

II. ACTION ON ACCESS

Making it all easier for your users
to get into

This section addresses issues and needs such as:

- Actions/strategies to make your e-resources more ‘accessible’ through better understanding of the barriers perceived by users
- Solutions that assist the ‘discovery’ of e-resources where users are unfamiliar with their content
- Approaches to making e-resources more visible where users commonly search
- Issues to consider that may be impacting on the availability of e-resources.

Making quality e-resources available is not sufficient to attract or retain their intended users - we need also to make them accessible. This requires more closely attending to the experience to which we commonly subject our users.

Browse through the sections or go to the issue of immediate need.

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Presentation: the User Experience

Reducing barriers to use or recognition of relevance and value

This section addresses issues and needs such as:

- **Constructive approaches to lower the perceived and functional barriers to ready use of e-resources**
- **Good practice presentation of e-resources within Web pages and their setting up and configuration**
- **Pointers to developing effective guides or help notes for e-resources.**

Aligning our e-resources more closely with the ways that our users commonly understand and observably use information, will allow them to focus on the prime tasks of sorting needs and evaluating information rather than being diverted into figuring out how to use our systems. Achieving such alignment is not trivial - many library e-resources presume a degree of information literacy to effectively use them, and their functionality and interfaces are commonly perceived as dated, deficient and 'different'. And though they may have high functionality and quality content, research tells us this is NOT sufficient to attract and retain users. If the perceived threshold for successful use is too high then users just retreat back to the Web. In many libraries such barriers may comprise the principal factors constraining use.

NOTE

Technology is not neutral, it imposes a way of thinking on those who use it. That thinking for library users is currently dominated by the Web search engine experience, most commonly Google. Building confidence with library e-resources therefore requires conveying a closer correspondence with this 'experience' - with what the average user feels are common and convenient ways of engaging in search.

ACTION

If you have carried out an 'e-resources health check' review all statements relating to access. If not, gather all known expressions or evidence of the perception of and frequency of use of your e-resources. You may feel there is little you can do to improve the user experience of your subscription products. Many of the EPIC e-resources do however allow designated 'administrators' to add or configure some default settings according to local preferences. Additionally much can be done to interpret them to users through the way they are 'presented' and linked to in library web pages. Issues and ideas to review are presented in 3 critical areas:

1. **Presentation Within Web Pages**
2. **Set Up of E-resources**
3. **Guidance & Help Notes**



1. Presentation Within Web Pages

Useful strategies and actions to lower the perceived or navigational barriers to get to, or into, your e-resources from library or institutional site pages.

Improve visibility and path guidance

- If staff or user opinion is that the e-resources are not very prominently or obviously displayed, aim for a re-design to make them more accessible. Look at the examples of other libraries in the **Resources** section and consider what you could adopt and improve. Talk to your website management support to see if you can reduce the number of click-throughs to get to the e-resources page(s) by new links from the front page or a different location. A quick launch button from the Home page is one option if they are 'buried'. If the only access to the resources is via the catalogue, at least provide prominent descriptions of e-resources on your Web pages to highlight their existence.
- Ensure you cater for both your new or infrequent and repeat users. For the latter provide an option of a quick means of access to known resources (eg. an A-Z title list or 'tag cloud' of most used sources). Those (less frequent users) who need to decide which resource to use will need prompts and descriptions of content and/or application.
- Consider the language used to describe e-resources content and/or how to use them. Use terms that are recognisable to users and convey what they are - don't talk about 'databases' or 'electronic publications', but rather about 'online magazines, encyclopaedias, professional journals...' (or whatever is in the e-resource). Users are then better informed to select an appropriate resource. If you don't know which words are apt, go out and ask a few users how they would describe the examples you show them. Plain language conveys information more efficiently, reducing the imposed learning load.

TIP

Don't leave your e-resources in a 'ghetto': consider which obviously relate to and can be usefully placed within other Web pages of provided links – specific topics/disciplines (History, New Zealand, news media etc) or customer groups (teens, kids...)

Make Evident their Application and Relevance

- The choice of which resource to use is the most confusing task for many. Use a needs or subject based approach to guide them toward a small relevant set of resources, or pages dedicated to a specific user group. Rewrite descriptions of e-resource content or use to suggest what kind of information can be accessed and/or the benefits of using it (see *s.III Promotion-Develop Messages...*). Determine (don't guess!) what are frequent needs for the inexperienced user and design pages that lead them toward a set of resources that would provide for these needs. Don't hesitate to provide links to any e-resource in more than place if they obviously relate to more than one area.
- Not all content or approaches will be equally in demand and/or desirable. Place emphasis on the most frequent or highest priority needs - there will be a few paths that will satisfy majority use (if you don't know these it suggests some user research!). Don't try to provide options for all assumed needs on the key start page - multiple entry points confuse, even mislead. Those users with less common needs probably have fewer options in general to source their information so may well be prepared to work a little harder on the process (see *s.III*)

NOTE

Research suggests users will follow paths if the trails are suggestive, simple and fast. The number of 'clicks' is not as critical as the engagement you provoke.



*Promotion-Develop Messages...*for ways to best convey the content and character of resources).

- Resources that fulfil a wide range of needs (large omnibus, multi-disciplinary resources) can be described as such but weaknesses in expected coverage are best noted so as to avoid misplaced expectations eg. lack of NZ content, weak science coverage... .

