

**The 3 bears –
not too big, not too small, just right
or
How search access logs can be used
to improve success rates for searchers**

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Abstract:

Using search-tracking logs, including comparing logs over time and between systems can provide information about how members of the public really search catalogues and databases. The logs are non-intrusive, and do not rely on anyone's memory, so provide an accurate picture of what is done and in what order, but they cannot unambiguously identify 'success'. However by examining trends and differences it is possible to establish some hypotheses, which can be tested by making changes and again observing the logs. This paper reviews some of the ways search-tracking logs have been used to make changes in a newly implemented Collection Management system at the State Library of Victoria.

Background

In 1984 I participated in a catalogue use study carried out for the State Library of Victoria by RMIT(Broadbent, 1983). It was particularly interesting in that the results went against the perceived wisdom of the time, which was that most catalogue searches were for known items. It was found that over 60% of the searches carried out at the State Library at the time of the survey were subject searches. The overall study was of users & success rates, and searches were characterised as either 'topic'(751 searches) or 'known item'(463 searches).

When the State Library acquired its first Integrated Library Management System (ILMS), Dynix classic, it had the ability to not only track the search text that was entered, but also to provide statistics on the number of searches carried out on each of the indexes listed in each of the menus. This enabled me to track this information in a consistent manner over a substantial period of time. When a web interface was developed in 1996 and the State Library made its digitised images available for searching via an apparently separate catalogue (it was actually only a different 'view' of the single catalogue) it was interesting to compare the searching of this Image database with the 'standard' catalogue.

The State Library took on facilities management of COOL-CAT for CAVAL in the mid 1990's. This is a physical union catalogue which contains catalogue records for the Victorian academic institutions. The records are downloaded on a fortnightly basis from the Australian national bibliographic utility – originally ABN, then Kinetica. COOL-CAT also used Dynix, and from time to time I took the opportunity to look at comparative statistics for searching on the two systems – COOL-CAT and the State Library of Victoria's own catalogue.

In 1999 the State Library of Victoria was invited to participate in PictureAustralia which was being developed by the National Library of Australia. The NLA provided access to a statistics web page, from which it was possible to download monthly and daily data. In preparation for a Steering Committee meeting which was held in Sydney in January 2001, I downloaded some data and analysed it. It was interesting to compare it with the data coming from our own Image database search-tracking.

At this point, I knew that the State Library of Victoria was about to change its ILMS from Dynix Classic to Voyager. I decided that it would be interesting to compare not only the searching of outcomes of an individual library with an aggregation for both 'standard' library materials and images, but also to include some examination of the effect of changing the interface to the same data. Hence the inclusion in this paper of the experiences of 1 month on Voyager.

Not very much seems to be written in the current library literature about examination of OPAC search logs, although in the early 1990's there were a number of papers on the topic. Now some of the same people are writing about Internet searching, and a number of Search Engine sites are even 'advertising' their most popular search topics.

Why look at statistics & search-tracking records

The answer to this question probably has 2 parts - depending on your point of view.

In a library context,

- to see whether what users are searching for is actually in the collection
- to see whether the search interface can be improved

In the web context the first is hardly relevant, as no search engine has control over the contents of the entire web the way a library has control over the contents of its collection, so one assumes that it is primarily for the purposes of interface design – and maybe just plain curiosity.

In many libraries, there is the opportunity for some user instruction so that identified problems can be ‘attacked’ through positive intervention. In the case of the State Library of Victoria this is not easily possible, so interface design becomes even more important – as I have just found out with the transition to Voyager. User instruction – particularly on a group basis is difficult in the case of the State Library of Victoria because of the nature of its user population. This is not based on membership of a host organisation – as in an academic or special library setting, nor is it confined to members of a geographic region (ignoring reciprocal borrowing privileges). In the case of almost every other type of library, there is an unspoken expectation of repeat use. This is not present in the case of the State Library of Victoria. Anyone who walks through the entrance may use the Library, and many users may only use it once. Several surveys over a number of years have identified that on any given day, between ¼ and 1/3 of the users are ‘new’ users, and in fact since we have started to register users, we have identified that a number of them come from interstate.

Trends & comparisons

A single ‘snapshot’ is of limited use. To be really valuable it is necessary to compare data

- Over time
- Between systems

which is what I have done. I have kept searching statistics on the State Library of Victoria’s own catalogue over a substantial period of time, and have noted some interesting trends in the last few years. I have also compared searching on essentially the same interface, but two different systems – the State Library of Victoria’s individual catalogue and COOL-CAT, the CAVAL union catalogue – and noted differences.

I have looked at differences between the way users search the web interface to the State Library’s ‘standard’ catalogue and its ‘Multimedia catalogue’, and also compared searching the State Library’s Multimedia catalogue (image database) and PictureAustralia, which is a virtual union catalogue of images. Finally I have looked at the way users are searching on the new Voyager interface to the State Library’s ‘standard’ catalogue and its image database.

Data sets

State Library Text

Single combined main collection & pictures.

This is the longest time series available. There have been a few changes in terms of the indexes available & the order in which they are presented. It is the interface which has been presented as the default to users within the Library. Although it has been available for 'dial-in' access from outside the Library for some time, it has been very little used at any time, and virtually not at all since the Web interfaces have become available.

State Library Web

There have actually been 3 publicly available interfaces from the 'Catalogue' home page

- an HTML interface, which some users had difficulty accessing because of the way the software handled access via proxy servers, however it was by far the most used
- a Java interface, which some users had difficulty accessing because of firewall problems. It was relatively slightly used, and due to the fact that it was Java based, did not provide any detailed search-tracking.
- the telnet client, which was the least problematic, but many home users had not configured a telnet client with their browsers or if they did, it was not providing the correct emulation, so was again little used.

Separate main collection (books & periodicals) (HTML interface)

This has been available since late 1996, but the range of searching options was far more limited than the text interface as it was based on a Z39.50 server which did not provide a SCAN option. This meant that although it was theoretically possible to set up any of the indexes for access, in practice none of the authority indexes worked. The smaller number of access points makes comparison between the telnet client and the web interface limited but not useless.

Multimedia (images)

This has also been available since late 1996 and suffers from the same technical limitations as the interface to the Main collection, ie. it is based on a Z30.50 server without SCAN capabilities. However due to the nature of searching for images - mostly done by (subject) keyword - this has probably been less of a limitation for users. It is not really possible to compare with searching for pictures on the text interface, because although it is possible to display web pages (containing the images) if the correct telnet client is used (Netterm), it is not an option for most users. Therefore I have made most of my comparisons with the web interface to the main collection.

State Library Voyager

Separate databases for main/pictures/manuscripts

This only became publicly available at the beginning of September, so there is limited data available. However it was possible even after the first week to make some comparisons and suggest some interesting hypotheses.

COOL-CAT Text

This was the interface originally available on site at most institutions, and data has been available for a considerable time period. It would have been possible to analyse individual institutional access, but this would have been very time-consuming for not much return, so just the aggregate data was used. In fact the structure of menu access was quite complex, and many of the indexes relatively little used, so only the most frequently used indexes have been included.

COOL-CAT – Web interface

This has been available to users outside individual university libraries for some time and is clearly the preferred method of access. However it suffers from the same limitations that the State Library's web interface does – Z39.50 server without SCAN capabilities which limits the access points to Keyword and first word of title. It can therefore only be compared in general terms with the text interface to COOL-CAT, or to the web interface to the State Library's catalogue.

