How do users search?

Examining user behaviour and testing innovative possibilities within the CREE project

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Introduction

JISC

- The CREE Project
  - Part of the JISC Portals Programme
- User evaluation
  - How do users want to search?
- Technical development
  - Portlet development using JSR 168 and WSRP

CREE: a JISC Project

JISC

- Joint Information Systems Committee
  - UK Government Agency supporting post-16 education
    - Network (SuperJANET)
    - Content
    - Advice
    - **Development**
- $1.4 million per year on portals

JISC Portals Programme

JISC

- A range of portal development projects
- Each supports:
  - Resource discovery across distributed multiple resources
  - Presentation
  - Use of open standards e.g., Z39.50, OAI, RSS
- Each has its own discrete website

Where does CREE fit in?

JISC

- Portals have assumed user will come to them
  - Better taking the portals, or portal functionality, to the user
  - Embedding in institutional contexts
- CREE
  - Investigating whether users find this valuable
  - Testing portal technologies to enable embedding

PORTAL project

JISC

- Presenting natiOnal Resources To Audiences Locally
- Examined the presentation of external content and services within an institutional portal
  - Very keen, particularly on library resources
  - Purpose and selection needs to be clear

Extending PORTAL: CREE

JISC

- Contextual Resource Evaluation Environment
  - Evaluating the use of resources
    - Specifically Internet search tools (portal and non-portal)
  - Placing these in different contexts
- Institutional portal context at Hull is uPortal

CREE: a partnership

JISC

- e-SIG, University of Hull
- OUCS, University of Oxford
- EDINA, University of Edinburgh
- Archaeology Data Service, University of York
- Newark & Sherwood College
- instructional media + magic, inc.

User evaluation

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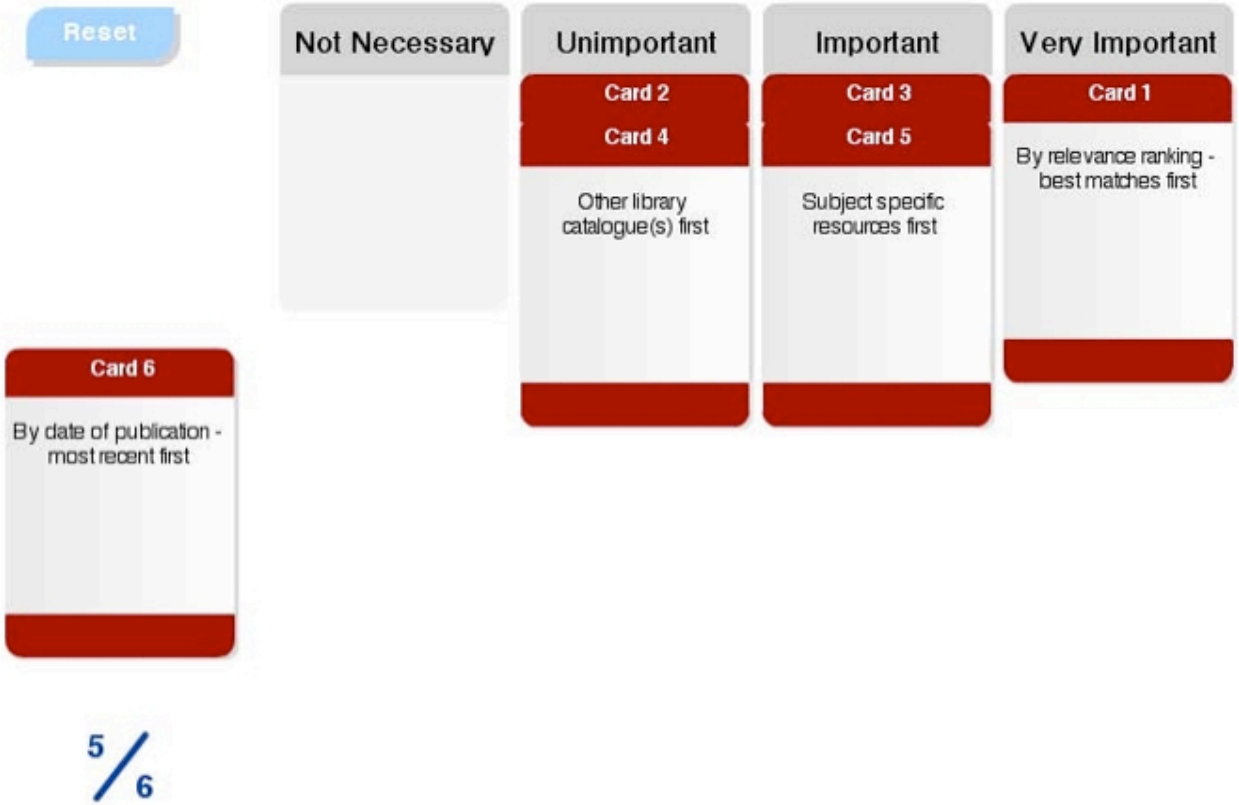
- How do users want to search?
- How do they currently search?
- What requirements do users have for searching?
- How might different contexts affect searching?

CREE Survey

JISC

- National survey carried out
- September - October 2004
- >4500 responses
- 2500 of them came from Oxford!
- Used Multimedia Flash-based card sort toolkit

Card sort toolkit



If you were able to search more than one online resource at a time, what priority would you give to the order in which your search results were displayed?