Use the Visual where Feasible

- Visual elements (arrows, flow diagrams, tables, icons...) if apt and conforming to understood conventions, impose a far lower perceptual load than text to convey a concept, choice or direction. They allow a faster comprehension of what's required, are less intimidating, and contribute to user engagement eg. use icons for identifying e-resources relating to particular topics, to distinguish those databases that require card/member access, have good NZ content, full text etc. Wherever feasible use graphic illustrations (screenshots etc) of what to do in any guides to use, in preference to explanation.
- Ensure the graphic design of your pages makes the navigation features quite distinct from the e-resources trails and links and content indications - novices can confuse these. And don't introduce a new style or convention for the e-resources pages – keep it all consistent with others of the site. Again this helps users to focus on sorting their need not learning how to navigate.

TIP

Once you've drafted something always test it on a few users or a staff member new to the library for their thoughts on how it reads and what they take it to indicate.

2. Set Up of E-resources

Configure presentation and/or interfaces to better align with understood conventions and the approaches of the majority of your core users (not library staff!)

Align with the Familiar

- To lower the barriers to successful use we need to align the look, feel and behaviour of e-resources with common search experience so they appear and act as familiar as possible. As a general principle for most user groups, the closer you move the imposed experience to de facto conventions (Web search engines) then the lower the imposed learning load and the higher the chance of retaining user confidence and completion of a successful search. Use this as your guiding principle in examining what features of your interface and display set up you can configure.

NOTE

Contact EPIC if you are unsure of how to access the 'administration' features of your respective e-resources (providing you are the designated administrator for your library). Many allow some customisation of search modes and default displays.

Tweak Defaults to Explicitly Favour Novice or Infrequent Searchers

- A key (and thorny) issue is the diversity of skills of digital resource users – generally you have to cater for both newbies and the knowledgeable. While we may envisage a wide range of potential needs at core there are just two broad categories of users - the novice and the



'expert'. Novices or infrequent visitors are generally more numerous but less likely to persist with resources they find confusing. The default presentation in entry pages and interfaces should accordingly favour them; the 'expert' is better positioned to move on to other layers of functionality. (Remember that 'usability' is commonly regarded as the ease with which a resource can be used by those not familiar with it). This does not imply that the expert will incline toward 'advanced' features. Their individual approach will be influenced more from what has worked well for them in the past, and they will look for familiar contextual clues to determine how they proceed.

DISCUSS

Research indicates many skilled but occasional users will prefer to live with limited but familiar functionality, as opposed to investing in a higher learning load to deploy more sophisticated approaches. And, a few novices of 'librarian-like' thinking may find helpful the greater structure provided by an advanced type interface. Let each find their approach and level - they may switch from novice to 'expert' in different search contexts. But the first up (default) presentation should be that which provides a familiar and/or the least overwhelming experience - and that is generally NOT the 'advanced' interface. If you want lots of pre-coordinated functionality provide it as an alternative for the 3% or so that will effectively use it. Don't make it the default because some staff favour it - doing so may sacrifice accessibility and lose a significant part of your audience.

Give Preference to Ranking by Relevance

- Default displays that are not relevance ordered are a common source of failure to discover the best source. Many novice users, conditioned by Web search experience, assume this is happening even when it clearly isn't and/or do not feel inclined to wade through many pages of display to find the useful stuff. In some contexts currency may have primacy but for most needs getting the best stuff to the top is going to better match expectations. For the more experienced searcher it also facilitates ready evaluation of lengthy hit lists. Examine whether you can change the default display. If you can't then provide clear guide notes that displays are presented by date etc and how to change them to relevance if desired (most EPIC databases allow you to do this by 'sorting'). Such small steps can achieve a significant improvement in search success.

Assume Weak Information Literacy

We know from search log analysis that users at all levels commonly exhibit poor term selection, don't use search connectors, spend insufficient time on source evaluation and are disinclined to a systematic approach to search refinement. Failure to attend to these areas is even more likely to lead to poor results in e-resources than with Web searching. Strategies to compensate for these weaknesses include:

- Reduce failure rates by not requiring Boolean operators as the default unless unavoidable. Some EPIC resources will allow you to select default search modes. Others will give apparently successful but quite distinct sets of results depending on whether Boolean operators are used. Try a range of likely user search strategies until you are sure you understand what is happening and then consider how you can mitigate potential failures. If you can't change anything for the better then it should prompt action on better guidance (see *Guidance & Help*)
- Make clear in your guidance notes how to distinguish or when to use quality or peer reviewed material from the less reputable.
- Favour basic rather than advanced interfaces, allowing users to progressively refine or filter their results rather than have to construct quite precise searches first up to achieve some success.



- Provide explicit examples of successful search statements - wherever feasible show by example (not by telling) common, effective search approaches.

3. Guidance & Help Notes

Provide help information that is constructive, not intimidating.