PictureAustralia monthly

PictureAustralia provides 2 types of statistics – monthly & daily. Each provides different information

The *monthly* data includes –

- Search type
- Term used
- Frequency of use

It was most useful to analyse this in terms of the type of search, the fields searched and the terminology used. This was more or less comparable to the searching carried out on the web interface to the State Library's Multimedia catalogue.

PictureAustralia daily

The *daily* data includes

- Search type (Basic/Advanced)
- Type of search (Keyword/Phrase)
- Field searched
- Search term(s)
- Result (number of items retrieved)

Because of the level of detail only a relatively few days' searches were used, and the results are therefore more 'anecdotal'.

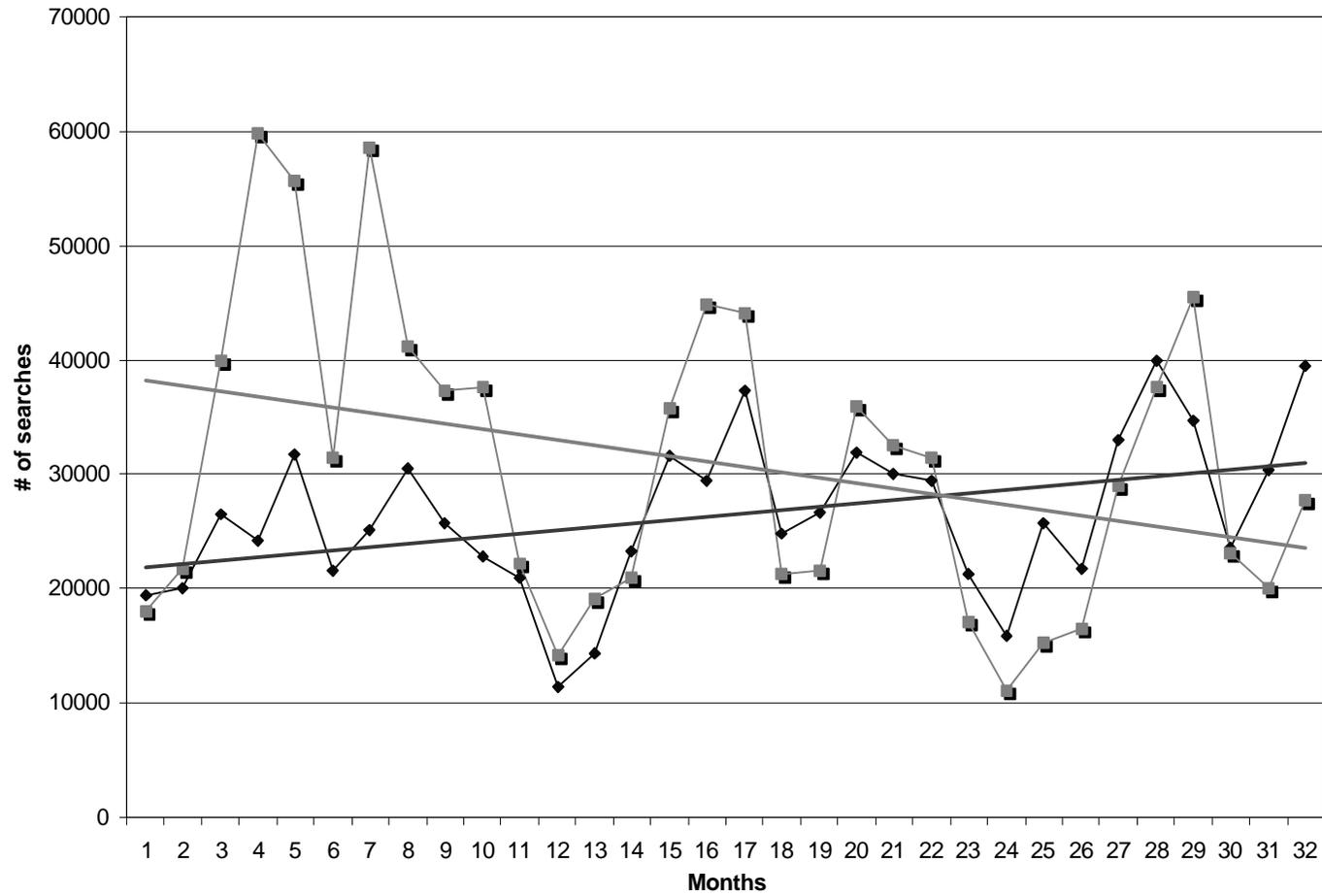
Broad trends identified

Internal/external use of catalogue

Although the State Library of Victoria made its catalogue available via a dial-up link several years before a web interface became available, this was little used. With the development of the Internet and web interfaces to the catalogue, it became much easier for users to access the catalogue from home or work. This has led to a clear trend towards increased external use. We would expect this trend to continue with the changed ILMS, which will now allow users to place callslips and orders for material required up to 7 days in advance from the catalogue interface regardless of where they are physically located. The chart below shows internal vs external access for the past 32 months changing from

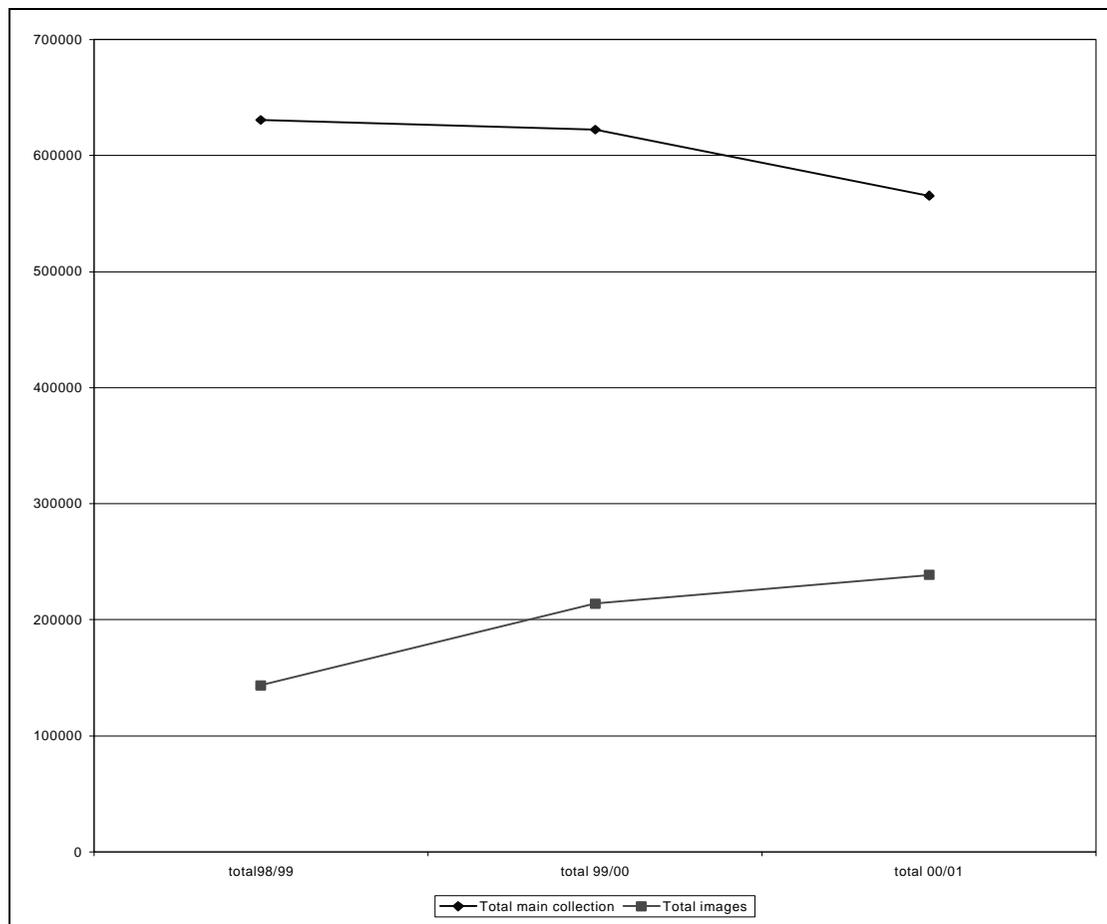
Internal 63% / External 37% To Internal 46% / External 54%

Internal & External catalogue searches 1999-2001



◆ Total external (web+dial-in text)
■ Total internal (web+text)

Another comparison which can be made is between searches made on the main database (books & periodicals) and the image collection. Usage of the main collection appears to be decreasing whilst use of the images is increasing.



