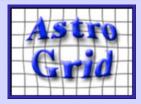
SCONUL2008

Edinburgh

Andy Lawrence

June 2008



Why Libraries are too important to be left to Librarians : Part I or What Researchers Really Need





- Its a 2D problem
- The market is global
- Find a niche
- Internet \neq Web

Who do I identify with ?

- My Library ?
- My University ?
- My Nation ?
- My Discipline ?

try the party test

Subject vs Institution

	Univ-A	Univ-B	Univ-C	Univ-D
Chemistry				
History				
Physics				
Linguistics				
Philosophy				
Maths				

Trad Solution-1 : Departmental Libraries

	Univ-A	Univ-B	Univ-C	Univ-D
Chemistry	٩	٥	¢	O
History	٩	٥	٥	٥
Physics	٩	٥	٥	٥
Linguistics	٩	٥	٥	٥
Philosophy	\diamond	٢	٢	٥
Maths	٩	٥	٥	٥

- maximises uses of domain expertise

- inefficient in storage and staff effort

Trad Solution-2 : Vertical Integration

	Univ-A	Univ-B	Univ-C	Univ-D	
Chemistry					
History			\diamond	\odot	
Physics	٩	O	€	٢	
Linguistics	٥	•	€	\odot	
Philosophy	•	•	•	•	
Maths					

- the central library
- efficient locally
- but duplicates nationally

Trad Solution-3 : National Centre

	Univ-A	Univ-B	Univ-C	Univ-D
Chemistry	**	♦	\diamond	Ø
History	€	€	€	\odot
Physics	¢	¢	\$	\mathbf{O}
Linguistics	¢	¢	0	¢
Philosophy	\odot	٥	٥	\odot
Maths	٢	٢	٢	٢

- maximally efficient
- can offer rare items
- but access very slow

Speed vs Efficiency vs Domain Expertise

Speed vs Efficiency vs Domain Expertise

	Univ-A	Univ-B	Univ-C	Univ-D	
Chemistry					
History	\odot	\odot	\odot		
Physics	\odot	\mathbf{O}	\odot	\bigcirc	
Linguistics	\odot	\odot	\odot	٢	
Philosophy	\odot	\odot	\odot		
Maths			C	C	

The good old days

compromise = Univ library reasonably efficient reasonably quick

Speed vs Efficiency vs Domain Expertise

	Univ-A	Univ-B	Univ-C	Univ-D	Univ-A Univ-B Univ-C Univ-D
Chemistry					Chemistry 🐼 🛠 🛠
History	\bigcirc	\bigcirc	\bigcirc	\odot	History 🐼 🐼 🐼
Physics	\bigcirc	\bigcirc	\bigcirc	0	Physics 😧 😧 😧
Linguistics	\odot	٢	\bigcirc	0	Linguistics 😯 😯 😯
Philosophy	\odot	\odot	\bigcirc	\odot	Philosophy 😧 😧 😧
Maths			C	C	Maths 🐼 🐼 🐼

The good old days

compromise = Univ library reasonably efficient reasonably quick

The network age

speed not an issue domain expertise wins horizontal integration wins global not national

What resources does research need?

- books
- latest research papers
- archived research papers
- data from research papers
- archived data collections
- live public datasets

Books

- only need a few specialised books
- most in own office or departmental library
- rare books in national libraries
- no case for institutional libraries ?

Latest research papers

• ALL astronomers put preprints on ArXiv

although disk evolution is sensitive to changes in opacity, the disks we study do not fragment, even at high resolution