Next

CREE Focus groups

JISC

- 13 groups held: 6 staff and 7 student
  - >60 people from across disciplines
- University of Hull and University of Oxford, Newark and Sherwood College
  - Including online focus group
- Testing results from the survey
- Gathering experience and views in depth

What did the survey find?

JISC

- 85% used Internet search tools daily
  - 61% used them daily for learning, teaching or research
- 67% used subject-specific resources
- 68% used the local library catalogue at least weekly
  - 54% used other library catalogues at least monthly

What search tools are used?

JISC

- Google!
  - Used frequently by over 90%
  - Yahoo!, Ask Jeeves, Altavista also used
- Nationally maintained subject-specific resources
  - Second in popularity to Google
  - Users are very aware of them

What search tools are used?

JISC

- Focus groups found that:
- Google is used by everyone
  - Usually as first choice and starting point
  - Sometimes as last resort!
- But users are aware of and use more specific search tools (especially electronic journals)
  - Choice of tool is according to need

Further focus group findings I

JISC

- How search tools are used depends on purpose of search
- Assignments - whatever can be found
- Research - more considered approach
- Quick use can lead to later advanced use

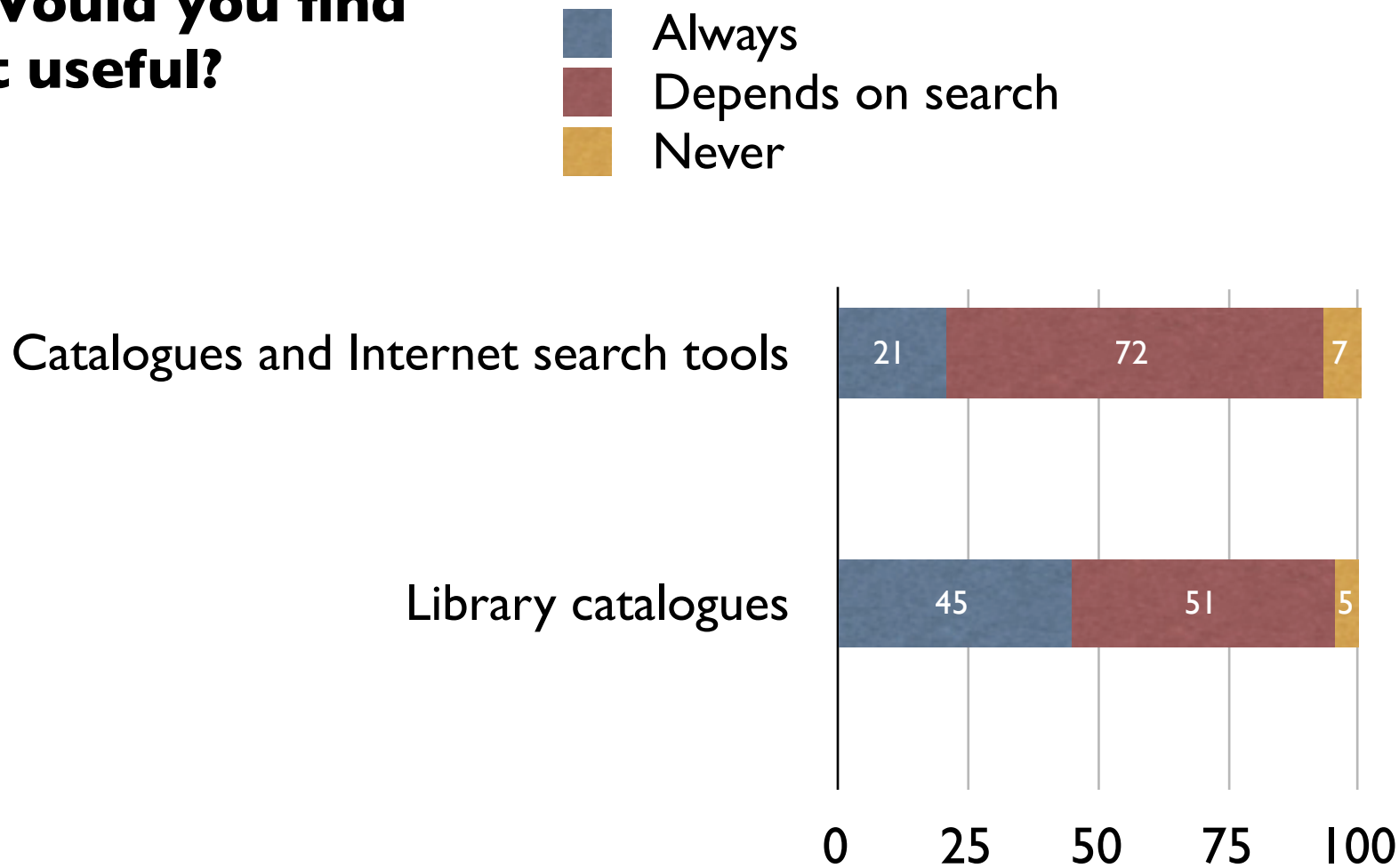
Further focus group findings 2

JISC

- Two search strategies are used
- Discovery - when nothing is known
  - Google, bibliographic databases
- Location - when item is known
  - Library catalogue, local and other
- Preference for searching only those resources that are available (i.e., can be located)

Simultaneous searching?