Decrease in subject searching

Over the same time period there has also been a change in the way the State Library of Victoria catalogue has been searched. There has been a decrease in the amount of subject searching and an increase in the amount of searching for known items. This has been most pronounced in searches carried out via the web interface, and far less pronounced in searches carried out using the standard text interface, as shown in the table below.

	1998		1999		2000	
Web searching SLV						
Total known item	42812	40%	75964	43%	91214	46%
Total subject searches	62121	58%	97652	55%	104417	52%
Text searching SLV						
Total known item	199123	49%	183791.5	49%	143935	50%
Total subject	206144	51%	193168.5	51%	145545	50%
Combined total SLV						
Total known item	241935	47%	259756	47%	235149	48%
Total subject	268265	53%	290821	53%	249962	52%
Total searches	510201		550576		485110	

This is particularly interesting as during this period, there was no access to journal databases from outside the library (where there was the greatest drop in subject searching), but there was access within the library, (where the text interface was used, and which showed little change in subject searching).

It is interesting to note that there has been very little change in the searching balance in COOL-CAT (text) over the same time period. As would be expected of a union catalogue, the balance is heavily towards known item searching.

COOL-CAT	1998	%	1999	%	2000	%
1998/2000						
Total Known item	305991	75%	204471	76%	108224	75%
Total subject	100363	25%	64743	24%	35412	25%

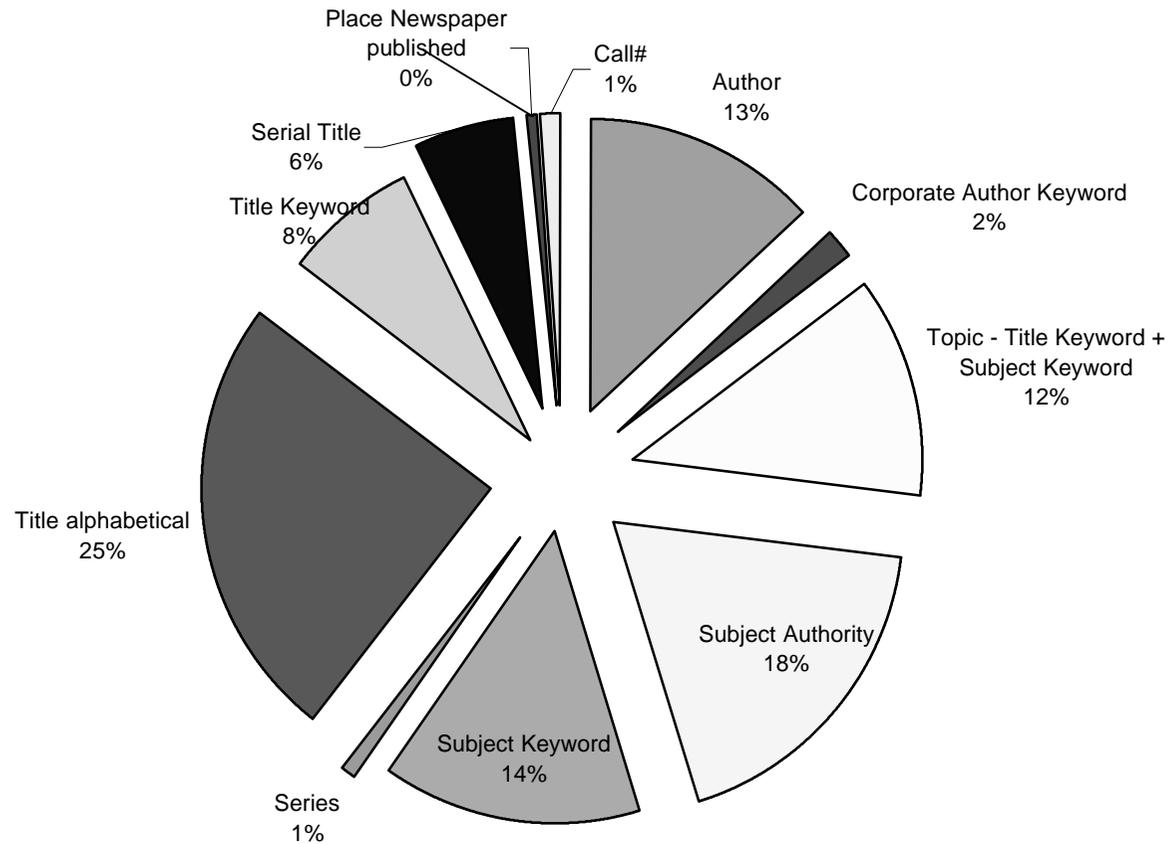
Because of the size of the files it is virtually impossible to analyse the searching of the web interface to COOL-CAT in a comparable manner.

Which indexes are used, changes and user sophistication (use of drop boxes), use of hyperlinks