Users are commonly reluctant to spend time learning to how use a system and do not consult 'help' files as a first resort. And when they do, the often confused, over-detailed or jargon-ridden nature of such files in many e-resources defeats them. While we can do little about the help files of subscription e-resources there are things to bear in mind in any guidance provided in your own Web pages:

Focus on Critical Information, Not All Possibilities

- Don't be tempted to provide long help or FAQ files covering all features and possibilities, or separate the guidance off to a large 'manual' accessed separately - research suggests this is very ineffective in learning terms, if opened it at all. Determine the most prevalent points of failure or key understandings needed to get started and present these only. Layer more detailed help information (on linked pages) off this primary guidance.
- Plain language conveys information more efficiently, reducing the imposed learning load. Don't couch descriptions in unfamiliar language (jargon) - label functions and features so that they are readily meaningful to non-librarians. If you are required to use specialist terms (eg. because the resource uses them) define them by example in context. Saying for example a 'Boolean' search mode is available or required is intimidating or unclear to many. Prefer descriptive statements such as to "find all (or any) search terms" or simply provide clear search examples of the required syntax.
- If an authentication step is about to be activated advise somewhere clearly what is expected. This can be a common failure or opt out point for novice users.

TIP

Keep it short! Any guide longer than one page is less likely to be read, much less used. A one-pager can be more readily displayed on screen or printed and pasted onto desks etc.

Use any Coincidence between the Familiar and the New

- Departures from common user expectations are a significant cause of search failure. Many e-resources look, feel and act distinct from the common 'Web' experience. Aim to close the gap somewhat by drawing analogies in help files with common experiences, things they know and feel confident with eg. state that "search just as in Google but insert an AND between your terms" ...or "Note the 'tabs' on top of the displays (Gale, ProQuest results...) are providing different sets or forms of the total results similar to the *Images*, *News* etc limiters top of a Google page"....or "You can search for a phrase using quote marks just as in Google"...

NOTE

Research indicates that as a general rule, succinct, illustrative search examples based on common needs (rather than general text descriptions of how to proceed) are the most effective mode to convey what is required – particularly for novices. Even just a few brief model search statements can do much to increase success. Ideally these are placed beneath the search box so that users can quickly model an acceptable search. If this is not feasible try to make them prominent in your 'how to' page(s).



Favour the Visual to Convey Concepts

- Keep the text minimal and deploy images (screen shots, flow charts etc) as much as possible. Graphic depictions allow faster perception of what's required in context, and are more engaging to the average user.

NOTE

Training initiatives are an obvious strategy to lowering the barriers to use. If well done they can serve to realign user approaches to searching, make evident some of the likely access issues and reduce failure rates. But such action should be the second line of attack after first ensuring the set up and presentation of your e-resources is as best as can be achieved.

Resources

ISSUES

Illustration from Penn State Library of the common barriers to access:

http://theshiftedlibrarian.com/archives/2007/03/25/finding_time_at_penn_state.html

Blog on our responsibility to attempt to address issue:

<http://cogscilibrarian.blogspot.com/2007/11/more-library-instruction-or-better.html>

An instructive report on the importance of using the right language words at:

<http://www.jkup.net/terms-studies.html>

Example of usability testing practice including for e-resources (Dartmouth College Library):

<http://www.dartmouth.edu/~dlmg/UserAssessment/reports/>

Reynolds, E. The Secret to Patron-Centered Web Design. *Computers in Libraries*, 28(6):6-47, Jun 2008.

<http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=32466509&site=ehost-live>

Elsevier. How to design library websites to maximize usability. *Library Connect. Pamphlet #5*, 2

ed, 2007 : <http://libraryconnect.elsevier.com/lcp/0502/lcp0502.pdf>

Society for Technical Communication. *Usability Toolkit* [Forms, checklist...]:

<http://www.stcsig.org/usability/resources/toolkit/toolkit.html>

Select examples (not necessarily ideal) of other libraries presentation of their e-resources. Features to focus on suggested in [...] :

ACADEMIC LIBRARIES

Massey University Library [entry point to databases + subject approach + use of icons]:

<http://kea.massey.ac.nz/search/e>



University Western Sydney Library [e-resources discovery options]
[:http://library.uws.edu.au/nResources.php](http://library.uws.edu.au/nResources.php)

University of Notre Dame Libraries [find article options] :
http://www.library.nd.edu/find_articles/index.shtml

University of Toronto Libraries [database search options]:
<http://main.library.utoronto.ca/eir/resources.cfm?T=I>

Open Polytechnic of NZ Library [2 search options, subject help guides]:
<https://library.openpolytechnic.ac.nz/>

AUT Library [Database options + use of icons] :
http://www.aut.ac.nz/library/library_resources/epic_databases/

University New Brunswick Subject Guides [Tabbed options in one subject] :
<http://www.lib.unb.ca/guides/view/index.php?s=34>

University of Oxford Library [Subject gateway]: <http://www.ouls.ox.ac.uk/history/eresources>

Dartmouth College Library [Implementation of *LibGuides*-note access options, tabbed guides]:
<http://libguides.dartmouth.edu/index.php>

PUBLIC LIBRARIES

Vancouver Public Libraries [language to describe resources + icons]:
http://www.vpl.ca/electronic_databases/

Auckland City Libraries [Multiple access paths to e-resources inc. tag cloud]:
<http://www.aucklandcitylibraries.com/DigitalLibrary.aspx?Page=MOSTPOPULAR>

Marlborough District Libraries [Subject access groupings]:
<http://www.marlboroughlibraries.govt.nz/online-resources/index.cfm>

Upper Hutt City Library [subject approach] :
<http://www.upperhuttcity.com/page/693/ChooseYourSubject.boss>

Central Otago & Queenstown Lakes Libraries [e-resources in context] : <http://libraries.codc-qldc.govt.nz/page.pasp?pageid=127>

Tauranga City Libraries [Introduction + Subject and A-Z access] :
<http://www.library.tauranga.govt.nz/online-resources.aspx>

Manukau Libraries [customer group/interest approach] : <http://www.manukau-libraries.govt.nz/e-resources/>

Ann Arbor District Library [simple, subject approach] :
<http://www.aadl.org/research/browse/history>

Seattle Public Library [Categories, resource mix + icons] :
http://www.spl.org/default.asp?pageID=collection_db

Denver Public Library [language + search/access options] :
<http://www.denverlibrary.org/research/index.html>



Hennepin County Library [Subject guide, format, A-Z & 'popular' options] :
<http://www.hclib.org/pub/search/Reference.cfm>

SPECIAL LIBRARIES

(Most aren't accessible - talk to local SLIS member libraries to learn from others efforts).