• available on web or RSS reader

000	astro-ph updates on arXiv.org — RSS (52 messages, 50 unread)		0
) (2	
Get Mail	Delete Junk Reply Reply All Forward New Message Note To D	0	Search
BT	Subject	Date Received	
orange-pop	Comments on New Limits on Spin-Independent Couplings of Lo	Today	11:26
🦉 EDI staffmail IMAP (Gravitational Instabilities, Chondrule Formation, and the FU Orionis P	Today	11:26
🦉 al@roe.ac.uk 🏾 🌑	Prospects in Constraining the Dark Energy Potential. (arXiv:0806	Today	11:26
▼ √ Sent	The Origin and Evolution of \civ Baldwin Effect in QSOs from the	Today	11:26
GZ BT	Primordial Magnetic Field Limits from WMAP Five-Year Data. (ar	Today	11:26
	Detection of period variations in extrasolar transiting planet OG	Today	11:26
⊲∠ orange-pop	Observational evidence for return currents in solar flare loops. (a	Today	11:26
😴 EDI staffmail IMAP (Evolution of Migrating Planets Undergoing Gas Accretion. (arXiv:	Today	11:26
🖅 al@roe.ac.uk	The B3-VLA CSS sample. VII: WSRT Polarisation Observations an	Today	11:26
🕨 🗑 Trash	Impact of Point Source Clustering on Cosmological Parameters with	Today	11:26
	Conversion of nuclear to 2-flavour quark matter in rotating com	Today	11:26
W REMINDERS	Stellar Structure of Dark Stars: a first phase of Stellar Evolution d	Today	11:26
Notes	Identifying the Low Luminosity Population of Embedded Protosta	Today	11:26
🔻 🚽 To Do	Calibration and flight performance of the long-slit imaging dual	Today	11:26
🥪 On My Mac 🧉	Quantum Noise as an Entanglement Meter. (arXiv:0804.1377v2 [Today	11:26
🤯 al@roe.ac.uk 🧉	Comparison of 36 BO Misson Enitman/IDAC Coloctic Contor Fur	Today	11:26
▶ ON MY MAC	astro-ph updates on arXiv.org		
▼ RSS			
🔤 Apple Hot News 🧉	Gravitational Instabilities, Chondrule Formatio	n, and	
📧 astro-ph upda 🕈 🥃	0		
S Astronomy Blog	Using analytic arguments and numerical simulations, we examine whether chondry		
	phenomenon can be caused by the burst-like onset of gravitational instabilities (Gi scenarios for bursting dead zones can work, in principle. If the disk is on the verge		
TWiki's EuroVOAIDA we	Cost of C to E All and produce chandrule forming chacks at least under extreme of	inditions. Mass f	luxes are also
► EDI STAFFMAIL IMAP	situation is demonstrated by numerical simulations. In contrast, as supported by an place close to \$r\sim1\$ AU, then even low pitch angle spiral waves can create cho	ndrule-producing	g shocks and
▼ AL@ROE.AC.UK	outbursts. We also study the stability of the massive disks in our simulations agains		

and even for extreme assumptions.

Read more.

A-aatemp

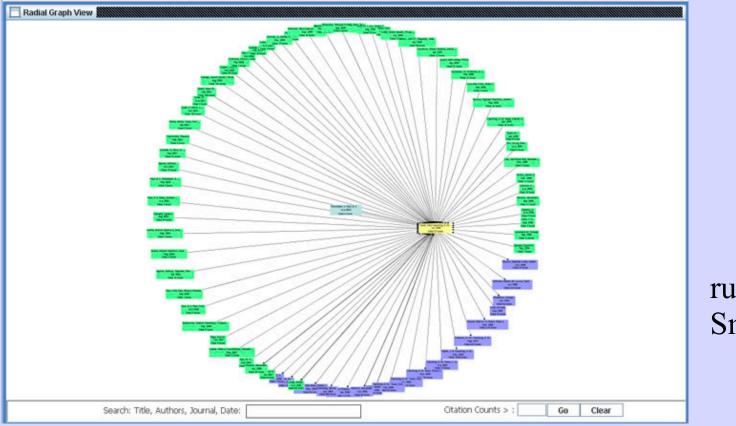
A-Approvals

A-active-files

run by Cornell

Archived research papers

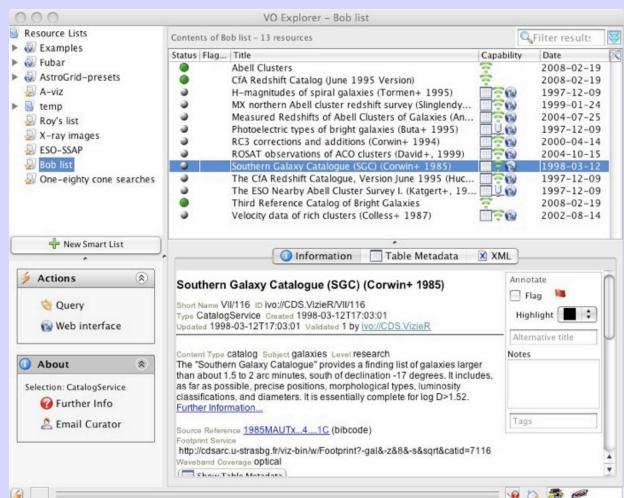
- ALL papers available thru ADS
- available on web or Java tool