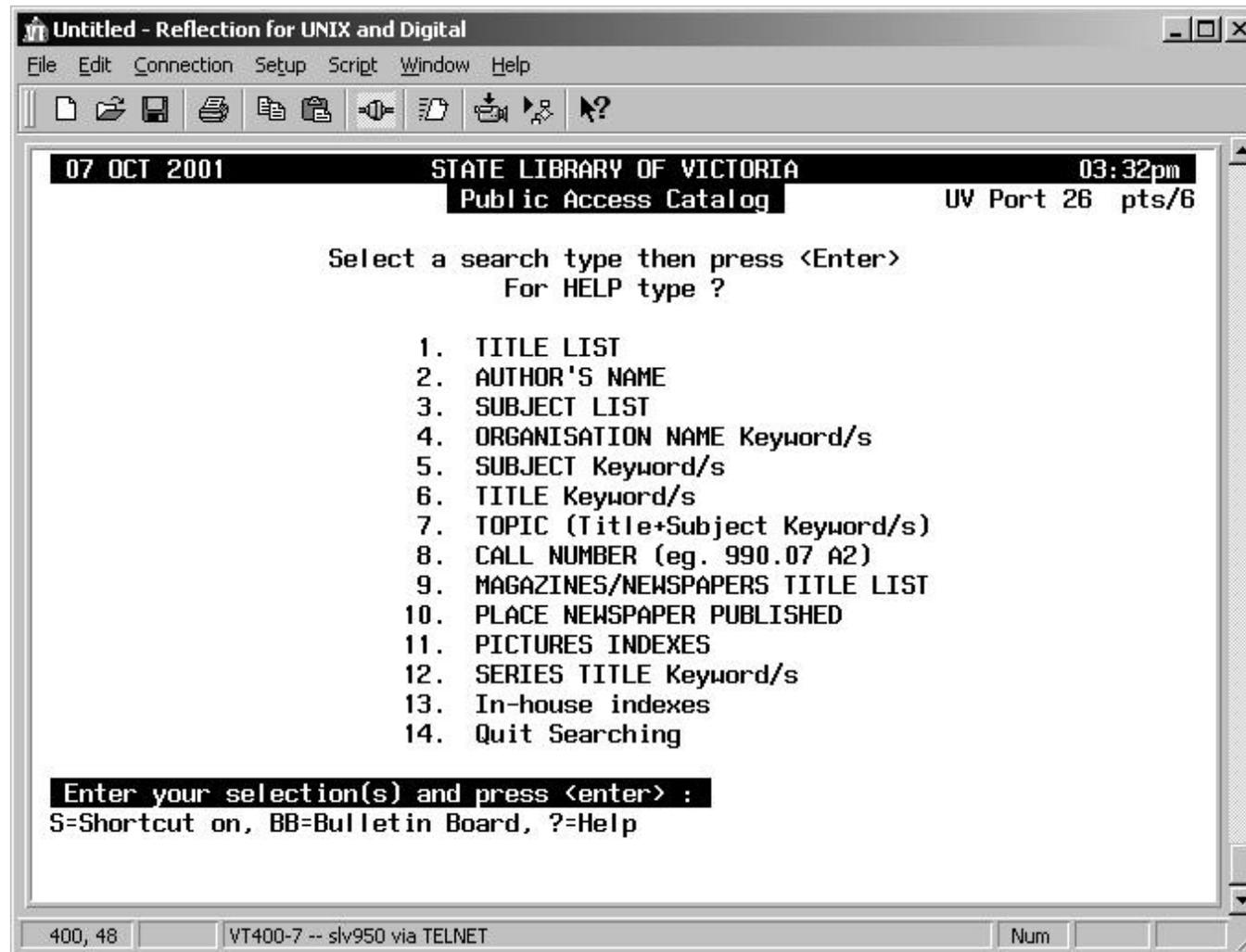
The most obvious area for comparison here is between the searching of the main State Library of Victoria collections (books & periodicals etc) and the Images. It is also possible to compare searching the text and web interfaces, and in fact this raises some interesting questions about interface design.

Searching the Main Collection using Dynix text interface (2000)

NOTE: Call number is used 1% of the time, Serial title 6%. Also menu order does not appear to appreciably influence searching choice. The most heavily searched index is at the top of the list, but beyond that, list order is not the same as usage ranking.

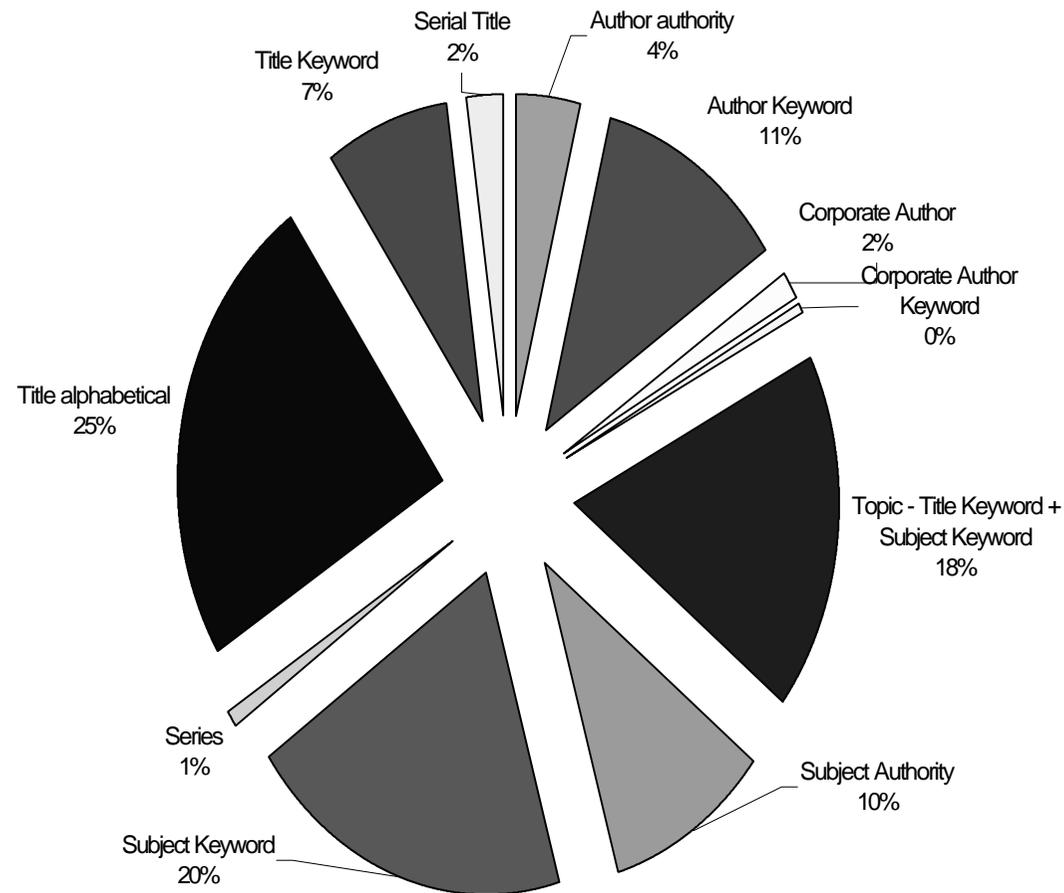


This is the interface used to select the index – a simple menu.

