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9-10 January 2003

Notes: NAW

Draft 11 Jan 2003

Present:

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Francoise Genova	<genova@astro.u-strasbg.fr>	FG	CDS
Bob Hanisch	<hanisch@stsci.edu>	BH	NVO
Tony Linde	<tol@star.le.ac.uk>	TL	AstroGrid
Reagan Moore	<moore@sdsc.edu>	RM	NVO
Masatoshi Ohishi	<masatoshi.ohishi@nao.ac.jp>	MO	JVO
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David Schade	<David.Schade@nrc.ca>	DS	CVO
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Nic Walton	<naw@ast.cam.ac.uk>	NW	AstroGrid
Rachael Webster	<rwebster@physics.unimelb.edu.au>	RaW	Aus-VO
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Apologies:

Chenzhou Cui	<ccz@bao.ac.cn>	CC	China-VO
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Glossary

AstroGrid - UK VO initiative	<a href="http://www.astrogrid.org">www.astrogrid.org</a>
Aus-VO - Australian Virtual Observatory	
AVO - Astrophysical Virtual Observatory	<a href="http://www.euro-vo.org">www.euro-vo.org</a>
AVO - AVO Science Working Group	
CDS - Centre de Données astronomiques de Strasbourg	
China-VO - Chinese Virtual Observatory	<a href="http://www.china-vo.org">www.china-vo.org</a>
CVO - Canadian Virtual Observatory	
GAVO - German Virtual Observatory	
GSC - UK Grid Steering Committee	
India-VO - Indian Virtual Observatory	
JVO - Japanese Virtual Observatory	<a href="http://jvo.nao.ac.jp/index-e.html">jvo.nao.ac.jp/index-e.html</a>
NVO - National Virtual Observatory	<a href="http://www.us-vo.org">www.us-vo.org</a>
RVO - Russian Virtual Observatory	

IVOA - International Virtual Observatory Alliance

0. Review of open action items from previous meetings

ACTION TM3-3.1 MD/RW: To sort out move and unification of IVOA archives.

CLOSED: only a few small details to be clarified (mailing lists etc)

ACTION TM3-4.1 ALL: send comments on agenda to BH

CLOSED: Agenda was distributed by BH end Dec 2002.

ACTION TM3-4.2 ALL: send BH an email to confirm attendance in Seattle. within one week. Also note on whether attending dinner.

CLOSED: this happened

ACTION TM3-5.1 ALL: send BH/FG ideas for speakers and topics for inclusion on the JD programme. Topics to include what users want

ONGOING: see 8.2.1 below

ACTION TM3-5.2 ALL: send FG ideas for Commission V discussion topics and roles of the commission. Technical points welcome.

ONGOING: see 8.3 below

ACTION TM3-10.1: MD: set up email groups on Webservices and networking - MD will email [ivoa@ivoa.net](mailto:ivoa@ivoa.net) with signup details.

CLOSED: new email groups have been setup - see <http://www.ivoa.net/forum>

ACTION TM3-10.12: FG: set up subcommittee to look into role of IVOA in owning and defining international astronomical data stds.

CLOSED: This did not happen. PQ is composing a position paper for IVOA (see 7.3.1). IVOA in the context of Commission V of the IAU is discussed in section 8.3 below.

ACTION TM2-1.1: BH/PQ: generate and distribute agenda of Seattle meet

CLOSED: BH distributed the agenda end 2002.

ACTION TM2-2.1: AL: send pointers to astro-ontology

CLOSED: TL distributed pointers shortly after TM3 (Nov 2002).

ACTION TM2-8.1: BH: start the email discussion re IAU JD by end Sep 2002.

ONGOING: See below in section 8.2.1

ACTION FM1-1.1: BH - report to next telecon: Contact suitable representatives in Japan, Chile, China and South Africa as to possible participation in the IVOA. This list is not exhaustive.

CLOSED: updates on new members to the IVOA will be reported upon at future IVOA meetings.

ACTION FM1-4.1 BH: organise Jan 9, 2003, meeting dinner in Seattle.

CLOSED: happened in Seattle 9 Jan 2003.

The participants - as listed above - introduced themselves.

## 2. New Members

BH welcomed RaW representing the Australian VO activity.

## 3. News Items

### 3.1 Meeting Goals:

Near term goals - project collaborations  
- review of IVOA Roadmap  
- IAU General Assembly Activities

### 3.2 News and announcements

BH: NVO demos successfully deployed at the AAS meeting in Seattle. International aspect as CVO and France-CDS involved in this. Several hundred astronomers, policy makers etc have seen and been impressed by the demos. Positive feedback.

PQ: FP6 Euro-VO proposal will be submitted to Brussels mid 2003. Thus the AVO is thinking hard now as to the format of larger scale operational VO facilities.

