

EnCLaVE

Work package 1

prepared by

Gill Hamilton

National Library of Scotland

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1. Executive summary

EnCLaVe Work Package 1 is purposed with:

- undertaking an analysis of both *Serial Solutions Aquabrowser* and *Ex Libris Voyager 7* OPAC functionality
- evaluating to what extent the **Voyager 7** OPAC can accommodate user engagement tools
- identifying options for the delivery of content enrichment services to **Voyager 7** OPAC

The analysis and evaluation was achieved through reviewing existing literature and research, considering usability findings, reviewing application functionality in both services and examining reference sites.

The findings identified:

- user requirements / expectations for “catalogues” in general
- a considerable overlap in functionality between **Aquabrowser** and the **Voyager 7** OPAC
- some opportunities for user engagement within **Voyager 7** OPAC
- some opportunities for content enrichment within **Voyager 7** OPAC

The recommendations from **Work Package 1** for the **Voyager 7** OPAC are to implement:

- a simple search box and search refine options
- clear layout of search results and full record display
- spell checking functionality
- a basic mobile version
- add word cloud functionality
- content enrichment and social networking tools
- additional help

2. Introduction

The overall aim of the **JISC LMS EnCLaVE** project is to enrich the Ex Libris **Voyager** Library Management System (LMS) OPAC module by developing on top of new functionality available in the latest release (Voyager 7), and to make it available in learner spaces to increase its value and effectiveness to the user community, with an emphasis on students.

Work package 1 of the **JISC LMS EnCLaVE** project is tasked with undertaking an analysis of the Ex Libris **Voyager 7** OPAC and Serials Solutions **Aquabrowser** functionality.

The objectives are:

- to compare the functionality of the **Voyager 7** OPAC with **Aquabrowser** and to evaluate the extent to which the **Voyager 7** OPAC can accommodate additional user engagement tools.
- to identify options for the delivery of content enrichment services and social networking tools.

The deliverables are:

- a report to inform the development work of **Work Package 2**
- recommendations to prioritise development work within the scope of the project

3. Methodology

The approach taken for development of **Work Package 1** was as follows:

- reviewed existing University documentation including
 - **Edinburgh University – Digital Library Usability testing report / User Vision. April 2010¹**
 - **Edinburgh University IS survey results: Mobile Services 2010²**
- reviewed initial findings from JISC LMS **project Aquabrowser UX⁵** and discussed these with **Boon Low**, the project manager
- from the above identified key issues experienced by users
- reviewed functionality in the **Serials Solutions Aquabrowser** product including a review of functionality implementation at **Aquabrowser** reference sites
- reviewed functionality in the **Ex Libris Voyager 7 OPAC** product including a review of functionality implementation at **Voyager 7 OPAC** reference sites
- identified overlap of functionality between **Aquabrowser** and **Voyager 7 OPAC**
- prepared recommendations for developing and enhancing Ex Libris **Voyager 7 OPAC** based on the above.

4. Review of the Edinburgh University Library usability report

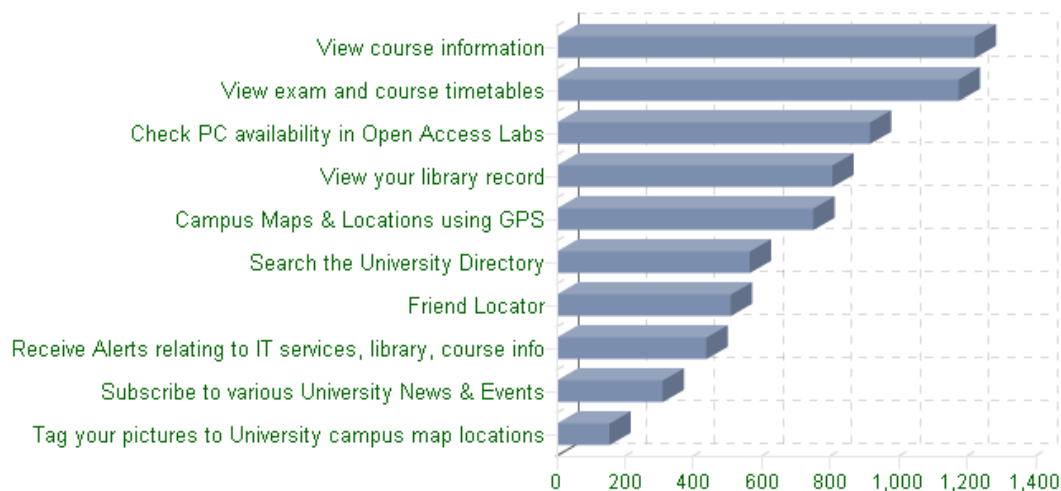
- 4.1. In Spring 2010 **Edinburgh University Library** commissioned **User Vision** to undertake usability testing of the Library's resource discovery systems prior to procuring for a new digital library resource discovery system.
- 4.2. The usability testing investigated the typical "*journeys*" that 4 undergraduates, 4 post-graduates and 4 academic staff took in using the Library's resource discovery systems. It recorded their starting points, where bottlenecks were experienced and difficulties encountered during a series of typical tasks.
- 4.3. **User Vision** delivered a report¹ of findings and recommendations and DVDs of the recordings of the usability testing sessions in April 2010.
- 4.4. For **EnCLaVE Work Package 1** the usability report and accompanying highlight DVD were reviewed and considered with the following findings:
 - the report included findings about the Library's **Aquabrowser** service.
 - the report did not include findings about the Library's **Voyager** catalogue service
 - in terms of **Aquabrowser**, undergraduates and post graduates, in general, preferred the simple search box as it was "*easy to understand*".
 - in terms of **Aquabrowser**, academic staff, in general were less accepting of the simple search box preferring more directed and focussed searches.
 - in terms of **Aquabrowser**, users assumed that multiple keywords could be included in the simple search box.
 - in terms of **Aquabrowser**, users did not read the instructions on how to search on the opening **Aquabrowser** page.
 - in terms of **Aquabrowser**, the refine option was well used and understood by all users.
 - in terms of **Aquabrowser**, users found that there was no clear indication of how to un-refine to return to the initial results.
 - in terms of **Aquabrowser**, users found it unclear how to refine within a range of years (of publication).