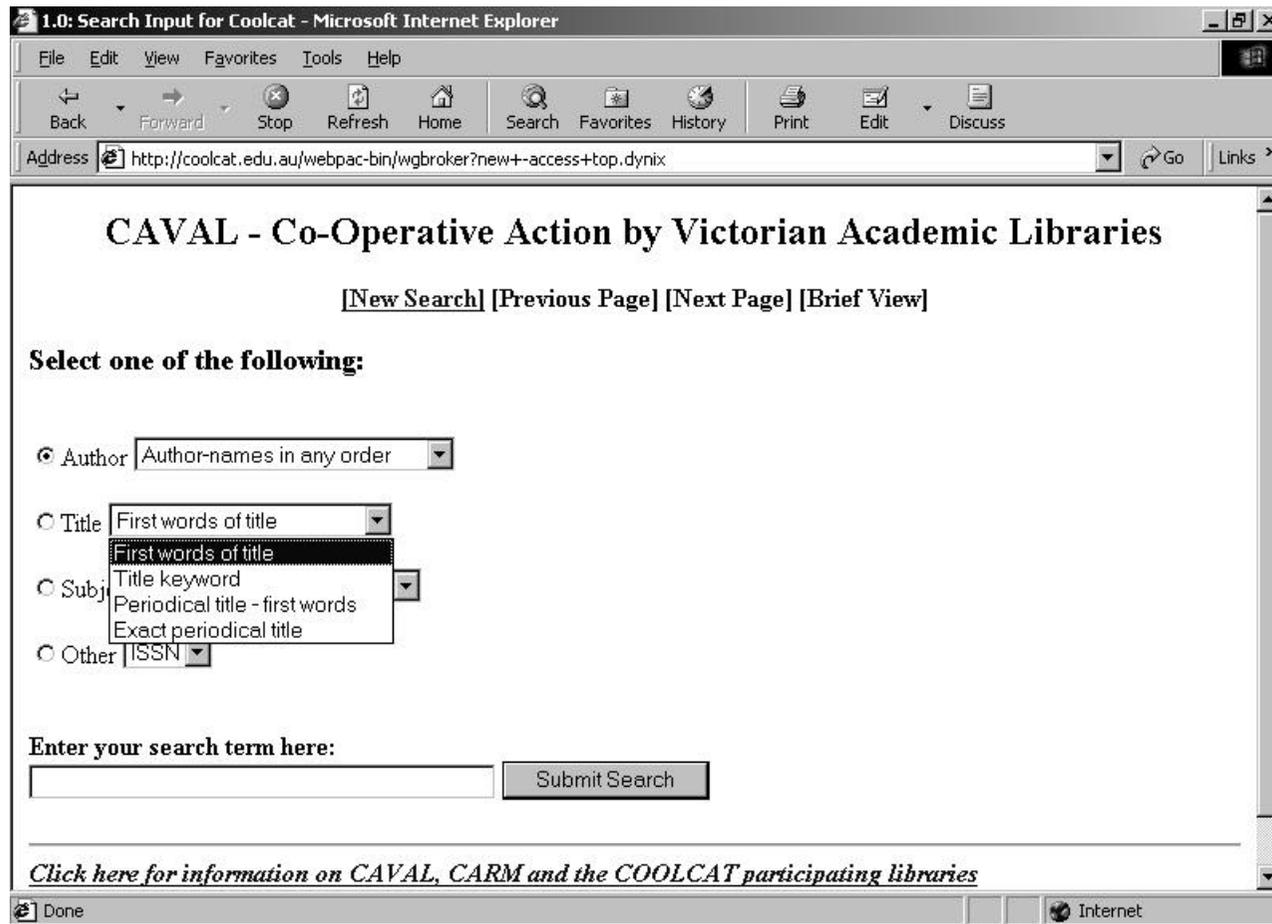


Searching the Main Collection using the Dynix web interface (2001).

Note that Serial title is only searched about 2% of the time, and although neither Author authority (4%) nor Subject authority (10%) can be searched directly, they still score via 'redirect', ie. They appear as hyperlinks on an individual bibliographic record.

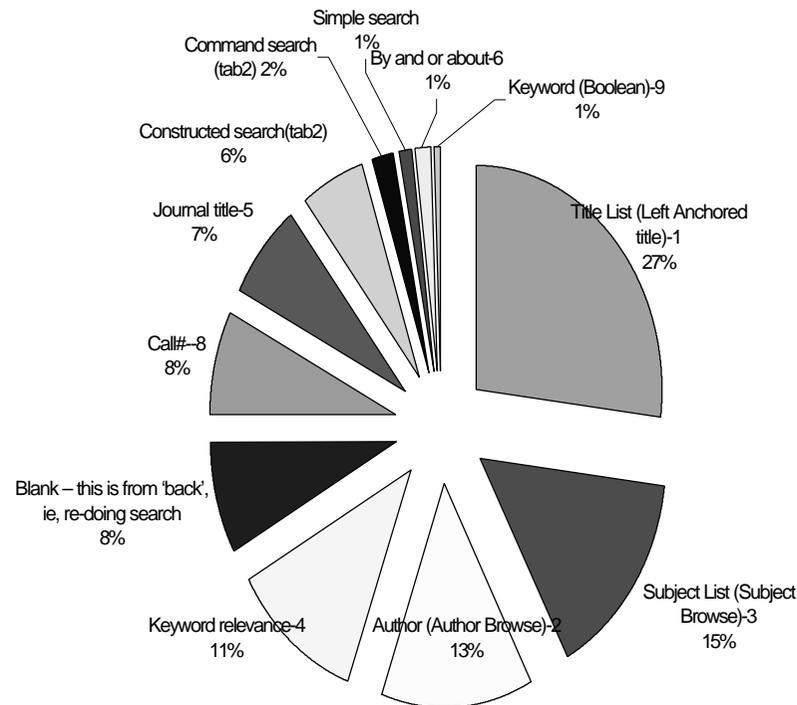


Because the Dynix interface is no longer available, an image of the COOL-CAT interface is shown, as they were very similar – note drop box to chose which option to search for title.



Searching the Main Collection September 2001 using the Voyager interface

This is only the data from the first month of operation, and may well change over time, but already there are a couple of interesting points to note. Call number is 8% - very significantly higher than use in the text interface – but in Voyager it is hyperlinked within the bibliographic record & labeled ‘Other items on this subject’. Also Journal title is 7% - much closer to the Dynix text interface than the web interface. I suspect that is because in the text interface it appeared in a simple menu, but in the web interface it was not the top item in a drop box, and although some users found it, many did not. In Voyager, it again appears as part of a simple menu. In different ways, the different utilisation of these 2 indexes demonstrates the importance of the interface design. **Drop boxes are bad news, hyperlinks are good news.**



Voyager Interface

The screenshot shows a Microsoft Internet Explorer browser window displaying the 'Main Catalogue' page of the State Library of Victoria. The browser's address bar shows the URL: `http://catalogue.slv.vic.gov.au/cgi-bin/Pwebrecon.cgi?DB=local&PAGE=First`. The page features a navigation menu with buttons for 'New search', 'Headings List', 'Titles List', 'Send Requests', 'History', 'All Cats', 'Help', and 'Logoff'. Below the menu, the text 'Catalogue Name: State Library of Victoria' is displayed. The main search area includes a search box, a dropdown menu for 'Limits results to:' (set to 'None'), and a dropdown menu for 'in:' (set to 'Title List (Omit initial article - the, a, an)'). At the bottom of the search area, there is a '15 records per page' dropdown, a 'Click to search' button, a 'Reset' button, and a 'More limits' button. The browser's status bar at the bottom shows 'Done' and 'Internet'.

Search - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Print Edit Discuss

Address `http://catalogue.slv.vic.gov.au/cgi-bin/Pwebrecon.cgi?DB=local&PAGE=First` Go Links >>

 **Main Catalogue** 

Select Catalogue New Users Contact Us Your Requests

New search Headings List Titles List Send Requests History All Cats Help Logoff

Catalogue Name: State Library of Victoria

Search Construct a search

for:

Limits results to:

in:

- Title List (Omit initial article - the, a, an)
- Author's Name (Last name first)
- Subject List
- Keyword Anywhere (Relevance ranked)
- Journals/Magazines/Newspapers Title List
- By or About a Person (Last name first)
- By or About an Organisation (Words in exact order)
- Call Number List