NZ Nurses Organisation [Databases & Online Journals]:
<http://www.nzno.org.nz/Services/Library/Onlinejournals.aspx>

HELP/FAQ NOTES

Tauranga City Libraries [search tips] : <http://www.library.tauranga.govt.nz/online-resources/search-tips.aspx>

Auckland City Libraries [Digital Library Help pages]:
<http://www.aucklandcitylibraries.com/aboutthelibraries/help/digitallibraryhelp.aspx>

Index New Zealand [Model search examples beneath search box] : <http://innz.natlib.govt.nz/>



Discovery

Solutions to assist the ‘discovery’ of e-resources when users are unfamiliar with their content and value

The section addresses issues and needs such as:

- Users perceiving library e-resources as lacking clear indications of content and/or fragmented in coverage
- Users with journal titles/citations not knowing in which e-resource they are to be found
- Service, technical or marketing approaches to making users more aware of e-resources related to their needs or interests
- Implementing a simultaneous search of multiple e-resources (consolidated or ‘federated’ search).

In the longer term database vendors will increasingly expose their content to Web search engines (with link resolvers to lead the user to their local library). In the interim we need to work on in-library strategies to enhance their visibility. Respective sectors and libraries will have different feasible options relating to their level of resourcing and user preferences and understandings. This is an evolving and complex area with few simple solutions.

Discovery of information for many library users is (as well noted) increasingly “elsewhere”. Most don’t come to our e-resources as a first resort if they’re located only in the library sphere. The catalogue in particular, our traditional discovery tool, is seen by many as limited in scope and bypassed for the Web. And, many users have no clear idea of what is provided in collections of e-resources so do not recognise them as a useful resource

ACTION

The following presents an indicative summary of options for libraries to consider across 3 interrelated areas. Libraries should pursue ideas with vendors and/or talk to other libraries that have implemented solutions. Check also the **Resources** section for examples.

1. **Technical Solutions**
2. **Services Solutions**
3. **Marketing Solutions**

1. Technical Solutions

To our users library resources typically appear fragmented, unclear as to content and purpose and often require separate searching of each resource – catalogue, indexing and full text databases, digital collections, gateway links and variations on these, each with their own distinct



interface and mode of searching. And while users may know of relevant journal or reference titles they don't know in which e-resource they are to be found.

Technical options to integrating e-resources include:

Journal/Title 'A – Z' Lists

- Various e-resources or third party vendors offer such services (eg. EBSCO, Serials Solutions...) or libraries could create and maintain their own. The appeal is that users do not need to know in which resource a journal or other source resides as they can search for relevant titles by name, keyword or in some broad subject, link directly to the title and then access any full-text content.
- Decide whether you want a comprehensive compilation of all holdings, a more select listing providing direct access to titles of high appeal, or a particular subject grouping (e.g. consumer magazines, recreation titles, nursing journals...). Public libraries may prefer to provide just indicative rather than full lists. The commercial A-Z solutions are often based on the number of titles listed. If you need to reduce costs consider whether you need to provide all, or just a select listing – you can 'deselect' titles from their lists.
- Titles can also be directly linked to from your catalogue. Some libraries adopt this strategy to enable name, keyword and subject searching with direct links to their individual e-resources and/or select titles within. Most serial titles in an e-resource have a 'persistent identifier' (see box below) that can facilitate this. Weigh up the work required to build and maintain this and whether the catalogue really is the preferred tool to make these resources accessible? Increasingly catalogues are losing out in user attention to Web resources and an Intranet/Internet based solution may be more visible and used.
- Making evident the specific content within e-resources this way is a generally well appreciated alternative route to discovery and a powerful means to develop interest and usage.

Vendor Cross-Database Searching

- Most of the e-resources vendors or aggregators provide some means of searching across more than one of their resources. Gale for example allows consolidated searching across a selection (not all) of its databases with its *PowerSearch* platform. The RDS databases can also be searched together or individually. The current EPIC EBSCO e-resources can be searched jointly or separately via the *EBSCOHost* database menu. If you hold other non-EPIC e-resources then those vendors will probably have similar options which may include EPIC databases (eg ProQuest 'Multiple databases' search).
- As these services search across resources with common structures and indexing it can be a more functional and reliable solution than 'federated' services that attempt to search across quite diverse e-resources.
- Bring these vendor specific services to the attention of users if it is felt there are common search needs that could be better fulfilled by a wide scope of coverage rather than searching individual resources. Given that such wide searches also have the potential to overwhelm some users, it is preferable to present them as options not the main or only search approach. Preferably offer these options from direct descriptive links from your web pages, don't just expect users to pick up on them. Vendors can advise on the setting up.