run by Smithsonian

Data from research papers

- ALL tables available thru Vizier
- available on web or Java tools

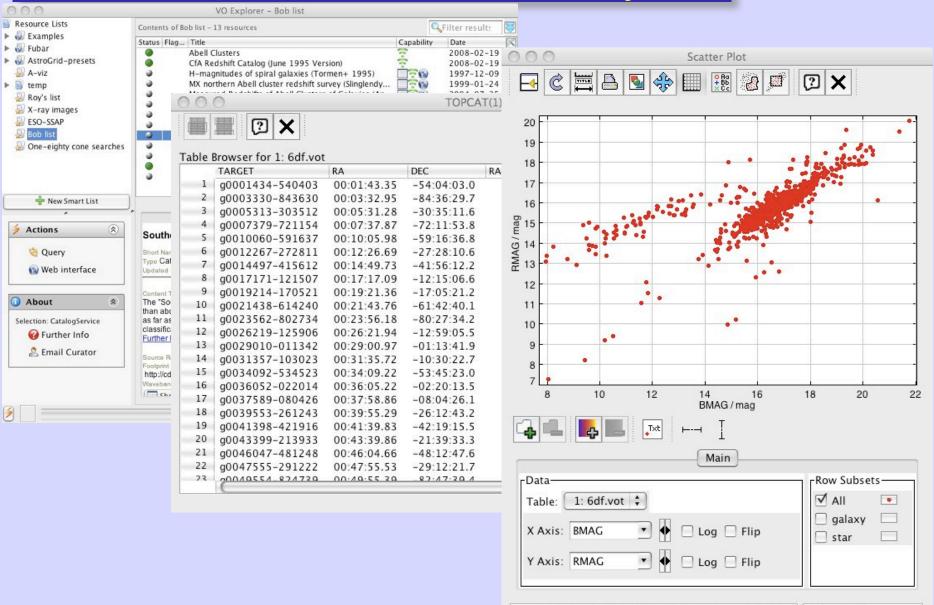


run by AstroGrid consortium

run by U.Strasbourg

000	VO Explorer – Bob list		
Resource Lists	Contents of Bob list - 13 resources	GFilter result:	
 Gramples Gramples Fubar AstroGrid-presets A-viz temp Roy's list X-ray images ESO-SSAP Bob list One-eighty cone searches 	 Abell Clusters CfA Redshift Catalog (June 1995 Version) H-magnitudes of spiral galaxies (Tormen+ 1995) MX northern Abell cluster redshift survey (Slinglendy Measured Redshifts of Abell Clusters of Galaxies (An Photoelectric types of bright galaxies (Buta+ 1995) RC3 corrections and additions (Corwin+ 1994) ROSAT observations of ACO clusters (David+, 1999) Southern Galaxy Catalogue (SGC) (Corwin+ 1985) The CfA Redshift Catalogue, Version June 1995 (Huc The ESO Nearby Abell Cluster Survey I. (Katgert+, 19 Third Reference Catalog of Bright Galaxies 	apability Date 2008-02-19 2008-02-19 2008-02-19 2008-02-19 2008-02-19 2004-07-25 1997-12-09 2004-07-25 1997-12-09 2004-10-15 1998-03-12 1997-12-09 1997-12-09 2008-02-19 2008-02-19 2008-02-19 2008-02-19 2008-02-19 2008-02-19 2008-02-19 2008-02-19 2008-02-19	
Actions	Southern Galaxy Catalogue (SGC) (Corwin+ 1985)	Annotate	
🍓 Query 🔞 Web interface	Short Name VII/116 ID ivo://CDS.VizieR/VII/116 Type CatalogService Created 1998-03-12T17:03:01 Updated 1998-03-12T17:03:01 Validated 1 by ivo://CDS.VizieR	Flag Highlight	
About (*)	Content Type Catalog Subject galaxies Level research The "Southern Galaxy Catalogue" provides a finding list of galaxies larger than about 1.5 to 2 arc minutes, south of declination -17 degrees. It includes,	Alternative title	
Selection: CatalogService Further Info Email Curator	as far as possible, precise positions, morphological types, luminosity classifications, and diameters. It is essentially complete for log D>1.52. Further Information Source Reference 1985MAUTx41C (bibcode)	Tags	
	Footprint Service Internet (internet internet internet) http://cdsarc.u-strasbg.fr/viz-bin/w/Footprint?-gal&-z&8&-s&sqrt&catid=7116 Waveband Coverage optical	A Y	
۶		- 🧏 💸 🐯 🥯	