- in terms of **Aquabrowser**, users found that only being able to apply a single refine option within a facet limited usefulness. For example they were unable to refine on both books and journals within the **Format** facet.
- in terms of **Aquabrowser**, users found that the results list contained the necessary key information for their needs.
- in terms of **Aquabrowser**, users found that the full record detail contained the necessary key information for their needs.
- in terms of **Aquabrowser**, users found that although all of the key information was provide, the layout of the results and the full record detail was challenging to read.
- in terms of **Aquabrowser**, students found the word cloud useful in assisting with finding related items however staff felt this feature was of less use to them.
- in terms of **Aquabrowser**, users found that the usefulness of the word cloud was unclear as they were unsure of how to use the word cloud results.
- in terms of **Aquabrowser**, most users found the service an effective resource discovery system.
- in terms of **Aquabrowser**, users reported the following main positives about service (in order of most positive first)
 - refine options
 - clear results
 - simple search
 - word cloud

5. Review of the IS Survey Results: Mobile Services 2010

- 5.1. In March 2010 **Edinburgh University Information Services** undertook a survey² of approximately 2000 students to gain an understanding of student use of mobile devices to inform plans to develop a pilot **Mobile Campus**.
- 5.2. The survey asked students what type of devices they owned, what they used them for and which potential University services, from a supplied sample list, they would most like to see delivered by the University.
- 5.3. On reviewing the survey results the following findings relevant to Library services were identified:
 - 49.2% students of all students surveyed own a Smartphone
 - the ability for students to review their Library record was ranked 4th out of 10 of potential mobile University services
 - the ability for students to receive alerts, including alerts from the Library, was ranked 8th out of 10 potential mobile University services
 - relevant feedback and comments regarding Library services included:
 - *“search the library catalogue from my phone”*
 - *“an interactive map of the library would be great especially for first years”*

Potential Services rated as “Very Useful”, listed in order of popularity



6. Discussions with UX2.0 and review of their findings

6.1. Colleagues **Boon Low**, **Lorraine Paterson** and **Liza Zamboglou** at **The University of Edinburgh National e-Science Centre** are participating in both the **JISC Enhancing Library Management Systems**³ (JISC LMS) and **Usability and Contemporary User Experience in Digital Library**⁴(UX2.0) projects. Their **JISC LMS** project seeks to **Evaluate the user experience of Aquabrowser at the University of Edinburgh**⁵and the findings of this project are specifically relevant to the **EnCLaVE** project. The **UX2.0** findings provide useful general information about use of digital library services. It should be noted that, at time of writing, the findings from the **JISC LMS** evaluation of **Aquabrowser** are preliminary and are based on a limited study of user interaction.

6.2. Observations from the **JISC LMS Evaluation of the user experience of Aquabrowser at the University of Edinburgh** included:

- users made effective use of keyword searching via the simple search to activate initial search
- users made effective use and understanding of **Aquabrowser** facets to refine initial search
- it was observed that users made limited use of the **Aquabrowser** word cloud
- comments from users when questioned about their use of **Aquabrowser** included:
 - *“simple and clear. Good design.”*
 - *“well ordered, great for finding stuff quickly.”*

6.3. At a meeting with **Boon Low**, he confirmed the above findings and also indicated the following additional observations and findings from both the **JISC LMS** and **UX2.0** projects:

- users found the information contained within search results to be relevant and useful
- users found that being unable to have multiple selections within a facet to be limiting
- there was a lack of clarity amongst users on the purpose of the word cloud
- users were familiar with, and liked the simplicity of, the simple search box

7. Review of Aquabrowser implementations and documentation

7.1. Several **Aquabrowser** reference sites were examined (see **Section 11.2**) including Edinburgh University Library's **Aquabrowser** implementation.

7.2. Standard **Aquabrowser** functionality supports the following:

- simple search box
- advanced search
- simple refine options
- sophisticated and flexible search results layout options
- sophisticated and flexible full results layout options
- spell checking and spelling suggestions
- associative word cloud
- content enrichment including book covers, digital object thumbnails, table of contents etc
- ability to forward references to email and social network forums
- ability to output references in various citation manager formats
- access to **Google Books** previews
- access to **LibraryThing** tagging, reviews and ratings via the **Aquabrowser MyDiscoveries** application extension
- RSS feeds for new items and the user's current search terms
- breadcrumbs to assist navigation
- grouping of editions / like works (FRBR-ization)

7.3. **Appendix 1** shows examples of the above functionality.

8. Review of Voyager 7 OPAC implementations and documentation

- 8.1. Several **Voyager** reference sites were examined (see **Section 11.1**) including **Edinburgh University Library's** Ex Libris **Voyager 7** OPAC development service.
- 8.2. Standard **Voyager 7** OPAC functionality supports the following:
 - simple search box
 - advanced search
 - simple refine options
 - sophisticated and flexible search results layout options
 - sophisticated and flexible full results layout options
 - ability to forward references by email
 - content enrichment including book covers, digital object thumbnails, table of contents etc
 - ability to output references in various citation manager formats
- 8.3. Although not part of standard functionality, the following functionality can be readily added to the **Voyager 7** OPAC by re-using tools that other **Voyager** implementations have developed and / or exploited.
 - spell checking and spelling suggestions
 - ability to forward references to social network forums
 - **Google Books** previews
 - access to **LibraryThing** tagging and reviews
 - RSS feeds for new items

9. Findings

9.1. General findings

The **Edinburgh University Digital Library Usability Testing Report**¹ and **AquabrowserUX**⁵ initial findings provided valuable insights in to students and staff use of **Aquabrowser** and exposed some of their requirements for and expectations of an information service such as the **Voyager 7** OPAC. The **Edinburgh University Information Systems Mobile Services** survey indicated an appetite within the student population for mobile services from the Library. The research and review of **Aquabrowser** and **Voyager OPAC implementations and documentation** identified that there is considerable functional overlap between the two services which would indicate that most of the specific findings (below) can be implemented.