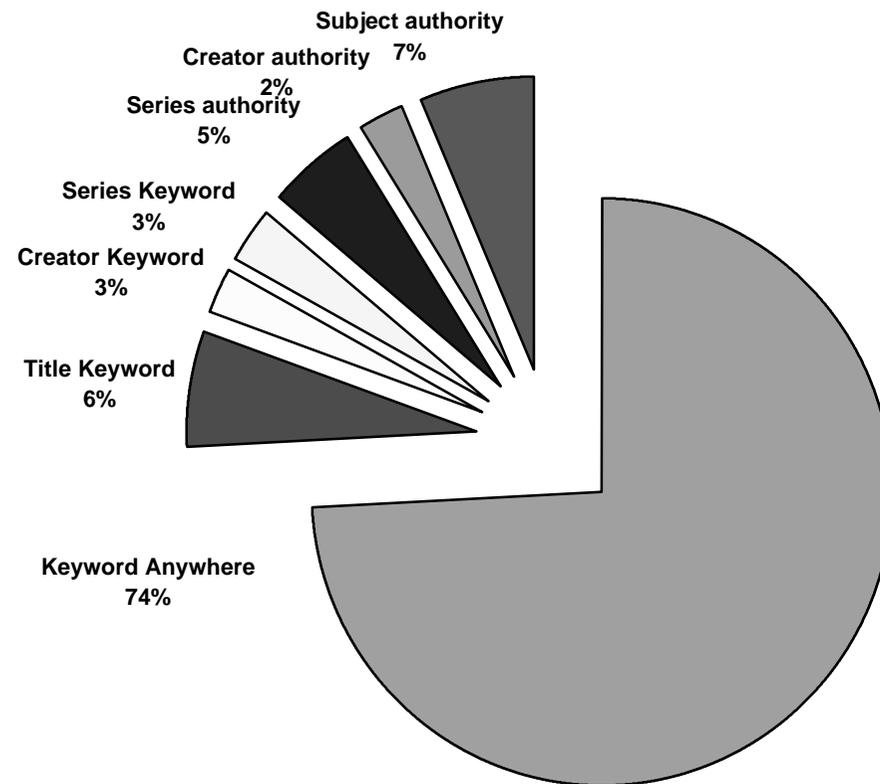
15 records per page

Done Internet

Images

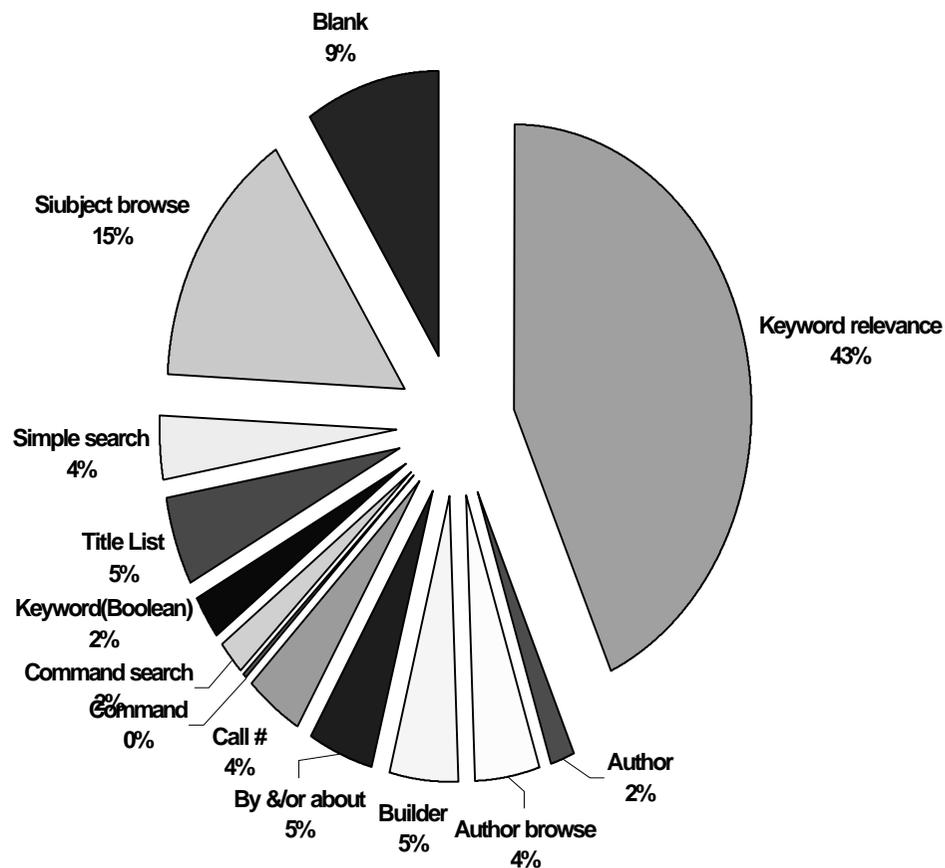
Searching for Images (Dynix) web interface 2001

The obvious difference here is the overwhelming preference for searching by Keyword, which in this interface was the visible option in a drop box.



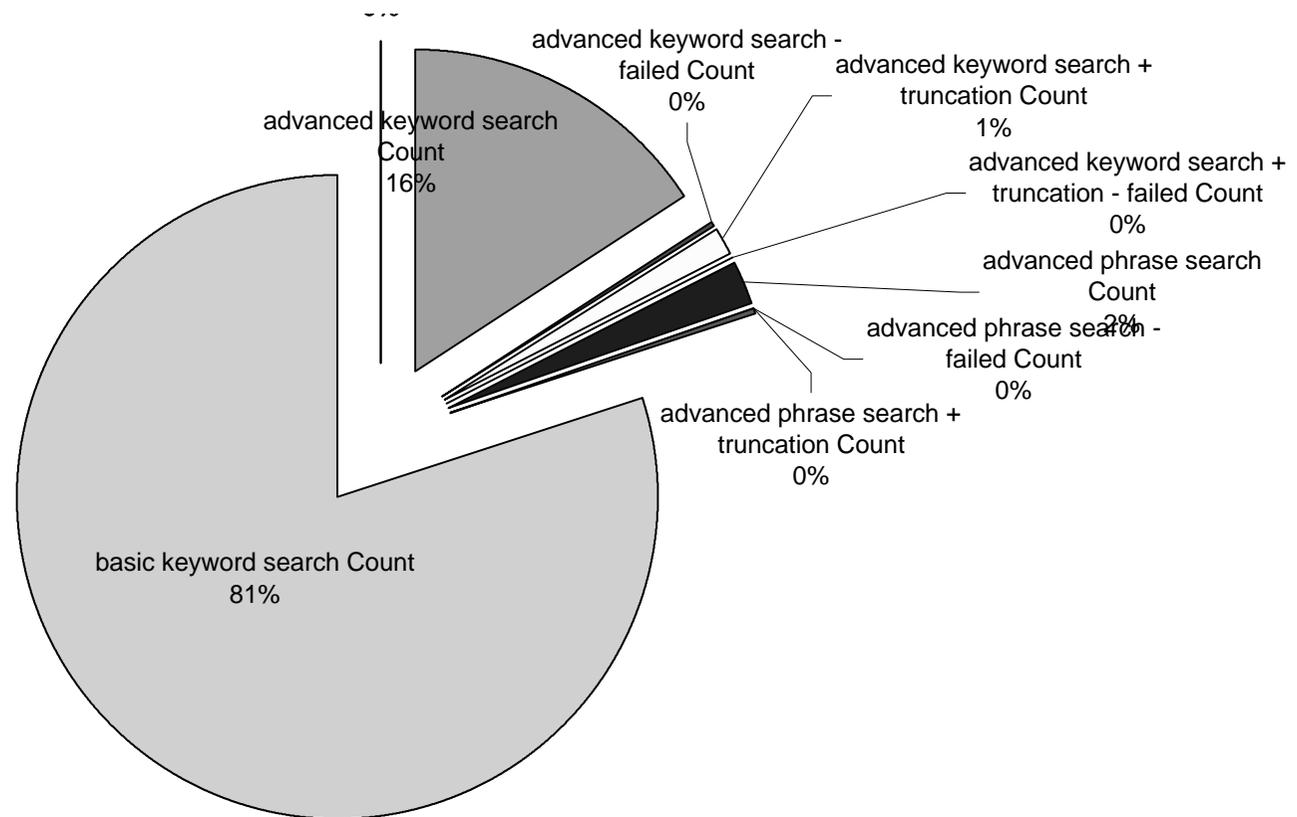
Searching for Images in Voyager

Although there is still a clear preference for searching by Keyword, it is nowhere near so pronounced, and I would suggest that this is due to the fact that the options are presented as a 'menu' rather than via drop lists (the interface is similar to that shown above for searching the Main collection). The existence of call number searching (4%) in this context alerted us to the fact that as it did NOT appear in the index list, it was being 'found' solely via a hyperlink in the bibliographic record. As it was meaningless in this context this was removed, as soon as its use was discovered (1 week after launch)!



