meeting in Brisbane end June 2004 that he will probably attend.

3. Reports from the Boston InterOp meeting

(see http://www.ivoa.net/twiki/bin/view/IVOA/InterOpMay2004)

# 3.1 WG reports

PQ reported that a number of WG reports had been received from Grid and Web Services, DAL, Registry, VOQL, Standards and Process, Data Model, VOTable. These will be made available from the wiki page for this meeting at IvoaExecMeetingFM11.

#### 3.1.1 Grid-WS WG

GTR: G&WS WG now has a plan of work covering five main activities.

This includes a VOSpace activity (incorporating MySpace and MyDB). Workflow was considered to be out of the scope of the G&WS WG. This issue may be re-visited by the WG at a later meeting.

Single sign-on authentication was kept as a G&WS activity.

Interface to the storage was also kept as a G&WS activity.

PQ: the architecture discussion considered that G&WS scope needed to be defined more clearly. It appears that workflow is an activity that may need to be a WG activity now.

GTR: noted that AstroGrid is developing a scripting based workflow system. BPL is used internally in this activity.

AL: commented that 'workflow' will be a key VO capability that would benefit from international agreement on an interoperability std.

RM: a number of general workflow solutions are emerging

NW: are there specific astronomical related extensions required for

'workflow'?

RM: could consider assessing workflow when using for instance ADQL.

DS: it would now be useful if some cases of workflow use cases could be drawn up.

RM: this is an activity that could be carried out in terms of the Astro-RG meeting.

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.

The IVOA Exec AGREED with the G&WS work plan as outlined by GTR.

#### 3.1.2 DAL

MD: focus is on SSA and catalogue access.

A poster describing SSA is presented in SPIE 5493 (Dolensky and Tody).

Looking at SIA and SSA output as catalogues, a top level ADQL layer could access these generically with one query language.

#### 3.1.3 VOQL

The May 2004 Boston interop meeting saw a number of agreements. One being the simplified access to the unified access protocols from the DAL.

A number of new actions will be supported in VOQL including an explicit join syntax, the addition of units, improvements o the syntax of cross match.

An ad hoc group is working on the VOQL v0.8 working document for release 15 Jul 2004.

The roadmap envisages:

v0.8 15 Jul 2004

v0.9 Pune meeting Sep 2004 - raise to a recommendation

after Jan 2005 demo will work on standardisation of VOQL

BH: worried a little about the inclusion of units in VOQL at this stage, it may be more complicated to implement than initially thought from the point of view of implementation.

GTR: you could have partial implementations where a service could say that you didn't implement units.

GTR: raised the 'select into' case - can all databases support this - probably not - so implies it will be an optional extra.

BH: databases (e.g. sky nodes) will publish units as specified in their metadata. but the issue is will a skynode return data in whatever units the query asks for. thus who does the conversion.

What does it mean for VOQL to support units?

it was AGREED that there should be the possibility to provide for unit conversion services but that if the conversion service was not available, the query would fail gracefully.

#### 3.1.4 Stds and Process.

BH noted that the document publishing process was now working well.

## 3.1.5 VOTable

PQ noted the report from Francois Ochsenbein. 6 july would see the UCD+ proposal being brough forward.

#### 3.1.6 Data Model

PQ noted the report from Jonathan McDowell. Main DM WG activity is to support the DAL group in SSA Observation and Quality control models are being progressed, along with activities to inform the other WG's of DM activities.

BH: noted that good progress in the group was made during the Boston meeting. However, there is still concern about progress of the model group between meetings.

There remain concerns that DM activities are out of sync with activities in other areas such as DAL and Registries.

PQ: stressed the importance off the 'Observation' data model.

GTR: how do we recommend that data providers use the data model.

BH: use the data model to define interface protocols

BH: deadlines for delivery of DM documents were agreed in Boston, and these deadlines are important to meet.

# 3.2 IG reports

PQ noted that a number of reports had been received from the Architecture, Theory and Applications IG. These will be accessible from IvoaExecMeetingFM11.

#### 4. IVOA architecture review

PQ: The Boston 22 May 2004 Architecture meeting clarified the IVOA architecture (based on the v0.4 document). No significant gaps in the architecture were identified.

Roy Williams has now issued v1.0 of the architecture.