PERSISTENT IDENTIFIERS

To create permanent links to any sources within EPIC e-resources you must use 'persistent' and unique identifying links ie. one that exists longer than the current search session. Persistent identifiers (PI) can be of various types – Persistent URLs, Digital Object Identifiers, Uniform Resource Names etc – but all aim to provide access to the resource even it moves to or is accessed from other locations. You don't have to be technically proficient to use them, just able to recognise what is a PI in the item record.


Journal/Source titles

These will generally be designated in the source record (found through a publication search) as 'link to this...' or similar. In some Gale databases you need to click on the *Bookmark* or *InfoMark* link (top bar) to generate a PI. Note that EBSCO has yet to establish PIs for NZ newspaper titles.

Individual articles

Most databases clearly provide a PI designated something like 'persistent link', 'durable link', 'Bookmark this doc' or similar in the item record. Some require a click on a link feature on the top tool bar to generate a PI - *Bookmark* or *InfoMark* link (Gale) or *Copy Link* (ProQuest). In Oxford databases or Encyclopedia Britannica click on the *Cite* tab above the article and copy the URL given in the formatted citation (without the < > marks!).

Note

- Don't confuse the URL in your address bar of the browser for the PI. This is generally just a dynamic address that exists only for the session - copying and pasting these may well be fruitless! The exceptions are any Gale databases that deploy their *InfoMark* []. When this symbol appears on the result page at the top of the search or article page (not just on the tool bar) you can copy the URL in the address bar as a PI.
- Access to the actual articles will still require authentication when links are activated. The use of a PI does not circumvent this.

Federated Searching

- There are many modes of providing a consolidated or 'federated' search ie. a simultaneous search of multiple, often quite distinct, e-resources. The scope of solutions runs from separate federated search tools that act as interface to your existing in-house and subscription resources, to implementing a so-called 'discovery layer' on top of your ILS that could include coverage of any other accessible e-resources. They offer a number of apparent benefits: improved discovery by expanding the range of sources that can be searched in one hit, and doing this within a set of resources that are generally of a higher quality than that retrieved through a standard Web search. The attractions are obvious but the effectiveness is debated.
- Federated technologies are never a complete or perfect solution. Depending on the option chosen, they can be expensive to acquire and/or maintain. Common reported user frustrations experienced include being overwhelmed by the array of sources and hits presented (from their commonly broad search strategies), assuming wrongly the search and display works like Google, failure to understand what is searched or viewed, difficulty in refining failed searches, and perceptions of the process as very slow to get to full text. Librarians add to this the loss of features of individual databases, poor relevancy ranking and clustering, and weak de-duplication results. These all result from the fact the federated search engine has to work with much poorer data than the individual e-resources. While federated search seems to offer an appealing, Google-like search service, it also generally eliminates



one of the strengths of searching 'native' databases – the ability to achieve more precise results through using the (controlled) subject indexing. The capability to get full text also depends on the quality of linking technology (link resolvers). Not all databases comply with the same standards so results can be variable and confusing to users. Getting link resolvers working well is critical to perceived service quality and whether a federated search solution will in practice drive users to a range of the library's e-resources. See **Resources** for a fuller discussion of issues.

OPTIONS

- Solutions based on 'harvested' search (or 'federated indexing') which retrieve, store and standardise the content of distributed e-resources into one 'union' index will generally provide faster and better search quality than the cross-search solutions that have to search and analyse results on the fly. But constructing harvested indexes can involve considerable technical, legal and cost challenges. EPIC vendors are now developing their own federated solutions that search across a wide range of products beyond their own eg. *Gale OneSearch* and *EBSCOHost Integrated Search*.

Consider as an alternative whether you can provide a reasonably effective service to your users by other approaches to guiding or simplifying e-resources selection (see *Presentation* section and *Marketing and Service Solutions* below...). Providing prompted decisions toward a point where users can select from a small group of relevant resources may provide a more useful service for some libraries than all-encompassing federated searching.

Some include both harvested and search-on-the-fly options. Emerging are new approaches that promise faster or more effective solutions through cross-vendor partnerships (eg. Serial Solutions *Summon* and EBSCOHost *Discovery Service* products). These can be explored with the respective vendors.

- Despite the (often weakly recognised) functional disadvantages, one-hit searching is increasingly sought by users. If on balance you do decide federated search is of value then ensure you thoroughly trial the product with all the e-resources you wish to cover (including end-user evaluations) before committing to purchase. And, ensure you have strategies to educate users on when it is appropriate to use compared with narrower search options.

NOTE

One federated solution for the EPIC consortium as a whole is unlikely given the diversity of the member libraries. It is challenging to get agreement on setting up and customising a solution that provides for a range of respective local needs. Each library, or group or related libraries with common interests, should assess options and determine if there is a feasible and effective service that serves the needs of their communities of users. EPIC will consider and discuss with vendors any evaluated proposals from groups of libraries for the procurement of a federated search product.

2. Service Solutions

Portals/Gateways

- Libraries can collate or bring to attention e-resources that reflect the known interests of groups of their users. In their simplest form these are annotated lists of resources by interest or need. In more ambitious scope they amount to 'portals' or 'gateways' that act as filters or channels to a considerable number of e-resources placed in a meaningful context with other related digital resources. A 'gateway' is typically a presentation of selected, evaluated e-



resources in a broad subject area; a 'portal' may include a search service across resources from single interface. (see *Presentation Within Web Pages* for good practice).