Would you find it useful?

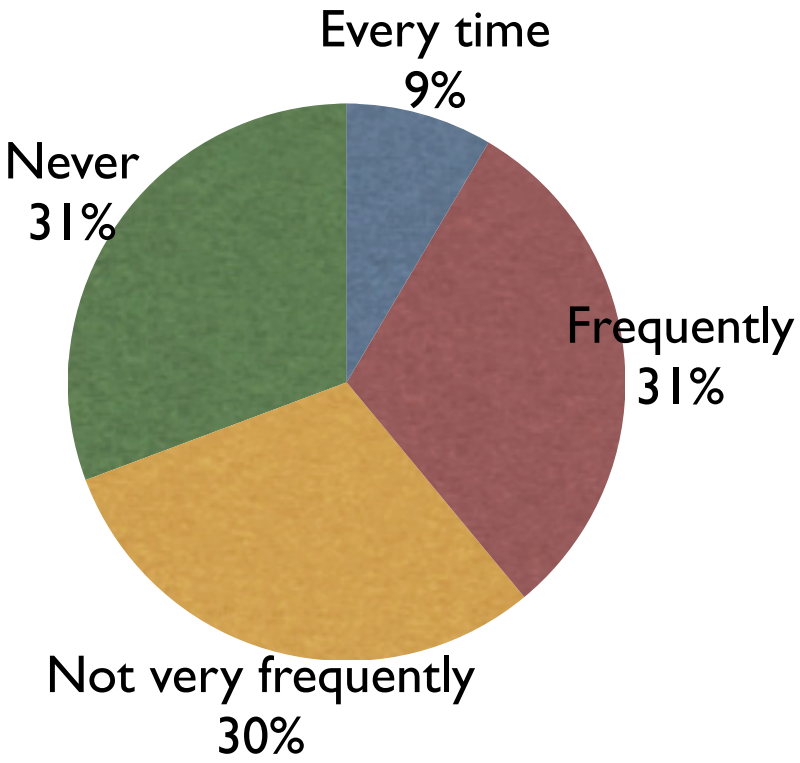


Simultaneous searching

JISC

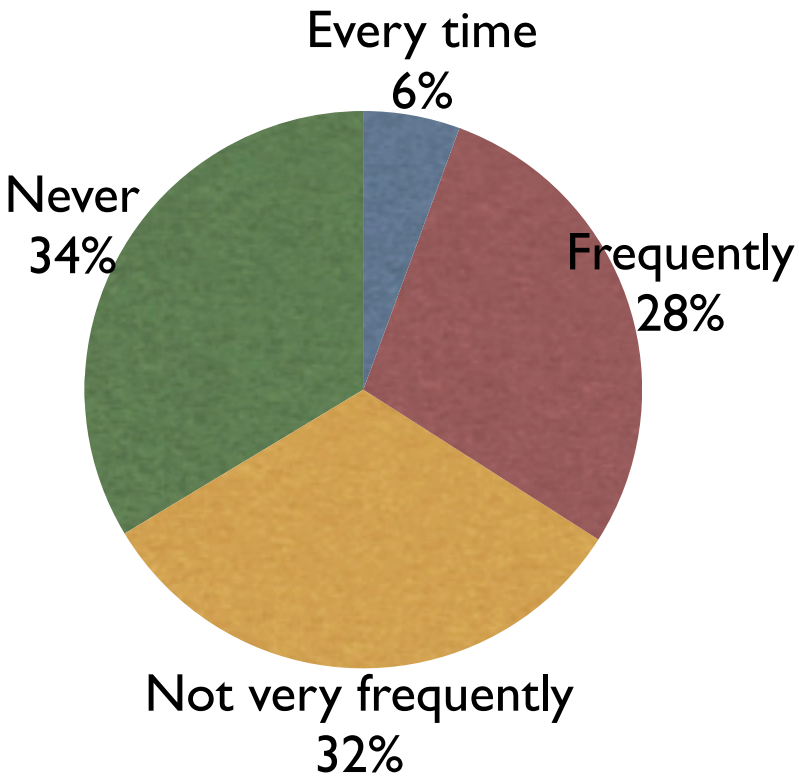
- Focus groups agreed that simultaneous searching was a good thing, but with caveats
- Saves time
- Google and others!
- Needs to be done well, or results are not usable
- Depends on type of search

Search tools and the LMS



Do you use Internet search tools whilst using an LMS?

Catalogues and the LMS



Do you use library catalogues whilst using an LMS?