PQ: Need to address 'VO Readiness' - how will data providers be able to fit into the 'VO' structure. Needs to be addressed by the IVOA.

ES: By IAU Gen Assembly - need to define a suitable forum in which large future data providers (e.g. LSST) can interface to VO's.

## 4. Project reports

### 4.1 AVO

PQ: AVO demo Jan 2003, showing early capability.

Euro-VO proposal being formulated. Euro-VO rests on AVO on the one hand, and Grid/Network projects on the other. Euro-VO will be partners to EGEE and GRIDSTART. Euro-VO will utilise GEANT and national high speed networks.

Euro-VO will have three main components:

- Data Centre Alliance - Euro-VO will interact with national bodies which in turn will be made up of their data providers.
- VO facility centre (persistent) - stds keeping, registry, user support - functional facility for Europe. Provides link to IVOA.
- VO Technology Centre - grouping of organisations - science and project driven.

ES: The US had these discussions two years ago. The facilities centre has a hierarchical relationship to the DCA. US model for an operational US-VO is not yet decided upon.

PQ: EU funding at the 10-20M euro's for the period 2005-8

### 4.2 AstroGrid

NW: update on AG - Phase-B beginning. Recruitment underway - project funding at 3.7M for 3 yr period. Iterative proposal - three monthly cycles.

#### 4.3 NVO

Recent meeting of the NVO Advisory Committee - chaired by Sidney Woolf. Composed of Astronomers and IT representatives.

Strong support from the committee - good advice - risk analysis and convince the US community that the NVO will be indispensable to them as early as possible. The official report will be made publically available.

The major NVO effort in the past three months has been in the area of the 3 science demos. All have worked well. The demos have made use of the Simple Access Protocol (developed by Doug Tody and Ray Plante).

There is much interest in the use of the NVO to support EPO activities.

NVO website has been updated.

Year 2 funding has been approved.

Joint report of NSF/NASA advisory committee has been published. This references VO's.

NASA HQ is becoming more supportive of NVO activities - looking at how will archives fit into the VO (not just should they).

#### 4.4 VO Canada

DS: VO efforts in Canada (CSA and NRC funded) are concentrated in the CADC. 8 new posts by early summer 2003. CDN\$ 1.6M capital upgrades of h/w facilities. Significant database machine with 7TB storage.

Major project is a Database query interface. The archive to VO interface. Linkages to other databases will developed over the next 6-12 months.

CVO has been involved with the NVO demos - cone service, SIAP to the CNOC image data.

Value added content.

NW: VO's are not just data centres - but more generally content providers (thus algorithm developers, value added products etc). Thus are there plans to expand the partners in CVO?

DS: will revisit this issue - content is now available, and other Canadian content providers could get involved.

#### 4.5 VO Russia

Unfortunately no representative from the RVO was able to attend the meeting.

#### 4.6 VO Germany

WV: funding for the coming 2.5 years. Euro 575K received now, supplementary proposal due 2004 for further funding.

Science definition in progress, 3 new posts will be created - across the partner organisations (Hamburg, Potsdam, Heidelberg, Munich, MPE).

Main data sets of interest to GAVO are ROSAT, Hamburg Quasar Survey, SDSS (German participation in this and an official mirror site), VIRGO consortium simulation data.

#### 4.7 VO Japan

Written report distributed before the meeting and available on the [www.ivoa.net](http://www.ivoa.net) web site.

Three staff employed at the NAOJ with collaborations with IT centres (e.g. Fujitsu). Limited funding at this stage is constraining h/w resource.

Data resources polled by JVO QL are Subaru SuprimeCAM, SDSS and 2MASS. JVO prototype is developing a flexible workflow.

BH: IPAC are developing ROAM - a workflow system

4.8 VO China - unfortunately no representative from China-VO was able to attend the meeting. However, Chenzhou Cui & Yongheng Zhao submitted a written status report which is available with these minutes on the IVOA wiki site.

#### 4.9 VO India

Unfortunately no representative from VO-India was able to attend the meeting.

FG: noted that VO-India are collaborating with the AVO on VOTable tool development.

#### 4.10 e-Astronomy Australia - now renamed Aus-VO.

RaW reported that Aus-VO has received funding. There was a small workshop held at the end of Nov 2002. PQ and Andy Lawrence gave presentations there. Australian astronomy is engaged.

Aus-VO is now a four institute consortium (AAO, ATNF, Sydney, Melbourne). The Project Scientist has been appointed and will be visiting AstroGrid in Jan 2003.

Aus-VO is making links with the Grid computing academic community in Australia.

BH: where does the funding come from?

RaW: funds come from the library funding line.

#### 4.11 French-VO

FG: reported that F-VO will be set up at the national level - exact form to be known by Mar 2003. CDS will be playing a significant role.