- For some topics pre-existing gateways may be co-opted where they meet known needs eg. *PubMed* in the health arena or other public library models (with permission!). The most effective mix may be to include your EPIC and other subscription e-resources within general aggregations of select websites so that they sit in topical context and are not pushed into perceptibly less visible collections of resources. See also *Marketing Solutions - Be Present in their Space*.

Current Awareness Services

- Current awareness or alerting services can be a persuasive way to bring e-resources to the attention of users in a sea of competing sources, as well as repeatedly convey their value. The effort required to produce such products can be well repaid, particularly for special libraries. And, those without the capacity to produce in-house services can at minimum educate their users on how to set up the alerting services available within many of the EPIC e-resources.
- Current awareness bulletins can provide a regular visible presence and, if delivered online, integrate direct links to selected or highlighted full text items of interest. In all cases ensure you are inserting a persistent identifier to a source not just a temporary session URL (see *Persistent Identifier* box above). And, keep them focussed on topics of known interest - don't overload the content or the bulletins won't be read. Having been exposed (by a link) to a database, many users will be tempted to explore and carry out searches on their own behalf.
- If you don't want to 'push' products directly to clients then an increasingly popular medium is to present such updating or alerting in the form of a blog which can act (amongst other aims) as a trusted referral site to selected current sources. Users can be invited to set up an RSS feed to notify them of updates to the blog.
- Special libraries wanting examples of current awareness products could contact their local SLIS committee; many libraries are willing to share experiences of building such resources.
- Tertiary library liaison librarians could consider similar 'highlights' bulletins or faculty blogs of new sources (with select links to specific current sources) and include an invitation to ask for instruction on how to set up their own alerts.
- Public libraries could consider regular small guides ('pathfinders') on popular topics that include e-resources alongside other information sources. These could be in the form of a Website page, email bulletins of developments and/or printed sheets/pamphlets. The web pages will allow insertion of direct links but if used make clear to users that there will be an authentication step before accessing any full text. Such vehicles should concentrate on new, current sources and highlight specific articles or magazine titles, not just the e-resources in general.

NOTE

The services provide by the respective databases generally provide two options for receiving alerts: email alerts and/or RSS feeds. A variation on this personalized alerting is automated provision of table of contents (TOC) of current issues of nominated journals as they arrive in an e-resource. Some EPIC databases provide for this. For further advice on how to access and set up alerting services look at the online help files in the EPIC e-resources.

Staff as Educators and Gatekeepers

- People, as others have noted in regard to social networking, "are entry points". Staff can be your most effective interpreters and pointers to appropriate resources as they can engage with user to determine their needs of the moment and make clear the relevance of using a



resource. Ensure staff at all levels have the requisite understanding and commitment to fulfil this role (see s.III *Promotion-Educate Staff*).

- Personal (individually on demand) and/or public (guidance, promotions...) recommendation can if well done, be the most effective approach to conveying to users the value of e-resources. Connections can be made that are often not evident to users. But be careful not oversell an e-resource's value or suggest they have relevance for every info need (they don't!).

3. Marketing Solutions

Be Present in Their Space

- Research and web analytics indicate users are increasingly coming to our site by links and referrals from other resources or search engines, rather than through the front door of our Home or Portal pages. This reinforces that fewer users are seeing library web sites as their first resort for information sources. Their first choice is commonly sites and resources they use for everyday search, work or play. Accordingly libraries need to make efforts to enhance the visibility of e-resources in any spaces – virtual or physical - where they might be pertinent to users. Don't limit the placement of e-resources to sites or pages dedicated to them alone:
- **Tertiary libraries** should aim (through their liaison activities) to get descriptions of, or links to, e-resources in course management systems, course notes, student commons' portal pages etc. **Special libraries** may have opportunities to get e-resources into various areas of their Intranets - good targets are alongside any other well used information tools (beyond the library pages) or in any project pages. **Public libraries** have a range of potential areas to instil awareness and raise visibility: study areas, relevant points in the stacks, magazines racks etc (see *Promotions-Messages & Channels*). Within the library website itself relevant resources should be embedded in areas that relate to customer segments or interests (teens, kids, seniors, fiction...pages). See also *Portals/Gateways* above.
- For those who lack the resources (or confidence) to develop their own Web-based guides there are Web 2.0 services such as *LibGuides* (see **Resources**) that enable you to build them with their tools and then embed into your website or even other locations where users may have a presence such as social media. User research and a degree of caution are prudent though before leaping into using social media as library discovery or promotion spaces. Users, especially students, shift allegiances between 'brands' quite quickly and many do not view favourably institutions that invade 'their' social space.
- Print pamphlets/guides that present e-resources according to need and/or interest can serve to raise awareness particularly if individual, high quality sources are exemplified. Possibilities include developing a series of guides with a common format but varying themes eg. 'e-resources for historians, genealogists, nursing, biologists' etc...). Once done aim to get them into the user's space - disseminate to institutional staff, relevant community organisations, students etc. (see also s.III *Promotion-Messages & Channels*)

NOTE

Libraries that implement 'discovery layers' have a potentially high value tool to exploit in that it may be feasible to install a search box to the discovery software in institutional, community, e-learning or any website. Some EPIC vendors also provide embeddable 'widgets' to achieve this. These can expose the resource(s) where users more commonly roam and potentially bring them to the libraries e-resources without their having to be first aware of, or explicitly enter, the library domain.