Searching whilst using an LMS

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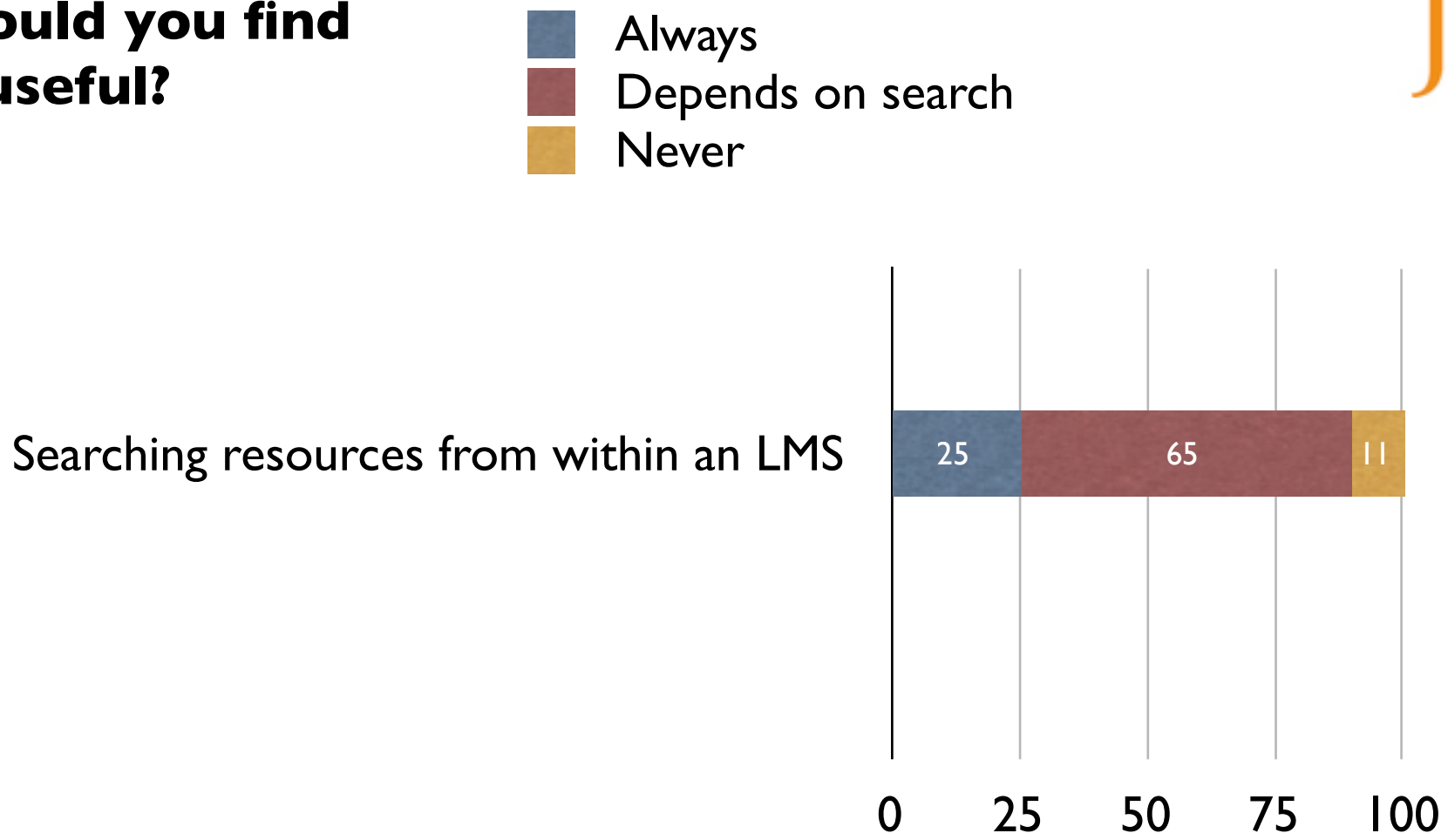
- Users with greater familiarity of using an LMS showed a higher frequency of using search tools
- Large proportion of users do not use search tools whilst using an LMS

Searching from within an LMS?

Would you find it useful?