#### 4.12 Efforts in Italy

PB: noted that there are efforts underway in Italy to form a coordinated data archiving/VO programme. Funds are limited though.

Fabio Pasian is the contact person.

#### 5. Science demonstrations

##### 5.1 Recap of NVO demos at AAS meeting

BH: NVO demo at the AAS

3 topics selected back in April 2002 - from 12 suggestions of the NVO science group.

BD candidate search, galaxy morphology computation, GRB followup service.

The GRB service will be made available as a robust tool for the community in the next few weeks.

##### 5.2 AVO demos, AVO SWG

MD: overview of the AVO demo capability for Jan 20/21 2003 demonstration taking place at Jodrell Bank Observatory, UK.

NW: highlighted the two science drivers - hi-z SN and hi-z galaxies.

FG: the demo raises issues as to future standards

NW: AVO SWG will get hands-on usage of the capability.

##### 5.3 AstroGrid

Grid technology demo - setting up a data centre grid.

BH: the NVO demos have taken a lot of effort.

NW: IAU Sydney demos should be consolidation of the existing demos.

##### 5.4 Discussion on project - VO partnership.

DD: what drives a 'project' to engage in the VO

PQ: funding linked to compliance, or real science benefit to the project by engaging with the VO

BH: we need to embrace the large projects. but also allow the 'small' data provider to input their data.

NW: key driver of AVO/AstroGrid is to minimise the 'cost' of inputting project resources into a VO.

#### 6. Interoperability

##### 6.1 Results from October interoperability workshop

FG: Oct 2002 Baltimore meeting (following the ADASS) was very productive. Good representation from VO projects. Focus on the meeting was 'standards', what are needed and what should the definition process be.

#### 6.1.1 Data models

FG: French (IDHA) and US groups discussed data models

The AVO demo shows the use of a hierarchical data model. The SIA may need extending.

#### 6.1.2 Resource metadata

FG: comments to the US proposals being developed

#### 6.1.3 Simple image access protocol

The NVO SIAP is a good first draft. The NVO will be amending this after their experience with the demos.

#### 6.1.4 UCD structure and content

The UCD concept is evolving. CDS are preparing a proposition as to UCD assignments.

ACTION FM4-6.1.4 FG: organise a working group to suggest a UCD goal, needs, standard. (The process should be modelled on the mechanism used to come up with the VOTable std). Kick off meeting could be April or May 2003.

It was agreed that it would be good to show progress in std development in these areas at the IAU general Assembly.

#### 6.1.5 VOTable

NW: VOTable and its handling of binary image data?

### 6.2 Grid Architecture.

RM: grid architecture is evolving - 3rd generation now - OGSA. 4th generation of the architecture is now on the horizon.

RW: OGSA brings in the integration of web and grid services.

RM: METS - encoding transmission std coming out of the digital library world.

Friday 10 January 2003

## 7. Interoperability roadmap

The meeting considered that the definition of a number of VO standards should be a primary focus of activity for the next two years.

### 7.1 Standards Working Groups.

The following areas were identified (mailing list also noted for

each):

		Priority
- UCD ucd@ivoa.net	[RW]	2
- Roy Williams and Francois Ochsenbein to lead		
- VOTable votable@ivoa.net	[FG]	4
- Roy Williams and Francois Ochsenbein to lead		
- SIA dal@ivoa.net	[BH]	2
- extensions for spectra, time series etc		
- Data Model dm@ivoa.net	[BH]	3
- Resource metadata/ Registry registry@ivoa.net	[TL]	1
- VO QL voql@ivoa.net	[MO]	4

ACTION FM4-7.1A named people: inform MD of who in his area will be responsible for activating these standard areas working groups.

Priorities are such that 1 is urgent.

Each WG must be formed (1 in two weeks) and a roadmap of the development in that std area be produced (1 within 4 weeks).

Standard development in each area:

Priority 1:2 - 12 months to generate a V1.0 document

Priority 3:4 - 24 months to generate a V1.0 document

Report at IAU July 03, ADASS Oct 03, AAS January 04.

ACTION FM4-7.1B NW: to organise an interoperability meeting in Cambridge - week beginning 28 Apr. Poll for dates. Will include tiger team meetings for the areas above. Use the interop distribution list.

## 7.2 Registry

RW: OAI - open archives initiative - archive.org. MIT implementation is DSPACE. The OAI lead is a member of the NVO oversight board.

RM: every community is coming up with their own registry.

## 7.3 Next steps

### 7.3.1 VO Readiness:

ACTION FM4-7.3.1 PQ: produce a White Paper on what VO Readiness might mean, and how the Data Providers will integrate into a VO system.