9.2. Specific findings

9.2.1. Simple search

- both the **Edinburgh University Digital Library Usability Testing Report** and **AquabrowserUX** projects identified that students, in particular, were accommodating of the single simple search box. It was also observed that having a single simple search box enables users to start their search quickly
- simple search box functionality exists within **Voyager 7**

9.2.2. Search refine

- both the **Edinburgh University Digital Library Usability Testing Report** and **AquabrowserUX2.0** findings highlighted that the **Aquabrowser** refine function was well used and that the concept of using refine options to narrow searches was well understood.
- the **Voyager 7** OPAC refine functionality differs somewhat from **Aquabrowser** because different indexes and limits are used, however given that refine is well used and understood it is recommended that refine should be implement. It should be noted that the **Voyager 7** OPAC, unlike **Aquabrowser** can have multiple refines from the same refine-tree applied.

9.2.3. Clear layout of search results

- both the **Edinburgh University Digital Library Usability Testing Report** and **AquabrowserUX** findings indicate that users felt results in **Aquabrowser** provided them with a clear indication of the information they would expect for a search.
- the layout and design of both the search results and full record display can be modified in **Voyager 7**.

9.2.4. Spell checking

- use of spell checking to prompt for alternative spellings is standard functionality in **Aquabrowser**. Use of spell checkers was also observed in several **Voyager 7** OPAC reference sites.
- spell checking is not standard functionality in the **Voyager 7** OPAC however several **Ex Libris** customers have developed, implemented and integrated spell checking tools and services in to their OPACs. Some customers have deposited their code at **El Commons** (see Section 11.3).

9.2.5. Mobile services

- the **Edinburgh University Information Services survey results: Mobile Services** indicates there is an appetite within the student population to have mobile library services available to their Smartphones including: review of their library record, alerts, catalogue searching and interactive maps of the Library.
- a mobile skin is not standard functionality in the **Voyager 7** OPAC however several **Ex Libris** customers have developed mobile skins. Some customers have deposited their code at **El Commons** (see Section 11.3).
- **Ex Libris** have informed their customers that SMS alerting services will be available in **Voyager 8** (scheduled summer 2011)

9.2.6. Word cloud functionality

- the **Edinburgh University Digital Library Usability Testing Report** indicates that for broad / general searches users found the word cloud useful. The **AquabrowserUX** findings recorded no use of the word cloud.
- a word cloud interface is not part of standard **Voyager 7** functionality however **Edinburgh University Library** has developed word cloud functionality based on OPAC searches undertaken by users.

- the **Edinburgh University Library** word cloud is based on previous user searches. The **Aquabrowser** word cloud differs from the **Edinburgh University Library** word cloud in that it is not based on previous searches but rather word associations, translations, spelling variations and thesaurus terms.

9.2.7. Content enrichment service and social networking tools

- it was observed that both **Aquabrowser** and **Voyager 7** OPAC reference sites used content enrichment services such as book covers, table of contents and summaries etc. Some sites also implemented **Google Book** previews, **LibraryThing** reviews and tagging and social networking tools to enable references etc to be forwarded to services such as email, **Facebook** and **Twitter**.
- the **Voyager 7** OPAC can accommodate both content enrichment services and social networking tools.

9.2.8. Additional help

- both the **Edinburgh University Digital Library Usability Testing Report** and **AquabrowserUX** projects indicated that on occasion users were unclear about the functionality of some aspects of various retrieval services including **Aquabrowser** and that additional support and help would be welcome.
- the **Voyager 7** OPAC can accommodate inclusion of help information in several locations within the interface.

10. Recommendations for development of Voyager 7 OPAC

The following recommendations for enhancing and developing the **Voyager 7** OPAC, based on the findings in **section 9**, in order of priority, are:

1. implement a simple search box
2. implement and develop refine options
3. devise and implement a clear layout for results and full record display
4. implement spell checking
5. implement a mobile version
6. develop word cloud functionality
7. implement content enrichment services and social networking tools
8. implement additional help

The priority of the above was determined by deciding which options could be implemented quickly with biggest benefit to the users.

- recommendations **1 - 3** are identified as quick wins because functionality is standard in **Voyager 7** and no coding expertise is required for their implementation.
- recommendations **4 – 6** are identified as a lower priority as they are not standard **Voyager 7** functionality however functionality has been develop by others and could be re-used. Some coding expertise may be necessary to implement these services.
- recommendations **7 – 8** are identified as lowest priority because there may be a cost associated with content enrichment services and additional help is staff resource intensive and evidence in other areas indicates that help is not read by users.

Each recommendation is supported by the following information:

Heading	Description
evidence	supporting evidence for the recommendation from the findings
considerations	options and issues to be considered if the recommendation is to be implemented
functionality exists in Voyager	advising if the functionality exists within the Voyager system
additional resources	further supporting resources
examples of usage in other Voyager catalogues	visual examples of recommendation implemented by other organisations

10.1. Implement a simple search box

Evidence

- **Edinburgh University Digital Library Usability Testing Report** (pages 38, 39, 55) and **Highlight DVD** and **AquabrowserUX** initial findings indicate students in particular are accommodating of simple search.