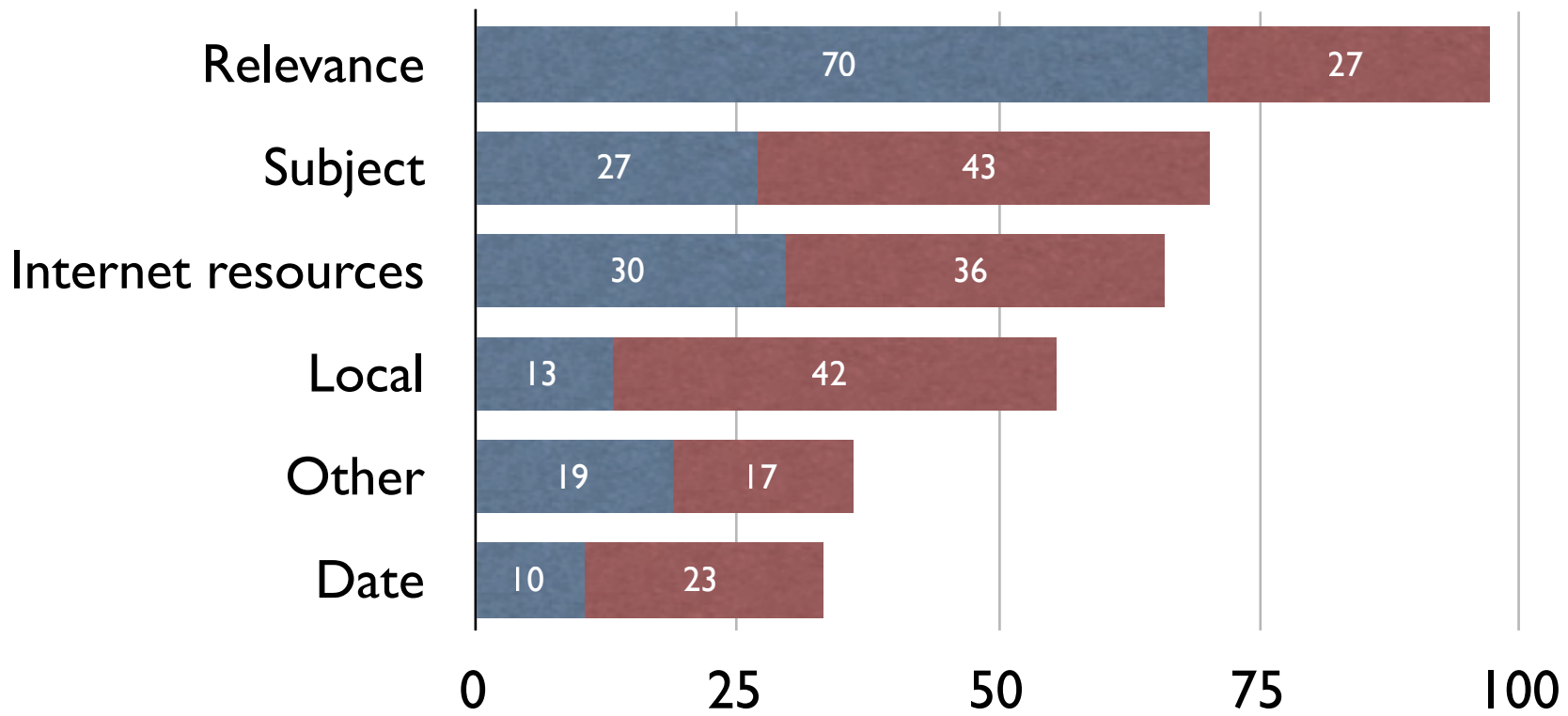
Searching whilst using an LMS

JISC

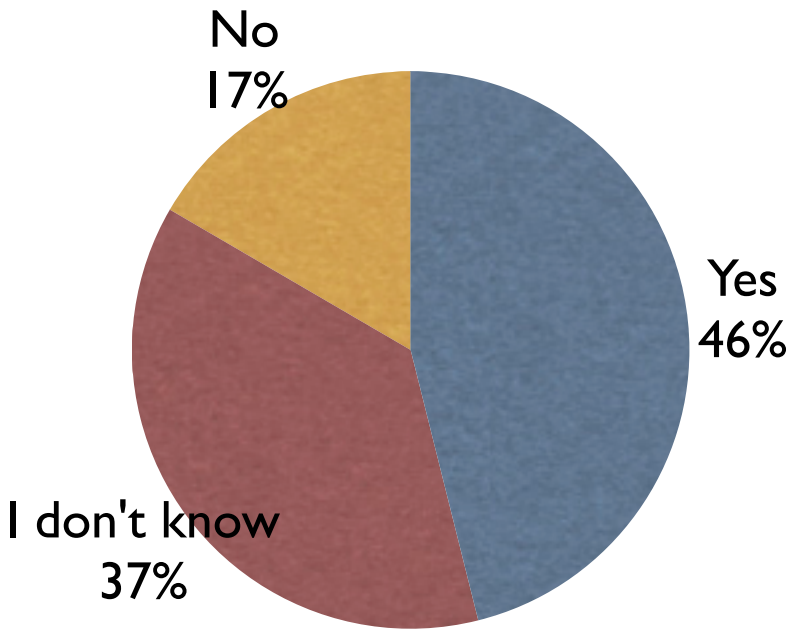
- Focus groups had a strong preference for multiple windows
  - Allows control of the search tools used
  - Considered to be as quick
- Access to quick reference tools considered useful, though
  - Dictionary, thesaurus etc.

Displaying search results

What priority would you give to displaying different results?



Displaying results in the LMS



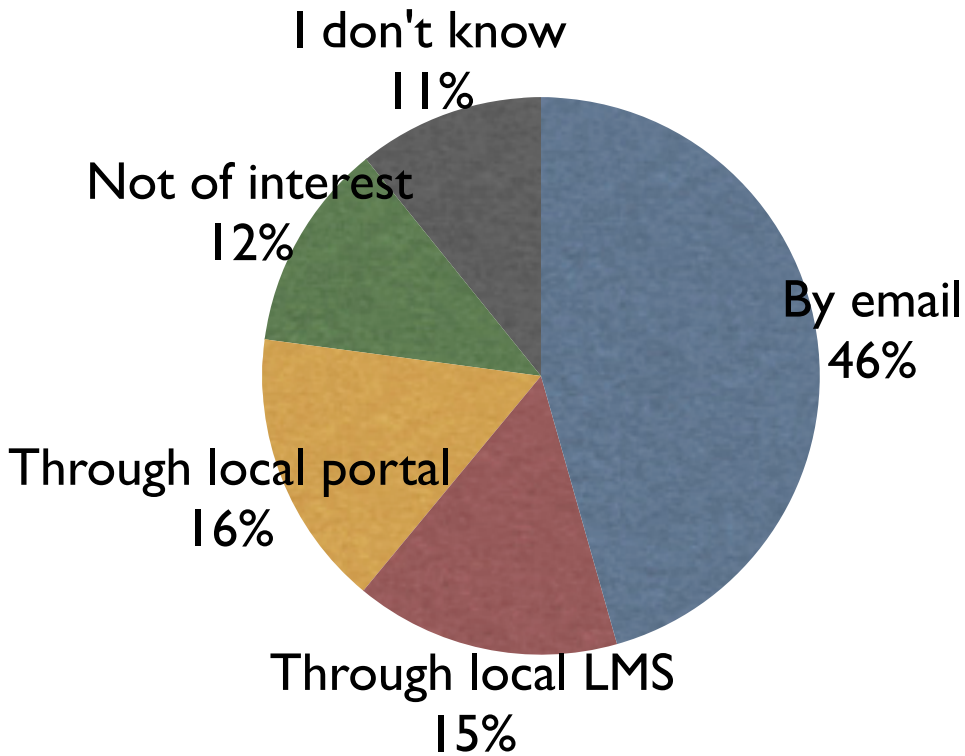
Would you like search results to appear within the LMS?