Resources

The examples following are indicative (not necessarily exemplary) of diverse solutions used to enhance or provide alternative modes of access. Special library examples are scarce as they are not commonly publicly accessible - contact local SLIS members to find libraries with solutions or similar issues.

DISCOVERY EXAMPLES & ISSUES

Auckland City Libraries 'Combined search':

<http://www.aucklandcitylibraries.com/DigitalLibrary.aspx>

Christchurch City Libraries 'Multi/Mega search': <http://christchurchcitylibraries.com/Databases/>

Palmerston North City Library 'Consolidated searching':

<http://citylibrary.pncc.govt.nz/consolidated-searching.html>

Queenstown Lakes DL 'cross-searchable' implementation (of Gale PowerSearch):

<http://libraries.codc-qldc.govt.nz/page.pasp?pageid=127>

Phoenix Public Library Magazines & Newspapers article searcher:

<http://www.phoenixpubliclibrary.org/controller.jsp?N=6595>

University of Technology Sydney 'Supersearch' [Metalib]:

<http://www.lib.uts.edu.au/students/finding-information/supersearch>

Emory University 'Discover-E' for searching across e-resources :

http://discover.emory.edu/primo_library/libweb/action/search.do?mode=Basic&vid=discover&tab=default_tab

Walker, J. New resource discovery mechanisms. *The E-Resources Management Handbook*. UK Serials Group, 2006 :

<http://uksg.metapress.com/app/home/content.asp?referrer=contribution&format=3&page=1&pagecount=12>

Illinois State Library (2006). *Developing a statewide discovery toolkit*.

<http://www.ilsdo.org/downloads/OPACGrant07.pdf>

Linowski, A. & Walczyk, T. Federated search 101. *netConnect*, 15 Jul 2008:

<http://www.libraryjournal.com/article/CA6571320.html>

Tenopir, C. Online databases: Can Johnny search? *Library Journal.com* 2/1/07 [federated search issues]: <http://www.libraryjournal.com/article/CA6407784.html?q=tenopir+johnny+search>

Federated Search Blog/Basics category [var. dates]:

<http://federatedsearchblog.com/category/basics/>

Gibson, I. et al. One box to search them all: Implementing federated search at an academic library. *Library Hi Tech* 27(1): 118-133, 2009:

http://www.cs.mun.ca/~igibson/fedsearch_article_preprint.pdf

Avery, S. et al. Planning and Implementing a Federated Searching System... *Internet Reference Services Quarterly*, 12(1): 170-194, 2007.



Klein, L. Notre Dame's Home Run: an academic website for the C21st. *Library Journal*, 130(8), 1 May 2005 :

<http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=16926868&site=ehost-live>

Casden, J. et al. Course Views: A Scalable Approach to Providing Course-Based Access to Library Resources. *Code(4)Lib*, Iss 6, Mar 2009 : <http://journal.code4lib.org/articles/1218>

Farkas, M. Its not all about the tech – why 2.0 tech fails. *Information wants to be free*[blog], 14 Mar 2009 :

<http://meredith.wolfwater.com/wordpress/2009/03/14/its-not-all-about-the-tech-why-20-tech-fails/>

Springshare. *LibGuides* [Web 2.0 licensed tool for creating hosted, content-rich guides to your libraries resources - for all sectors] : <http://www.springshare.com/libguides/> . See examples at: <http://community.libguides.com/community.php?m=i>

CURRENT AWARENESS SERVICES

VUW Library 'Auto Alerts' [links to services] :

<http://www.victoria.ac.nz/library/research/autoalerts.aspx>

Unitec Library 'Databases A-Z' [including links to Journal/TOC alerts] :

<http://library.unitec.ac.nz/resbysubj/DatabasesAZ.htm>

Durham University Library [RSS feeds]: <http://www.dur.ac.uk/library/resources/online/rss/>

Stent, C. Helping all the people all the time. *LIANZA Conference 2008* [includes innovative RSS services for special libraries]:

http://www.lianza.org.nz/library/files/store_020/StentC_Helping_all_the_people_all_the_time.pdf.

Armstrong, K. Using RSS Feeds to Alert Users to Electronic Resources. *Serials Librarian*, 53(3): 183-195, 2007 : <http://www.haworthpress.com/store/E-Text/ViewLibraryEText.asp?s=J123>

Suffolk University Law School [faculty awareness blog] : <http://sufab.wordpress.com/>

Library Boy: legal research news... [Special/Government librarian blog]:

<http://micheladrien.blogspot.com/>

Tararua District Libraries [public library blog on e-resources] :

<http://tararualibrary.wordpress.com/tag/epic/>

Christchurch City Libraries 'Backgrounder' [topical guides]:

<http://christchurchcitylibraries.com/Reference/Backgrounders/FinancialCrisis/>

OTHER ISSUES

Persistent identifiers: considering the options [detailed discussion] *Ariadne* 56 Jul 2008 :

<http://www.ariadne.ac.uk/issue56/tonkin/>

Bell, S. The Library website of the future. *Inside Wired*, 17 Feb 2009 [a call to rethink the role of academic library e-resources gateways] <http://www.insidehighered.com/views/2009/02/17/bell>



Availability

A (very) brief guide to troubleshooting e-resource technical issues

This section addresses needs such as:

- Technical issues to consider when access is unreliable or impeded
- Options for authenticating users to access e-resources.