Considerations

- there is a split between students and staff regarding usefulness of simple search. Students being more accommodating of simple search compared to staff.
- evidence indicates that users, in particular academic staff who are undertaking known item and complex searches find simple search restrictive to their requirements. Suggest that advanced search options are made available to accommodate this requirement and clear navigation to advanced search is implemented.

Functionality exists in Voyager

- Yes.

Additional resources

- not applicable

Examples of usage in other Voyager catalogues

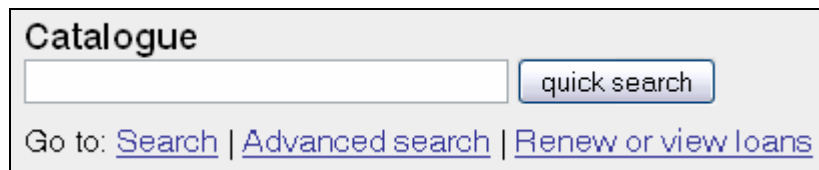
- RMIT University Library, New Zealand <http://www.rmit.edu.au/library/>



- Rochester University Library, USA <http://www.library.rochester.edu/>



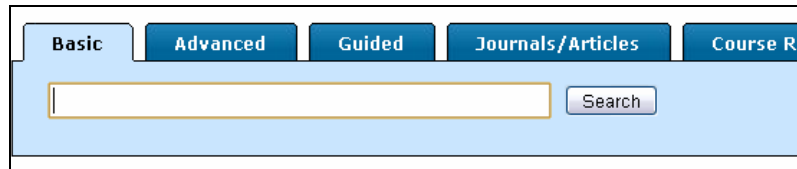
- Monash University Library, Australia <http://www.lib.monash.edu.au/>



Catalogue

Go to: [Search](#) | [Advanced search](#) | [Renew or view loans](#)

- University of Texas at Arlington, USA <http://pulse.uta.edu/vwebv/>



10.2. Implement refine option

Evidence

- both the **Edinburgh University Digital Library Usability Testing Report** (pages 41 and 55) and **Highlight DVD** and **AquabrowserUX** findings indicate users use refine in **Aquabrowser**.
- **Edinburgh University Digital Library Usability Testing Report** (pages 41 and 55) and **Highlight DVD** and **AquabrowserUX** findings indicate users find refine in **Aquabrowser** intuitive.

Considerations

- users find difficulty in understanding how to switch refine options on and off
- users find option to refine on a single option within a facet limiting
- clear labelling of the refine option is required to avoid confusion
- refine in the **Voyager 7** OPAC does not function exactly the same as refine in **Aquabrowser**.

Functionality exists in Voyager

- yes, although refine in **Voyager 7** OPAC does not function exactly the same as refine in **Aquabrowser**

Additional resources

- not applicable

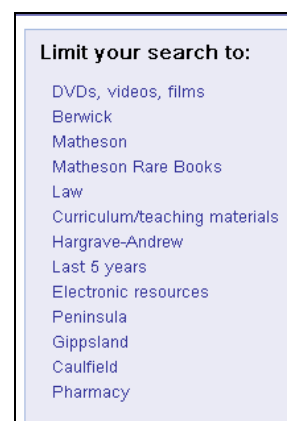
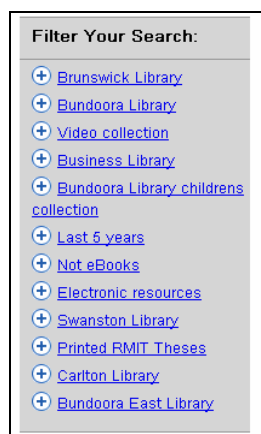
Examples of usage in other Voyager catalogues

Monash University Library, Australia

<http://library.monash.edu.au/vwebv/searchBasic>

RMIT University Library, New Zealand

<http://cat.lib.rmit.edu.au/vwebv/searchBasic>



10.3. Implement clear intermediate and full record results

Evidence

- **Edinburgh University Digital Library Usability Testing Report** findings (pages 43 and 55) indicate users felt results in **Aquabrowser** provided them with a clear indication of the information they would expect for a search.

Benefits

- appropriate, relevant information displayed to users
- readability

Considerations

- users consider key information to include:
 - appropriate reference details
 - availability
 - location
- **Voyager 7** OPAC to display the same or similar information in the intermediate results as **Aquabrowser** (see below). Also to include the same labels for fields for consistency between services.

○ title and additional titles (uniform etc)	no label
○ author etc	no label
○ place of publication	label is Publisher
○ publisher	label is Publisher
○ date of publication	label is Publisher
○ series	label is series
○ subject	label is Subject
○ number of times keyword is matched	label is Matches
○ availability	label is Availability
- **Voyager 7** OPAC to display the same or similar information in the full results as **Aquabrowser** (see below). Also to include the same labels for fields for consistency between services.

○ Title	no label
○ Additional titles (uniform etc)	various labels
○ Author (personal name main heading)	label is Author

- Author (personal name added heading) label is **Co-author**
 - Corporate name (main & added heading) label is **Corporation**
 - ISBN label is **ISBN**
 - Place of publication label is **Publisher**
 - Publisher label is **Publisher**
 - Date of publication label is **Publisher**
 - Physical description label is **Pages**
 - Subjects label is **Subjects**
 - Edition label is **Edition**
 - Notes label is **Notes**
 - Series label is **Series**
- Evidence suggest that users may experience issues with reading information from results and full record display if information is presented using similar colours and texts, thereby making each element difficult to distinguish. Suggest varying colours and fonts.

Functionality exists in Voyager

Yes.

Additional resources

- not applicable


Examples of usage in other Voyager catalogues



- not applicable, see below for examples in **Aquabrowser**.