Displaying search results

JISC

- Focus groups were more concerned with the way results were displayed, not the order
- Preferred results sets to be separate, not a single list
- If a single list, then de-duplication is a priority

Keeping informed



Would you like to be notified of new resources as they become available, and how?

Technical development

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- Test out how users wish to interact with portal search tools in different contexts
  - Institutional portal
  - LMS
  - Outside of formal frameworks
- Creation of interactive search interface demonstrators for users to view

Testing portal standards

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- For testing in portals and related frameworks
  - Developing portlets using open standards
- JSR 168
- WSRP
- Examine the relationship between these

Re-purposing existing tools

JISC

- JAFER - Z39.50 engine for searching library catalogues (and other) - Oxford
- GetRef - Metasearch engine for searching bibliographic databases - EDINA
  - Including GetCopy - OpenURL resolver - EDINA
- Archaeology Data Service Z39.50 search
- Google

Development path

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- All project partners concluded that JSR 168 was the simpler development route
  - JSR 168 portlets developed for all so far
- JSR 168 portlet is basis for WSRP portlet
  - JAFER the first example of this
  - ADS now working via this route as well
  - Google being developed

CREE portlets screenshot

Portlet Examples | Developers | News | Admin Tools | CWebProxy Examples | ICC Demo | CREE Portlet

JAFER portlet

Search Library

Title

Author

Submit Clear

ADS Portlet

ADS:ARENA Portlet Search:

This portlet has been designed to search the ADS:ARENA Target.

Please choose When and What to search in and around the city of York, UK.

When: Neolithic

What: Religious, Ritual and Funerary

Search

Google Portlet

maximized
help

submit

GetRef portlet

Please enter a term for searching GetRef

Title

JAFER results page

Navigation

JAFER portlet

Your search has found 116 records: viewing records 11 to 20

- Philip Larkin and English poetry /Whalen, Terry.
- Philip Larkin of England /Weatherhead, A. Kingsley1923-
- Philip Larkin :after symbolism /Everett, Barbara,
- James Larkin :Irish labour leader, 1876-1947 / by Emmet LarkinLarkin, Emmet J.,1927-
- Philip Larkin :his life and work ; catalogue of an exhibition held in the Library of University College, London, 4 November - 5 December, 1986 /Dyson, Brian.
- The Labour Archive at the University of Hull /Saville, John.
- Philip Larkin /Brownjohn, Alan,1931-
- Larkin at sixty /Thwaite, Anthony.
- Philip Larkin and English poetry /Whalen, Terrence Anthony,1944-
- Poets in their time :essays on English poetry from Donne to Larkin /Everett, Barbara,
- Philip Larkin :his life's work /Rossen, Janice,1955-

JAFER detailed results page

JISC

JAFER portlet

Author
Whalen, Terry.
Title
Philip Larkin and English poetry /
Publisher
Macmillan,
Description
x, 164 p ;23 cm
ISBN
0333398165
Locations

Library	Shelfmark	Status
Bodleian	27961 e.899	In place
Bodleian	SE.12L 18. 7	Available
English Fac.	P57.71WHA	Available
Hertford	M 70 LAR/WHA	Please check shelf

Holdings

GetRef results

CREE Test Area

Welcome
Unrecognized
person: staff

Google Portlet | ADS Portlet | JAFER Portlet | Getref Portlet | News | GoGeo

GetRef portlet

Displaying results 1 - 10 of 142 results
Start a new search?

prev ? ? next

BIOSIS Previews 1 – 16
Jump to your chosen dataset

1. An image analysis approach for automatically re-orienteering CT images for dental implants
   Computerized Medical Imaging and Graphics, vol 28 (2004), issue 4, pp 185-201
   Cucchiara, Rita; Lamma, Evelina; Sansoni, Tommaso
2. The signal to move: D. discoideum go orienteering.
   Science (Washington D C), vol 300 (2003), issue 5625, pp 1525-1527
   Kimmel, Alan R.; Parent, Carole A.
3. Respiratory gas exchange and lactate measures during competitive orienteering.
   Medicine & Science in Sports & Exercise, vol 35 (2003), issue 4, pp 682-689
   Smekal, Gerhard; Von Duvillard, Serge P.; Pokan, Rochus; Lang, Karl; Baron, Ramon; Tschan, Harald; Hofmann, Peter; Bachl, Norbert
4. Analysis of performance in orienteering with treadmill tests and physiological field tests using a differential global positioning system
   Journal of Sports Sciences, vol 20 (2002), issue 7, pp 529-535
   Larsson, Peter; Burlin, Lennart; Jakobsson, Erkki; Henriksson-Larsen, Karin
5. Two cases of tularaemia after an orienteering contest on the non-endemic island of Bornholm
   Scandinavian Journal of Infectious Diseases, vol 34 (2002), issue 1, pp 76
   Hansson, Christer; Ingvarsson, Tom
6. The use of dGPS and simultaneous metabolic measurements during orienteering
   Medicine and Science in Sports and Exercise, vol 33 (2001), issue 11, pp 1919-1924
   Larsson, Peter; Henriksson-Larsen, Karin