AL: Should the architecture be a fixed or evolving document?

PQ: the architecture is a document for the IVOA member VO projects.

AGREED: architecture group, chaired by the IVOA Technical Lead will meet at each InterOp meeting, May identify possible changes needed from that interop, Oct sees re-release (if required) of the Architecture document.

If major changes to the architecture appear to be required on a more rapid timescale, a note of the possible change can be made available on the Architecture IG wiki pages.

BH: A paper is required still to describe how the VO should and perhaps would work.

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.

AGREED: the forum of the working group chairs, led by the technical lead of the IVOA, has an ongoing responsibility to review and if necessary update the architecture document.

#### 5. IVOA roadmap

PQ: noted that the Roadmap needs to be revised so that the milestones from each of the individual WGs are brought together into a combined roadmap.

# 5.1 synthesis for 2004/5

The 2004/5 roadmap has significantly more detail than earlier versions (2001-4).

The roadmap for the IVOA has a strong internal focus.

NW: what should be the extent of externally focused milestones, and to whom should these be addressed.

Issues arising in discussion:

- who are the external 'community' end science users, data providers
- should milestones focus on external project implementations.

AL: the broad brush picture of 2005-2007 should be worked out soon.

NW: feedback is required from (reference) implementations constructed using IVOA standards.

The PQ presented 2004 roadmap was AGREED by the IVOA Exec.

## 5.2 projected milestones 2005/6

IVOA standards Milestones

- voql 1.0 2005
- full registry spec 1.0 (single sign on community?) 2005
- Single sign on 1.0 2005
- Workflow 2006
- VOSpace 1.0 2005
- Ontology (semantics) 2006

- Grid & Web Services Interfaces 1.0 (includes usage logging) 2005
- Data Model plans (Registries, VOResource) 2005
- VOList 0.5 2006
- Simulation data services milestone 2005
- Preservation 1.0 2006

#### Takeup Metric Milestones

- January 2005 coordinated complex demo
- July 2005 Data Centre take-up workshop and evaluation
- January 2006 Data CentreInteroperability
- Coordinated demo IAU August 2006
- Data Centre take-up statistics (July 2005, July 2006)
  - level 1 does a data centre provide any data or applications through a VO registry
  - level 2 how much data, applications made available
  - level 2 data access fraction through VO interface
- Reference implementations
- Implementations feedback
- VO enable science metric (SRM's)
- January 2007 Community Applications in action

Two types of milestones, those that are technical in nature, the other type being more those that result from development of the technical standards.

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

ACTION FM11-5.2B PQ/NW - add in 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.

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

# 6. New WG/IG proposals.

RM: discussed the areas of curation and preservation. VOSpace is related to digital library efforts curation efforts. Preservation is a question of managing curated data sets in the long term (technical issues relating to access to the data sets). The preservation challenge is how to move with new technologies whilst making the curated sets available.

DSpace is a MIT life cycle management technology (see http://www.dspace.org/)

Fedora is a Cornell product (see http://www.fedora.info/)

Digital library efforts focus on local collections. the emerging challenge is in distributed collections.

AL: noted that there is a need to focus on provenance and annotation of data.

RM: commented on the experience of the SDSC in ingressing large project based collections (e.g. the SDSS). Issues of high performance environments needed to deal with large data collections.

It was AGREED to set up a Curation and Preservation Interest Group - the mandate would be to review needs of Curation and preservation.

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

#### 7. IVOA Strategic Review and Plan

PQ: introduced the concept of a strategic plan for the IVOA over the next few years.

Original document was released to the Exec 20040429 from PQ. Many suggestions have come back - notably from BH.

ES: organisation usually carry out strategic reviews once the mission of the organisation is known.

# 7.1 What is the mission of the IVOA?

NW: the IVOA needs an analysis of the competitive environment.

ES: need to decouple view of VO projects and the IVOA.

ES: how does the VO work in the 'operational' age?

# 7.2 Key Issues

AL listed a number of key issues:

- what is the difference between the IVOA and IVO.

AGREED: The IVOA is the formal organisation which develops standards underpinning the the development of functional regional VO projects. The regional VO projects together form the organic and distributed International Virtual Observatory.