Examples of usage in Aquabrowser catalogues

Relevant information in intermediate and full record results, Edinburgh University Library,

UK <http://aquabrowser.lib.ed.ac.uk/>

 Book	<p>Artificial intelligence : methodology, systems, and applications ; 8th international conference, AIMSA'98, Sozopol, Bulgaria, September 21-23, 1998 ; proceedings Giunchiglia, Fausto International Conference on Artificial Intelligence: Methodology, Systems, Applications</p> <p>Publisher: Berlin ;London : Springer, c1998 Series: Lecture notes in computer science; Lecture notes in artificial intelligence Subject: Artificial intelligence, Congresses</p> <p>Matches: Artificial (5) , intelligence (5) Availability: Main Library, QA75.5 Lec. v. 1480 Check availability</p>	
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<p>Artificial intelligence : methodology, systems, and applications ; 8th international conference, AIMS'A'98, Sozopol, Bulgaria, September 21-23, 1998 ; proceedings</p>		 Book  Table of Contents
Co-author	Giunchiglia, Fausto	
prvw fld-meeting	International Conference on Artificial Intelligence: Methodology, Systems, Applications	
<hr/>		
ISBN	354064993x	
Publisher	Berlin ; London : Springer, c1998	
Pages	ix, 502p : ill ; 24cm	
Subject	Artificial intelligence -- Congresses	
<hr/>		
Notes	Spine title : AIMS'A'98 : Artificial intelligence: methodology, systems, and applications Includes bibliographical references and index	
Series	Lecture notes in computer science Lecture notes in artificial intelligence	


Use of colour and fonts to improve readability, Harvard University Library, USA

<http://discovery.lib.harvard.edu/>

Authors:	Harrington, John.
Title:	Intelligence and artificial intelligence / John Harrington.
Published:	[1985]
Description:	10 leaves ; 28 cm.
Notes:	James Bryant Conant Prizes (1st prize)—Harvard University, 1985. Originally submitted as a paper in Science A-22, Spring Term, 1985. Bibliography: leaf 10.
Subject:	Artificial intelligence.
HOLLIS number	001337826
Link to this record	http://discovery.lib.harvard.edu/?itemid= library/m/aleph 001337826

Use of colour and fonts to improve readability, University of Chicago Library, USA

<http://lens.lib.uchicago.edu/>

 Artificial intelligence / Elaine Rich.	
Book	
Authors:	Rich, Elaine
<hr/>	
Imprint:	New York : McGraw-Hill, c1983.
Description:	xii, 436 p. : ill. ; 24 cm.
Series:	McGraw-Hill series in <u>artificial intelligence</u>
Topics:	<u>Artificial intelligence</u>
Notes:	Includes indexes. Bibliography: p. 412-426.
Language:	English
ISBN:	0070522618 : \$25.95
Bib. number:	520281
URL for this record:	http://lens.lib.uchicago.edu/?itemid= library/marc/uc 520281

10.4. Implement spell checking

Evidence

Review of **Aquabrowser** and **Voyager** implementations / sites and **Aquabrowser** and **Voyager** documentation.

Benefits

- assists users by making suggestions when a search term is misspelled
- reduces the number searches that result in “0 hits returned”

Considerations

- may require a developer to implement.

Functionality exists in Voyager

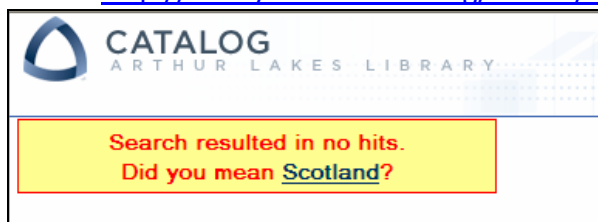
- no. Is an additional, non-supported function.

Additional resources

- University of Aberystwyth use of the Yahoo! search API.
<http://voyager.aber.ac.uk/addons/spellcheck.php>
- Tarrant Community College spell checker for WebVoyage 7 <http://lib-serv.tccd.edu/code/webvoyage/spellcheck/tomcat/index.php>
- University of Texas at Arlington creation of a spell checking dictionary
<http://rocky.uta.edu/doran/dictionary/> and
<http://www.exlibrisgroup.org/display/VoyagerCC/Spell+Check+Dictionary>

Examples of usage in other Voyager catalogues

- Use of spell checker, Colorado School of Mines, USA
http://catalyst.coalliance.org/vwebv/searchBasic?sk=en_US




- Use of spell checker, University of Aberystwyth, UK
<http://voyager.aber.ac.uk/vwebv/searchBasic?sk=en>

Search resulted in no hits. Did you mean **tolkien**?

Basic Search
Database: Prifysgol ABERYSTWYTH University

Basic **Advanced** **Subject** **Author**

Search: within 

10.5. Implement basic mobile version

Evidence

- The **Edinburgh University Information Services: Survey Results: Mobile Services 2010³** indicates that:
 - 49% of students surveyed have smart phones
 - when given a choice a choice of options, students want to view their Library record and receive alerts.
 - comments in the survey also indicate that students would like to:
 - Search the catalogue
 - Have an interactive map to assist them in orientating themselves in the Library

Benefits

- enable staff and students to search the Library catalogue from their phone
- enable staff and students to check their Library patron record from their phone

Considerations

- may require testing on various mobile devices. According to the survey the most popular devices in March 2010 were Apple, Nokia, Blackberry, HTC, Samsung in that order.
- SMS alerting services not available until version 8 of **Voyager** (scheduled summer 2011)

Functionality exists in Voyager

Yes.