This paper will touch on what a VO will mean, the costs and implications of participating in a VO, outline why organisations might want to participate, etc.

### 7.3.2 Data Quality:

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

### 7.3.3 Web Services:

TL: AstroGrid's first implementations will employ Web Services

ACTION FM4-7.3.2 RW: get the IVOA Web Services mailing list going.

### 7.3.4 Grid integration, collaborations with PRAGMA:

PRAGMA is the Pacific Rim Grid Management Association.

MO will be speaking at the next PRAGMA meeting and will introduce IVOA activities.

## 8. Planning for IAU General Assembly

### 8.1 Display booth's at the IAU

ACTION FM4-8.1A ALL: (by begin Feb 03): email BH with who is likely to have a booth - CDS, ESO, AstroGrid, NVO, Aus-VO/ATNF, CVO, etc

Agreed that in principle it should be possible to run any of the demos (AVO, AstroGrid, NVO etc) at any participating booth.

ACTION FM4-8.1B TL: coordinate the logistics and display materials

RaW suggested that Aus-VO might be able to organise volunteers to help out with running the demos

ACTION FM4-8.1C NW: to organise the poster design - under the IVOA logo umbrella- for use at all booths.

ACTION FM4-8.1D ALL: send to TL requirements on hardware needed for the demos. (He'll pass this info on to RaW).

### 8.2 IAU meetings

8.2.1 Joint Discussion 8 - 17+18 July 2003 only - 4 x 1.5 hours sessions available.

FG and BH are formulating the programme on the VO side (the ELT side have decided on their speaker list).

Posters for each project (e.g. AVO, AstroGrid, AstroVirtel, etc) and a poster describing each of the demonstrations (science focused).

Deadline for speaker list is Feb 15, 2003

ACTION FM4-8.2 FG: circulate draft programme for comment - still accepting speaker suggestions till Weds 15 Jan 2003.

It was AGREED that the programme should attempt to integrate the Large Telescope and VO sessions.

8.2.2 Future of Large Scale Facilities - chaired by Richard Schilizzi -  
Tues July 22 2003.

Talks by BH on the IVOA and the projects, and PQ on the Grid

8.3 IAU Commission V - Data.

FG: will be the next president of this commission. Comm V covers the FITS WG.

The VO's Data Centres and Networks WG has a role to play working in partnership with IVOA. This Comm V WG is likely to be the mechanism through which VO stds are internationally agreed.

The VO WG will be a review body of standards put forward by the IVOA.

The FITS WG could eventually merge into the new Data Centre WG.

ACTION FM4-8.3A ALL: send names of representatives from projects as to make up of the WG.

PQ: Suggested that IAU Comm V presents its new mission statement highlighting the VO roadmap.

ACTION FM4-8.3B FG: organise interoperability meeting in Sydney under the auspices of the IAU Comm V.

ACTION FM4-8.3C FG: generate a draft mission and terms of reference for the VO WG of IAU Comm V.

8.4 Release of updated IVOA roadmap

- Coordination of demonstrations; international data access

These issues are covered above.

9. Plans for future IVOA meetings, telecons, sub-groups

9.1 Next IVOA meetings.

ACTION FM4-9.1A BH: Organise IVOA telecons - 24 Mar, 2 Jun

ACTION FM4-9.1B PQ: Full IVOA meeting to be organised perhaps Weds 23 July 2003 in Sydney during the IAU.

9.2 Interoperability meetings

ACTION FM4-9.2 NW: to organise an interoperability meeting in Cambridge - week beginning 28 Apr. Poll for dates. Will include tiger team meetings for the areas above. Use the interop distribution list. (might happen end 12 May).

ADASS - Strasbourg - 13-15 Oct 2003, Interop meeting 16+17 Oct 2003 follows

10. Recap of new action items

ACTION FM4-6.1.4 FG: organise a working group to suggest a UCD goal, needs, standard. (The process should be modelled on the mechanism used to come up with the VOTable std). Kick off meeting could be April or May 2003.

ACTION FM4-7.1A named people: inform MD of who in his area will be responsible for activating these standard areas working groups.

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

ACTION FM4-7.3.2 RW: get the IVOA Web Services mailing list going.

ACTION FM4-8.1A ALL: (by begin Feb 03): email BH with who is likely to have a booth - CDS, ESO, AstroGrid,

ACTION FM4-8.1B TL: coordinate the logistics and display materials

ACTION FM4-8.1C NW: to organise the poster design - IVOA logo - for use at all booths.

ACTION FM4-8.1D ALL: send to TL requirements on hardware needed for the demos. (He'll pass this info on to RaW).

ACTION FM4-8.2 FG: circulate draft programme for comment - still accepting speaker suggestions till Weds 15 Jan 2003.

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Meeting closed 11.30.