(The analogy is with the W3C developing standards which have enabled the development of the Web, which is made up of organic groups of providers).

GTR: noted the GGF case. GGF exists as a small legal entity.

- what is the lifetime of the IVOA:

AGREED - the IVOA must endure to ensure the longterm viability of the

IVOA.

- should the IVOA be funded formally?

AGREED - not at this time as resource is provided by the partner VO projects. BUT resource will be required over the long term to ensure the IVOA activities.

If the VO is successful resource will be required to support the IVOA activities to ensure that the operation of the regional VO's is as cost effective as possible.

- who are the stakeholders for the IVOA?

It was AGREED that the:

The VO Projects steer and direct the IVOA.

VO projects are users of IVOA standards and best practice recommendations.

Funding agencies are stakeholders once removed as they have influence on the VO projects and other stakeholders, but are not primary stateholders in the actual IVOA.

Astronomers, data centres, facilities are stakeholders of the IVOA, as potential users of the IVOA standards. They are also able to participate in the development of the standards via the open WG standards processes.

Other stakeholders, such as the public, press, are lesser stakeholders in the IVOA.

- demos etc.

It was AGREED that the VO projects are responsible for the demos, but seen within the context of the IVOA roadmap.

- relationship to external bodies

it was AGREED that it is the IVOA that affiliates to the GGF, IAU, etc

- content of IVOA web site

IVOA should include an events page, but not a news page. Otherwise the IVOA web site should include primarily standards and best practice

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.

# 8. IVOA Calendar 2005, 2006

Sep 27-29 2004 - IVOA InterOp Pune, India Sep 20-23 2000 - Astro-RG at GGF12, Brussels, Belgium Jan 09-13 2005 - NVO demo at the AAS, San Diego 2005 - IVOA Exec after AAS, San Diego Jan 25-26 2005 - Euro-VO demo event - Madrid, Spain (TBC)

May 2005 - IVOA InterOp, Kyoto, Japan (TBC)

May 2005 - IVOA Exec, Kyoto, Japan (TBC)

2005 - Euro-VO technologies workshop, Munich, Germany (TBC) July

2005 - ADASS + IVOA InterOp Madrid, Spain Autumn

Aug 14-25 2006 - IAU Gen Assemly, Prague, Cz - VO Event

Jan 2006 - IVOA sponsored VO demos Jan 2006 - IVOA Exec (in Europe)

TBC = date and/or location 'to be confirmed'.

#### 9. AOB

## 9.1 SVO

PQ: received a proposal from the Spanish Virtual Observatory.

The IVOA Exec AGREED that they could join the IVOA

ACTION FM11-9.1: PQ to contact SVO to inform them that they are invited to join the IVOA.

#### 9.2 Licenses

PQ: reported that this is still an ongoing issue.

BH: The IVOA should encourage open licenses of their VO implementations.

ACTION FM11-9.2: PQ to seek advice on what (if any) license should be added to IVOA standards and other products.

## 9.3 New Chair/Deputy Chair

PQ welcomed AL as the new incoming Chair for 2004/5

MO was welcomed as the new incoming Deputy-Chair for 2004/5

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.

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

ONGOING: Good progress occurred at InterOp May 2004. MD reported that the deadline for the v0.9 SSA std is 15 Jul 2004 at which time it will appear on the wiki.

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

ONGOING: Good progress occurred at InterOp May 2004. MD expects  $v0.9\ DM$  std 15 July 2004.

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

ONGOING: Good progress occurred at InterOp May 2004. PQ reported that 15 July 2004 will be date for the v0.9 registry harvesting schedule.

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

ONGOING: FG reported that this action is still to be carried out.

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

ONGOING: RM has circulated a pre-draft charter.

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.

ONGOING: this is still being developed.

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

ONGOING: This is still being developed.

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

ONGOING: FG reported that the registration site was open. To date three WG chairs will be attending,. The status of other chairs not yet know. Critical areas are Registry, ADQL, DAL.

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

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.

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.

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.

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

ACTION FM11-5.2B PQ/NW - add in 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.

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

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

-----

GMT 16:30 - Close of meeting

Generated by unregistered txt2pdf v.6.6  $\odot$  SANFACE Software 2003 Available at http://www.sanface.com/txt2pdf.html