Additional resources

- EL Commons code⁴ share includes several entries for mobile skin development
- Skin example from Universal College of Learning, New Zealand
<http://www.exlibrisgroup.org/display/VoyagerCC/Mobile+skin+for+TomCat+WebVoyager+7.0.4>
- Skin example from Universal College of Learning, New Zealand

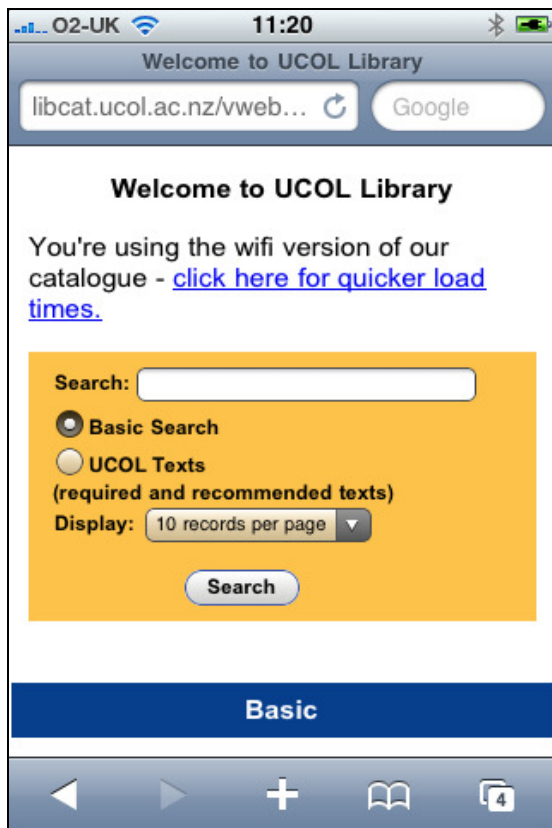
³http://www.projects.ed.ac.uk/areas/itservices/integrated/ITS045/Other_documents/MobileSurvey2010.shtm

⁴<http://www.exlibrisgroup.org/display/CodeShare/Home>

- <http://www.exlibrisgroup.org/display/VoyagerCC/Mobile+skins+for+TomCat+WebVoyage>
- Skin example from University of Rochester Library, USA
<http://www.exlibrisgroup.org/display/VoyagerCC/mobile+skin+for+tomcat+Webvoyage+7>
- User agent detector and auto-skin switcher, Universal College of Learning, New Zealand
<http://www.exlibrisgroup.org/display/VoyagerCC/WebVoyage+Mobile+skin+switcher>

Examples of usage in other Voyager catalogues

- Colorado School of Mines, USA
<http://voytest.coalliance.org/vwebv/searchBasic?sk=mobile>
- Rochester University, USA <http://www.library.rochester.edu/m>
- Universal College of Learning, New Zealand <http://libcat.ucol.ac.nz/vwebv/m>.



10.6. Implement word cloud to find relevant / associated materials

Evidence

Edinburgh University Digital Library Usability Testing Report (pages 45, 46, 55) indicates that for broad / general searches, users found the **Aquabrowser** word cloud useful.

Benefits

- may assist users in finding other relevant materials
- visually appealing

Considerations

- suggest that consideration be given to creating a word cloud based on associations and proximity rather than on popular / current searches
- findings indicate that users are unclear about how word clouds function and therefore suggest inclusion of guidance /help
- not all users find the word cloud useful

Functionality exists in Voyager

- no

Additional resources

- existing word cloud development at **Edinburgh University Library**.

Examples of usage in other Voyager catalogues

- Edinburgh University Library, UK <http://wordcloud.lib.ed.ac.uk/>



10.7. Implement content enrichment services and social networking tools

Evidence

Review of both **Aquabrowser** and **Voyager** implementations / sites and **Aquabrowser** and **Voyager** documentation.

Benefits

- book covers act as a visual cue and finding aid.
- table of contents and summaries help users decide on whether an item is appropriate to their needs.

Considerations

- it may be necessary to purchase content enrichment services from 3rd party suppliers such as **Syndetics Solutions**.
- free content enrichment services (e.g. **Google Books**, **LibraryThing**) may not be as accurate and comprehensive as a purchased service

Functionality exists in Voyager


- yes

Additional resources



- not applicable

Examples of usage in other Voyager catalogues

Open University Library, UK <http://voyager.open.ac.uk/vwebv/searchBasic>

 Mechatronics : designing intelligence machines. Vol.1. Perception, cognition and execution : edited by George Rzevski. 006.3 MEC multiple items available, Book collection - First floor	
---	---

Tarrant Community College Library, USA <http://library.tccd.edu/vwebv/searchBasic>

 Intelligent databases : technologies and applications / Zongmin Ma [editor]. 2007 QA76.9.D3 I54826 2007 <input checked="" type="checkbox"/> available, Southeast Library Circulating Collection	
---	---

10.8. Implement additional help

Evidence

Edinburgh University Digital Library Usability Testing Report and Highlight DVD indicated, in general, that users were sometimes unsure how to use services.

Benefits

- help users when they are unsure how to use services.

Considerations

- minimise help on search screens. Consider a small number of “search tips” on opening search screens and consider placing extensive help as a toolbar / menu option
- writing useful help may be time consuming

Functionality exists in Voyager

Yes

Additional resources

Not applicable

Examples of usage in other Voyager catalogues

Tarrant County College Library Catalog <http://library.tccd.edu/vwebv/searchBasic>

Search Tips: enter words relating to your topic,
use quotes to search phrases: **"world wide web"**,
use + to mark essential terms: **+explorer**,
use * to mark important terms: ***internet**,
use ? to truncate: **browser?**

11. Resources

11.1. Voyager 7 websites sites examined and referenced

11.1.1. Colorado School of Mines, Colorado, USA

- Library website <http://library.mines.edu/>
- Voyager catalogue <http://catalyst.coalliance.org/>
- Voyager mobile catalogue
<http://catalyst.coalliance.org/vwebv/searchBasic?sk=mobile>