Searching PictureAustralia

Clearly there is a strong predominance of Keyword searching in this case also, at least partly due to the design of the searching interface. The difference is the option of advanced searching – but even here, keyword is the most frequently selected option.



Picture Australia Search interface



The predominance of searching by Keyword for images is not really very surprising, given that creator is seldom known by the searcher – and probably of little importance. What is probably more interesting is the number of terms used, the structure of the search, and problems to do with terminology such as synonyms.

Individual searches – how successful – does 0 matter?

This is the most ‘anecdotal’ section of the paper because scanning search logs is very time consuming, and to some extent subjective.

The results come from 2 sets of logs – those from PictureAustralia, and from those from Voyager, so clearly they are not strictly comparable given what has been demonstrated above about the different ways that users search for items in a ‘standard’ library catalogue and in an image database.

Note that as the search examples have been taken from the text of the logs, spelling mistakes are the searchers, not typographical errors by the author of the paper.

From PictureAustralia

Most searches (>80%) use one or two terms. Their success varies from 0 to 10,000 items retrieved.

However a few use significantly more terms, and their success is almost always 0.

- pictures of the gold rush and the worker
- whether and close collecting ice in a bucket
- a bay on the south coast of new holland
- caiques , coastal craft, greece ,1939 -
- end of world war two in sydney
- fuzzy wuzzy angel in papua new guinea
- houses in albion road and box hill
- houses and pictures and albion road and box hill:—
(note: if search had been limited to ‘albion box hill’ would have been successful)
- lawson and not henry and not greystanes (*successful*)
- mick jagger as ned kelly with helmet
- paint* and sydney and harbour and bridge
- plants and animals of the great barrier reef
(note: barrier reef retrieves a number of items with additional terms such as ‘anemone, coral’)
- post office buildings ; new south wales (*successful*)
- simpson and his donkey in world war 1:—
(note: simpson donkey would have been successful)
- st peters & st pauls south melbourne (*successful*)
- sydney 2000 olympic games ian thorpe photo
- the front of the australian war memorial
- the landing of captain cook at erramanga:—
(note: erramanga would have found the required item, cook was referred to as ‘James Cook’ not ‘Captain Cook’)
-

Whilst using a single term can result in unusably large retrieved sets, clearly adding too many terms is likely to result in 0 in this context. Given this, a question which can reasonably be asked is ‘how much do users modify their searches in light of too few/too many items retrieved’?

This is time consuming to check and is always ‘anecdotal’ but below are some interesting examples which tend to indicate that users do learn – sometimes- and so the 25% unsuccessful figure, derived from counting the absolute number of 0 hits, may be an overstatement.

Williamstown (426)
Williamstown bakery (0)
Williamstown nelson (40)
(Bakery was probably on Nelson place, so suggest yes)

beach + swimming costume (0)
aussie cozzie (0)
swimming costume (5)
(yes, but unfortunately did not try bathing costume, which would have retrieved 46!)

Woodstock onloddon (0)
Woodstock on loddon (0)
Woodstock victoria (0)
(there are images of Woodstock (Victoria) but Victoria does not appear in the Author/Title/Subject, which is what is used for the Basic Keyword search)

Metropolitanhotel (0)
Metropolitan hotel (104)
Metropolitan hotel victoria (2)
Kings street hotel victoria (3)
Hotel victoria stork (0)
Hotel metropolitan (104)
Stork hotel (0)
Hotel north melbourne (9)
Hotel west melbourne (8)
(In fact there is an image of the Stork Hotel Ballarat – which is probably not the right one – but it needs an Advanced search to find it)

This one leaves me dumbfounded. Having done the broadest search first & established that there are only 4 items by Will Longstaff, the user then goes searching for items which – to me at least – are clearly NOT in the database. And persists.

Basic search:—TERMS: **will longstaff** :—FIELD: Author/Title/Subject :— found: **4**

Advanced search:—TERMS: **will longstaff** :—FIELD: AnyWhere :— found: **5**

Basic search:—TERMS: **longstaff will** :—FIELD: Author/Title/Subject :—found: **4**

Basic search:—TERMS: **oil paintings will longstaff still life flowers** :—FIELD:

Author/Title/Subject :— found: **0**

Basic search:—TERMS: **longstaff will stilllife** :—FIELD: Author/Title/Subject :— found: **0**

Basic search:—TERMS: **longstaff will oil paintings** :—FIELD: Author/Title/Subject :—
found: **0**

Advanced search:—TERMS: **longstaff will** :—FIELD: AnyWhere :— found: **5**

Basic search:—TERMS: **longstaff will english oil painting** :—FIELD: Author/Title/Subject
:— found: **0**

Basic search:—TERMS: **opera house sydney harbor longstaff** :—FIELD:
Author/Title/Subject :— found: **0**

Basic search:—TERMS: **sydney opera house** :—FIELD: Author/Title/Subject :— found:
2023

Basic search:—TERMS: **sydney australia will longstaff** :—FIELD: Author/Title/Subject
:— found: **0**

Basic search:—TERMS: **will longstaff england paintings** :—FIELD: Author/Title/Subject :— found: **0**

Basic search:—TERMS: **oil painter will longstaff** :—FIELD: Author/Title/Subject :— found: **0**

Basic search:—TERMS: **longstaff will oil painter** :—FIELD: Author/Title/Subject :— found: **0**

Basic search:—TERMS: **longstaff will flower vase** :—FIELD: Author/Title/Subject :— found: **0**

Basic search:—TERMS: **will longstaff** :—FIELD: Author/Title/Subject :— found: **4**

Advanced search:—TERMS: **flower vase oil paintings** :—FIELD: AnyWhere :—: found: **0**

Basic search:—TERMS: **information will longstaff** :—FIELD: Author/Title/Subject :— found: **0**

Basic search:—TERMS: **opera house sydney harbor longstaff** :—FIELD: Author/Title/Subject :— found: **0**

Not sure whether I would say this user learned from experience or not.

The following sequence is interesting for the use of the term '*aboriginal*' instead of the alternative '*aborigine*'. If the searches had been conducted using the Advanced option and '*aborigine*' truncated ANDed with the second term, the number of items retrieved is the first number in (), if the Advanced search had been conducted using '*aborigin*' and the second term the number of items retrieved is given in [].

Basic search:—TERMS: **aboriginal huts** :—FIELD: Author/Title/Subject :—: found: **31** (59) [100]

Basic search:—TERMS: **aboriginal ceremony** :—FIELD: Author/Title/Subject :— found: **14** (39) [58]

Basic search:—TERMS: **aboriginal dance** :—FIELD: Author/Title/Subject :—: found: **11** (44) [91]

Basic search:—TERMS: **aboriginal corroboree** :—FIELD: Author/Title/Subject :— found: **20** (82) [258]

Basic search:—TERMS: **aboriginal initiation** :—FIELD: Author/Title/Subject :— found: **1** (1) [4]

Basic search:—TERMS: **aboriginal scarification** :—FIELD: Author/Title/Subject :— found: **0** (0) [2]

Basic search:—TERMS: **aboriginal tatoo** :—FIELD: Author/Title/Subject :—: found: **0** (2) [3]

Basic search:—TERMS: **aboriginal body decoration** :—FIELD: Author/Title/Subject :— found: **0** (0) [1]

Basic search:—TERMS: **aboriginal domestic life** :—FIELD: Author/Title/Subject :— found: **0** (0) [0]

Clearly this person was persistent and tried different combinations of search terms, but if they had used the **advanced** option, particularly with truncation, they would have retrieved significantly more items.