GetRef abstract

CREE Test Area

Welcome
Unrecognized
person: staff

Google Portlet | ADS Portlet | JAFER Portlet | Getref Portlet | News | GoGeo

GetRef portlet

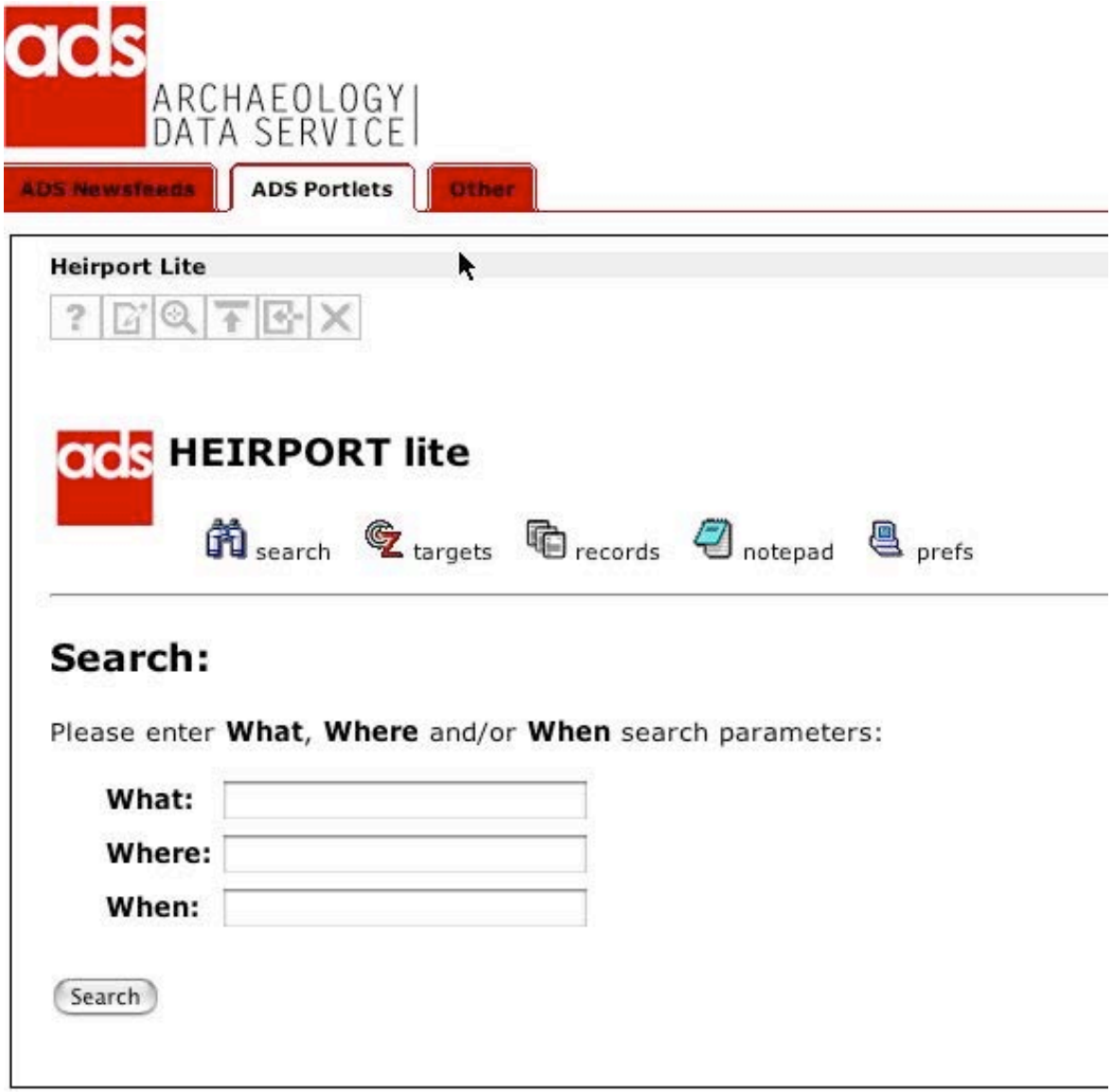
Displaying result 1 of 142 results
back to results

prev next

BIOSIS Previews 1 - 16
Jump to your chosen dataset

Title: An image analysis approach for automatically re-orienteering CT images for dental implants
Authors: Cucchiara, Rita; Lamma, Evelina; Sansoni, Tommaso
Journal: Computerized Medical Imaging and Graphics, vol 28 (2004), issue 4, pp 185-201
ISSN: 0895-6111
Language: English
Abstract: In the last decade, computerized tomography (CT) has become the most frequently used imaging modality to obtain a correct pre-operative implant planning. In this work, we present an image analysis and computer vision approach able to identify, from the reconstructed 3D data set, the optimal cutting plane specific to each implant to be planned, in order to obtain the best view of the implant site and to have correct measures. If the patient requires more implants, different cutting planes are automatically identified, and the axial and cross-sectional images can be re-oriented accordingly to each of them. In the paper, we describe the defined algorithms in order to recognize 3D markers (each one aligned with a missed tooth for which an implant has to be planned) in the 3D reconstructed space, and the results in processing red) exams, in terms of effectiveness and precision and reproducibility of the measure. (C) 2004 Elsevier Ltd. All rights reserved.
Subjects: Radiation biology - Radiation and isotope techniques