11.1.2. Tarrant County College, TX, USA

- Library website <http://library.tccd.edu/>
- Voyager catalogue <http://library.tccd.edu/vwebv/searchBasic>

11.1.3. Open University Library, UK

- Library website <http://library.open.ac.uk/>
- Voyager catalogue <http://voyager.open.ac.uk/>

11.1.4. RMIT University, Australia

- Library website <http://www.rmit.edu.au/library>
- Voyager catalogue <http://cat.lib.rmit.edu.au>

11.1.5. Monash University Library, Australia

- Library website <http://www.lib.monash.edu.au/>
- Voyager catalogue <http://library.monash.edu.au/>

11.1.6. Cambridge University Library, UK

- Library website <http://www.lib.cam.ac.uk/newton/>
- Voyager catalogue <http://ul-newton.lib.cam.ac.uk>

11.1.7. Universal College of Learning, New Zealand

- Library website <http://library.ucol.ac.nz/>
- Voyager catalogue <http://libcat.ucol.ac.nz/>
- Voyager mobile catalogue <http://libcat.ucol.ac.nz/vwebv/m.cgi>

11.1.8. Rochester University, USA

- Library website <http://www.library.rochester.edu/>
- Voyager catalogue <http://catalog.lib.rochester.edu/>
- Voyager mobile catalogue
<http://catalog.lib.rochester.edu/vwebv/searchBasic?sk=mobile>

11.1.9. University of Texas at Arlington, USA

- Library website <http://library.uta.edu/>
- Voyager catalogue <http://pulse.uta.edu/vwebv/>

11.1.10. University of Aberystwyth, UK

- Library website <http://www.aber.ac.uk/en/is/index.html>
- Voyager catalogue <http://voyager.aber.ac.uk/vwebv/searchBasic?sk=en>

11.1.11. Indiana State University Library

- Library website <http://library.indstate.edu/>
- Voyager catalogue http://luis.indstate.edu/vwebv/searchBasic?sk=en_US

11.2. Aquabrowser sites examined and referenced

11.2.1. Edinburgh University Library, UK

- Library website <http://www.lib.ed.ac.uk/>
- Aquabrowser catalogue <http://aquabrowser.lib.ed.ac.uk/>

11.2.2. National Library of Scotland, UK

- Library website <http://www.nls.uk/>
- Aquabrowser catalogue <http://discover.nls.uk/>

11.2.3. Harvard University Library

- Library website <http://lib.harvard.edu/>
- Aquabrowser catalogue <http://discovery.lib.harvard.edu/>

11.2.4. University of Chicago

- Library website <http://www.lib.uchicago.edu/e/index.html>
- Aquabrowser catalogue <http://lens.lib.uchicago.edu/>

11.2.5. University of Western Sydney

- Library website <http://library.uws.edu.au/>
- Aquabrowser catalogue <http://uws.aquabrowser.com/>

11.2.6. Oklahoma State University

- Library website <http://www.library.okstate.edu/>
- Aquabrowser catalogue <http://boss.library.okstate.edu/default.ashx>

11.3. Ex Libris Voyager code share

- <http://www.exlibrisgroup.org/display/VoyagerCC/Home>

11.4. Ex Libris Voyager APIs

- <http://www.exlibrisgroup.org/display/wiki/Home>

11.5. ELUNA document repository

- <http://documents.el-una.org/>

11.6. Voyager_I mailing list

- <http://voyager.ship.edu/voyager/>

11.7. Aquapedia Aquabrowser wiki

- <http://kb.aquabrowser.com/>

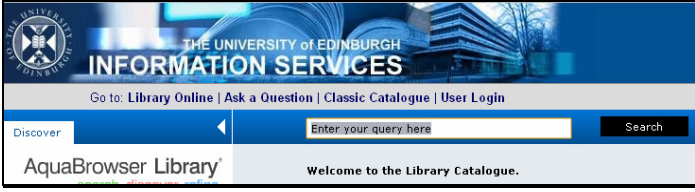


12. References




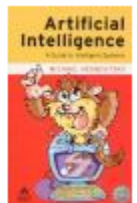
1. **Edinburgh University – Digital Library Usability testing report / User Vision. April 2010**
2. **IS Survey results: mobiles services 2010**
http://www.projects.ed.ac.uk/areas/itservices/integrated/ITS045/Other_documents/MobileSurvey2010.shtml
3. **JISC Enhancing library management systems: 12/09**
http://www.jisc.ac.uk/fundingopportunities/funding_calls/2009/12/1209lms.aspx
4. **Usability & contemporary user experience in Digital Libraries**
<http://ux2.nesc.ed.ac.uk/>
5. **Aquabrowser UX** <https://www.wiki.ed.ac.uk/display/UX2/AquaBrowserUX>