This raises the issue of synonyms – or at least terms that are synonymous from the user's point of view, eg. *aborigine/aboriginal*, and also terms where what has been used by the indexer is not what the searcher uses, eg. *road, rd., street, st., mount, mt.* This can be controlled within a single database, but once more than one independent database is involved, it is likely to become a problem.

From Voyager – Main collection

This first search is interesting because of the number of different indexes searched – it was the perceived wisdom that users did not change the type of index, just the search string.

NOTE: The number of hits shows –1 when a 'browse' search is carried out where it is possible to scroll up and down the list, theoretically covering the whole database.

Index searched	Search string	Limit options	IndexType	Hits
Subject Browse	australian football		B	-1
Subject Browse	australian football		B	33
Subject Browse	australian football		B	-1
Command Search	australian football		K	0
Command Search	australian and football		K	685
Call Number Browse	628.92 f51s		B	-1
Command Search	australian and football			685
Command Search	australian and football	DATE=-1969	K	107
Command Search	australian and football			107
Command Search	australian and football	DATE=-1970	K	77
		TYPE=am		
Command Search	australian and football			77
Command Search	australian and football	TYPE=as	K	129
Command Search	australian and football			129
Keyword Relevance Search	football	TYPE=bc	K	0
Keyword Relevance Search	football	TYPE=bc	K	0
Keyword	football		K	1334

A simple search – no change of index, but change of search string makes a substantial difference to the success!

Index	Search string	Hits
Left Anchored Title	a.b.v. of	0
Left Anchored Title	a.b.c. of	78
Left Anchored Title	abc of	128

An interesting change of index and change of search string moving from too large to too small to probably about right – rather like the 3 bears!

Index	Search string	Hits
Keyword Relevance Search	customer service excellence	20000
Keyword Relevance Search	"customer service excellence"	1
Command Search	customer and service and excellence"	0
Command Search	customer and service and excellence	7

This is a sophisticated searcher who not only changes the index and the search string, but also knows to use the jurisdiction first!

Index	Search string	Hits
Simple Search	victoria dept of finance	0
Simple Search	victoria department of finance	0
Author Browse	victoria department of finance	-1
Command Search	victoria and dept and finance	179
Constructed search	("victoria dept of finance")[in Keyword Anywhere] AND ("annual report")[in Title Keyword]	3

From Voyager – Picture Collection

Keyword Relevance in Voyager works in perhaps an unexpected manner, that is, it ‘OR’s search terms, it does not ‘AND’ them. This may cause more difficulties with Image searching than searching for standard library materials.

This person has changed both the index and the search string with unclear results with respect to satisfaction.

Index	Search string	Hits
Subject Browse	groote beer	-1
Subject Browse	immigration ships	-1
Subject Browse	dutch immigration	-1
Subject Browse	shipping	-1
Subject Browse	immigration shipping	-1
Command Search	ss groote beer	0
Simple Search	ss groote beer	0
Left Anchored Title	ss groote beer	0
Simple Search	ss groote beer	0
By and/or about a Person	ss groote beer	0
Keyword Relevance Search	groote beer	118
Keyword Relevance Search	dutch immigration	206

Another series of changes, with unclear results

Index	Search string	Hits
Keyword Relevance Search	Sprott	1
Keyword Relevance Search	Sprott & Fisher	14543
Simple Search	Fisher & Sprott	0
Simple Search	Sprott and Fisher	0
Simple Search	Sprott Fisher	0
Left Anchored Title	Sprott Fisher	0
Keyword Relevance Search	Sprott Fisher	79
Keyword Relevance Search	Stanley Sprott Fisher	265
By and/or about a Person	Fisher Stanley Sprott	0
By and/or about a Person	Fisher Sprott	0
Keyword Relevance Search	Joseph Sprott	652
By and/or about a Person	Fisher	253

Almost the only clear-cut ‘successful’ search I could find, where the searcher had understood the problem and made the appropriate changes

Index	Search string	Hits
Keyword Search	Aborigines of Victoria	20000
Relevance Search	"Aborigines" AND "Geelong"	20000
Builder	(Aborigines)[in Keyword Anywhere] AND ("Geelong")[in 17 Keyword Anywhere]	

Who else is doing this

Google Zeitgeist

Google Zeitgeist - Search patterns, trends, and surprises according to Google

For both breaking news and obscure information alike, people around the world search on Google at www.google.com. With a bit of analysis, this flurry of searches often exposes interesting trends, patterns, and surprises.

On a monthly, weekly, and sometimes daily basis, this Google Zeitgeist page will be updated to reflect lists, graphs, and other tidbits of information related to Google user search behavior.

Archived information [available here](#).

Top 10 Gaining Queries
Week of September 10, 2001

- [nostradamus](#)
- [cnn](#)
- [world trade center](#)
- [osama bin laden](#)
- [pentagon](#)
- [fbi](#)
- [american red cross](#)
- [american airlines](#)
- [afghanistan](#)
- [american flag](#)

Top 10 Declining Queries
Week of September 10, 2001

- [us open](#)
- [aaliyah](#)
- [hank the angry dwarf](#)
- [irs](#)
- [compaq](#)
- [david blaine](#)
- [shark attacks](#)
- [anne heche](#)
- [Carly Fiorina](#)
- [kate winslet](#)

For more Google search statistics from 9/11/01, please [click here](#).

This strikes me as rather comparable in terms of searching sophistication to searching for images in its use of simple terms – at least as shown above.

AgriSurf

	Rank	Percent	Search Term
	1.	1.53%	jobs
	2.	0.83%	employment
	3.	0.77%	agriculture AND food AND agriculture AND food
	4.	0.61%	boulangeries bakers bakeries bakery and iso and haccp and
	5.	0.47%	commodity AND exchanges OR commodity AND markets AND agriculture
	6.	0.4%	agriculture AND society
	7.	0.38%	careers
	8.	0.37%	disease AND management OR pest AND management AND agriculture
	9.	0.36%	planting OR cultivating OR harvesting AND agriculture
	10.	0.34%	pest AND equipment OR disease AND control AND equipment AND agriculture
	11.	0.33%	agribusiness AND finance AND (agribusiness OR agriculture)
	12.	0.33%	organic AND farming
	13.	0.32%	insects AND entomology AND agriculture
	14.	0.31%	reproduction AND fertility AND (animal OR agriculture)
	15.	0.31%	biotechnology AND genomics AND (animal OR agriculture)
	16.	0.3%	current AND prices AND agriculture

This strikes me as much more akin to the searching in the 'Advanced search' area of a standard library catalogue, or possibly a journal database.

Summary

Examination of search access logs on a regular basis is time consuming, but the information provided can be used to

- Give early warning of changes in market trends – eg. Increased demand for access from outside the physical building, a swing away from subject searching.
- Indicate the need for changes to an interface design, eg. Removal of an irrelevant hyperlink, change from drop-boxes to menu style choices

Such examination should certainly be carried out early implementation phase of any new system, and if possible on a regular basis thereafter, as only by seeing changes is it possible to chart trends – and make future predictions.

Bibliography.

Broadbent, Marianne 1983, *Survey of Users and Success Rates: State Library of Victoria 1983*, Royal Melbourne Institute of Technology, Melbourne