000	14-1		VO Explorer - Bob list							
Resource Lists	Contents of	Bob list –	13 resources		C Filter resu	ilt:				
Examples	Status Flag.	Title		0	apability Date	R				
🕨 🐻 Fubar	۲	Abell Clusters 2008-02-19								
AstroGrid-presets	•									
A-viz	3		gnitudes of spiral galaxies (To		1997-1					
temp Roy's list	3									
Koy s list X-ray images		00	0		TOPCA	T(1): Table Brov	/ser			
ESO-SSAP		Anna I								
Bob list			🔳 🔃 🗙							
One-eighty cone searches	3	·								
some engine come searches		Table I	Browser for 1: 6df.vot							
	3		TARGET	RA	DEC	RA2000	DEC2000	BMAG	RMAG	SGFLAG
		1	g0001434-540403	00:01:43.35	-54:04:03.0	0.43063	-54.0675	17.04	16.06	10
New Smart List		2	g0003330-843630	00:03:32.95	-84:36:29.7	0.88729	-84.60825	16.65	16.16	1
· · ·	·	3	g0005313-303512	00:05:31.28	-30:35:11.6	1.38033	-30.58656	15.99	14.7	1
乡 Actions 🛞		4	g0007379-721154	00:07:37.87	-72:11:53.8	1.90779	-72.19828	15.04	14.41	1
	South	5	g0010060-591637	00:10:05.98	-59:16:36.8	2.52492	-59.27689	16.71	14.99	1
Second Second	Short Nar	6	g0012267-272811	00:12:26.69	-27:28:10.6	3.11121	-27.46961	16.54	15.02	1
🚱 Web interface	Type Cal Updated	7	g0014497-415612	00:14:49.73	-41:56:12.2	3.70721	-41.93672	16.91	16.09	1
Gy web interface	opoatod	8	g0017171-121507	00:17:17.09	-12:15:06.6	4.32121	-12.25183	15.93	15.21	1
	Content 1	9	g0019214-170521	00:19:21.36	-17:05:21.2	4.839	-17.08922	17.	15.89	1
🚺 About 🛛 🛞	The "So than abo	10	g0021438-614240	00:21:43.76	-61:42:40.1	5.43233	-61.71114	15.36	14.81	1
Selection: CatalogService	as far as	11	q0023562-802734	00:23:56.18	-80:27:34.2	5.98408	-80.4595	16.77	15.24	1
🕜 Further Info	classific	12	g0026219-125906	00:26:21.94	-12:59:05.5	6.59142	-12.98486	17.19	15.92	1
	Further I	13	g0029010-011342	00:29:00.97	-01:13:41.9	7.25404	-1.22831	16.01	15.05	1
🙎 Email Curator	Source R	14	g0031357-103023	00:31:35.72	-10:30:22.7	7.89883	-10.50631	14.59	14.47	1
·	Footprint http://cd	15	g0034092-534523	00:34:09.22	-53:45:23.0	8.53842	-53.75639	12.71	16.11	2
	Waveban	16	q0036052-022014	00:36:05.22	-02:20:13.5	9.02175	-2.33708	16.92	16.11	1
	Con Che	17	q0037589-080426	00:37:58.86	-08:04:26.1	9.49525	-8.07392	15.3	14.51	1
9		18	q0039553-261243	00:39:55.29	-26:12:43.2	9.98038	-26.212	16.91	15.76	1
		19	g0041398-421916	00:41:39.83	-42:19:15.5	10.41596	-42.32097	10.5	9.35	2
		20	g0043399-213933	00:43:39.86	-21:39:33.3	10.91608	-21.65925	16.17	15.09	1
		21	q0046047-481248	00:46:04.66	-48:12:47.6	11.51942	-48.21322	16.16	15.34	1
		22	g0047555-291222	00:47:55.53	-29:12:21.7	11.98138	-29.20603	16.	15.29	1
		23	20040554 824720	00.10.55 30	87.47.20 A	12 48079	-82 79428	16 85	16 27	1 7
		-	() 4 1



Potential: 875 Included: 875 Visible: 849 Position:

Data collections

- curated by various data centres world wide
- published in various registries
 - no need for central repository
 - registries are "smart repositories"
- follows standards agreed by IVOA
 - global subject based standards body
 - but built on Dublin core ..
- searchable and analysable by various tools

run by AstroGrid, Strasbourg, Caltech, ESA, NASA

Whats left for libraries ?

- many global services provided by Universities
 find a niche; solve *one problem* at a time
- physicists like rolling their own
- but others will prefer pret-a-porter
- not just storage
 - curation, databases, tools





• The Library is dead



- The Library is dead
- Long Live Librarians

Conclusions

- The Library is dead
- Long Live Librarians
- Sprinkle them over the garden

FIN

Traditional Library Tasks

- store
- provide study space
- organise and catalogue
- preserve
- provide access
- purchase

Traditional Library Tasks

TASK	STILL NEEDED ?	WHY ?
store	no	who needs books ?
provide study space	no	was only needed because of the books
organise and catalogue	maybe	better done by domain experts ?
preserve	maybe	better done by domain experts ?
provide access	maybe	better done by domain experts ?
purchase	maybe	depends on outcome of open access war