13. Appendices

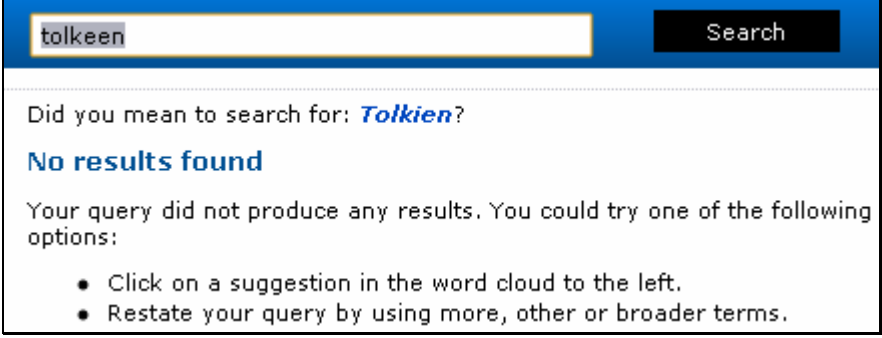
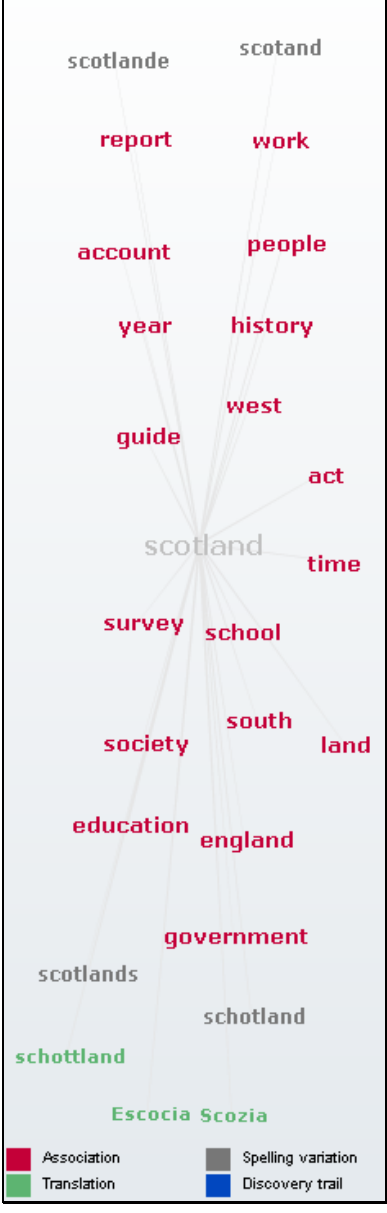

13.1. Appendix 1

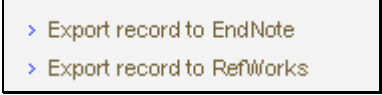
Screen grabs demonstrating examples of functionality in **Aquabrowser**. Derived from a review of **Aquabrowser** implementations and documentation.







<p>simple search box</p>		
<p>advanced search</p>		
<p>simple refine options</p>	 <p>Refine</p> <p>Format</p> <ul style="list-style-type: none"> > Book (8,037) > Journal (125) > E-Journal (8) > Film (4) > E-Book (3) <p>Publication date</p> <ul style="list-style-type: none"> > Last 5 years (1,192) > Last 10 years (2,271) > Last 20 years (5,462) > Last 50 years (8,139) > Older than 50 years (1) 	

<p>sophisticated & flexible search results layout options</p>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Your query: artificial intelligence</p> <hr/> <p>1. <input type="checkbox"/>  Intelligence and artificial intelligence / Harrington, John. [1985] > Check Availability</p> <hr/> <p>2. <input type="checkbox"/>  Artificial intelligence : the very idea / Haugeland, John, 1945- Cambridge, Mass. : MIT Press, c1985. > Check Availability</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p> Artificial intelligence : a guide to intelligent systems / Negnevitsky, Michael.</p> <p>Year: 2002 Subject: Artificial intelligence, Expert systems (Computer science) Shelfmark: S3.201.1701 Check availability</p>  </div>
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<p>sophisticated and flexible full results layout options</p>	<div style="border: 1px solid black; padding: 5px;"> <p>Authors: Harrington, John. Title: Intelligence and artificial intelligence / John Harrington. Published: [1985] Description: 10 leaves ; 28 cm. Notes: James Bryant Conant Prizes (1st prize)—Harvard University, 1985. Originally submitted as a paper in Science A-22, Spring Term, 1985. Bibliography: leaf 10. Subject: Artificial intelligence. HOLLIS number 001337826 Link to this record http://discovery.lib.harvard.edu/?itemid= library/m/aleph 001337826</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">Artificial intelligence an interna / [electronic resource]</p> <p>Co-author Bramer, M. A. (Max A.), 1948-</p> <hr/> <p>ISBN 3642032265 9783642032264</p> <p>Publisher Berlin : Springer-Verlag, c2009 Pages 1 online resource (vi, 245 p.) : ill Subject Artificial intelligence</p> <hr/> <p>Notes Description based on print version record Includes index Mode of access: World Wide Web Access may be restricted to authorized Univ</p> <p>Series Lecture notes in computer science ;Lecture intelligence LNCS sublibrary, SL 7 Artificial intelligence State of the art survey</p> <p>Series Additions Lecture notes in computer science Lecture notes in computer science Lecture notes in computer science LNCS sublibrary</p> <hr/> <p>Website > View resource online</p> </div>
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<p>spell checking and spelling suggestions</p>		
<p>associative word cloud</p>		
<p>content enrichment including book covers, digital</p>		

<p>object thumbnails, table of contents etc</p>	
<p>ability to forward references to email and social network forums</p>	
<p>ability to output references in citation manager format</p>	
<p>access to Google book previews</p>	
<p>access to LibraryThing tagging, reviews and ratings via MyDiscoveries application extension</p>	

<p>RSS feeds for new items and the user's current search terms</p>	<div style="background-color: #f4a460; padding: 5px;">RSS feeds</div> <hr/> <p>Available feeds</p> <p>You can subscribe to the following RSS feeds:</p> <ul style="list-style-type: none"> •  New items for your query 'artificial intelligence' •  New items added to the Digital Archive •  New items added to the Scottish Bibliographies Online (SBO) •  New items in Scottish Gaelic •  News from NLS
<p>breadcrumbs to assist navigation</p>	<div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center;"> 🏠 > Your query: artificial intelligence > Book > English > This year </div>
<p>grouping of editions / like works (frbr-ization)</p>	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  <p>Books</p> </div> <div> <p>Macbeth / Shakespeare, William,</p> <p>Year: 1994 Shelfmark: HP2.95.670</p> <p>Check availability</p> </div> </div> <p style="text-align: right; margin-top: 10px;">> show all 162 editions</p> </div>