Lack of reliable access or acceptable speed of display is a strong disincentive to use. Although obvious, managers or technical support often underestimate the impact and concerted attention may be required. If such issues are persistent consider the following:

Network Issues

A range of network or system factors potentially may influence:

- Local IP range - is your IP address(es) as supplied to vendors still current? If changed this needs to be registered with vendors to enable in-house access.
- Filters/Firewalls – if your network uses a firewall, proxy server or any content filtering software these could be blocking access. If so contact the vendor technical representatives for lists of the IP ranges and/or domain 'exceptions' that need to be provided for, and pass to your local network administrator to include in their exceptions.
- Proxy servers – as above plus ask for the server throughput to be checked. If deployed for in-house users consider whether essential; straight IP authentication may be faster.
- Bandwidth - Ask your local IT support for specifications and actual speed. Hard data is useful to clarify the issue. 'Broadband' has a range of specifications and lower ranges may NOT be adequate to handle simultaneous use of large e-resource files.
- Proxy servers - if you use a proxy server product ask for the server throughput to be checked. If deployed for in-house users consider whether essential; straight IP authentication may be faster.
- Hardware - ask for configurations to be checked such as in switches, server memory or other key components that may cause bottlenecks. Enquire (diplomatically) whether server log maintenance is up-to-date.
- If there are periodic slowdowns (say when your local network may be heavily loaded) ask if there other competing activities for bandwidth or server capacity (such as processing reports?) that can be scaled down or rescheduled during a peak use period.

TIP

Document it!

Keep an accurate log of availability for a period, noting any downtime or significant slowdowns.

Monitor the average response speed to display results or download documents in the e-resources. Absolute speed is not as useful as the perceived - if staff or users tell you its too slow to reliably use then its an issue.

Installing a 'life of request' plug-in to your browser (see **Resources**) will enable you to gather evidence of time taken to load and the file sizes of respective sources.



It may require tweaking of a number of factors to effect improvement - try to identify and work on them one at a time.

Access/Authentication Issues

- Talk it through with your local IT support ; and if they can't do anything contact vendor technical support
- If evidence of external authentication failures (eg. lack of reliability or a number of users failing to successfully log in) then review the method you are currently deploying (see Authentication Options box below).
- Consider whether a proxy server set up (with the authentication data drawn from your ILS membership files) could provide a more effective solution. Talk to EPIC, vendors and/or other libraries that have used such solutions. All of EPIC products will support this.

TECH TALK

AUTHENTICATION OPTIONS

You need to set up an authentication system to log in your users that is recognised by the respective e-resources vendors. Common options include:

IN-LIBRARY ACCESS

IP Address

The unique address for your computer network. Vendors maintain a list of accepted IP ranges and when you link to products they will recognise a subscriber and pass them through without a password. The IP address(es) need to be 'static', that is they mustn't change from session to session.

Referring URL

Provides access from a secure page that users must log into to access. The vendor can register the URL of that page and will recognise requests coming from it as from an approved site.

REMOTE ACCESS

Username and Password

Most vendors allow you to assign your own user id and passwords for accessing products.

Membership Patterned ID

Access via a library card/bar code number - useful for public libraries. The vendor will register the membership number pattern and then recognise pattern matches when your users login.

Using your own authentication system

Using vendor authentication means you don't need to implement your own system. This can though result in users having to authenticate more than once to move from one product to another in a session. Options around this include using an ILS authentication module (if available) or 'pass through proxy systems' such as EZProxy (see **Resources**)

Discuss these options with your IT staff and contact vendors or EPIC for further advice.

Tactics

- Work with all parties – your local tech support, vendors, EPIC. Get them involved and talking to each other. Solutions can usually be found if all angles are systemically considered.



- If it appears to be related to issues in the databases set up, contact the vendor technical support or EPIC for advice.
- If you can't get co-operation or resolution then document examples of service failure (reluctance of staff to use, customer dissatisfaction, fall off in use...) that result from issues and present them to management. Emphasise the lack of full value for the investment in the resources.

Resources

George Brown College [Example of access troubleshooting guidance]:

http://llc.georgebrown.ca/llc/pagecontent/section_eresources/gbl_eresources_troubleshooting.aspx

'Life of Request Info' tools. Freeware examples for MSIE:

http://www.topdownloads.net/software/lori-life-of-request-info_2_126380.html

for Firefox: <https://addons.mozilla.org/en-US/firefox/addon/1743>

Gale Cengage description of authentication options:

<http://support.gale.com/gale/article.html?article=1161>

EBSCO listing of authentication options:

http://support.ebscohost.com/knowledge_base/detail.php?topic=&id=3572&page=1

Bickford, D. Firewalls, Ad-Blockers, Web Accelerators: Helping Remote Users of Electronic Resources Overcome Barriers to Access. *Journal of Library Administration*, 2006, 45(3/4): 511-512. : <http://www.haworthpress.com/store/E-Text/ViewLibraryEText.asp?s=J111>

Gordon, R. S. & West, J. Drawing the Line on Tech Support. *Computers in Libraries*, 28 (2): 42-43, Feb 2008 :

<http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=29987801&site=ehost-live>

OCLC. EZProxy Overview: <http://www.oclc.org/support/documentation/ezproxy/overview.htm>