ADS search



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ADS preferences

HEIRPORT lite

search targets records notepad prefs

Edit:

Please make your choices from the following options. Remember to click the '**Commit changes**' button found at the bottom of the page for the changes to take effect!

Choose your resources:

Database	Speed
☐ ADS Catalogue	*medium*
☑ NMR of Scotland	*fast*
☐ Portable Antiquities	*medium*
☑ SCRAN	*fast*
☐ HEIRNET Register	*slow*
☐ Excavation Index for England	*slow*
☐ Durham SMR	*medium*

How many results to fetch? 50

How many results to display per page? 10

Commit changes

Google JSR 168 portlet

JISC

- im+m CREE partner development
- Uses the Google Search API
- XSLT for presentation layer
- Role based presentation
- Includes View, Edit and Help Modes
- Unlimited paging of search results

Google portlet - view mode

Search results
are in View mode

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Role based view

Different view according to role

Google portlet - edit mode

JISC

Can change parameters for the portlet

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Google portlet - help mode

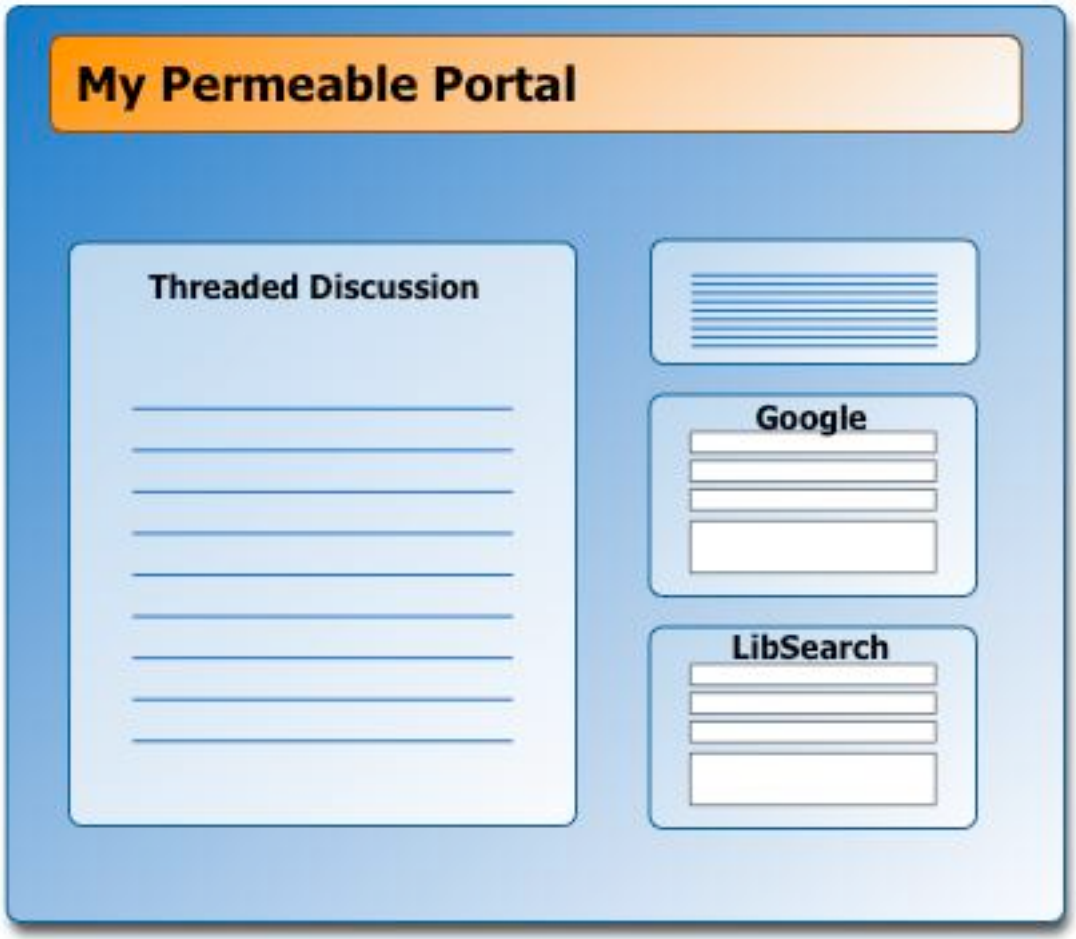
Contextual help during search

Portlet functionality

JISC

- Searching
  - Library catalogues, bibliographic databases, subject-specific resources
  - Single and multiple targets
- Target and preferences selection
- Saving and exporting results
- Link to other portlets

How will this be used?



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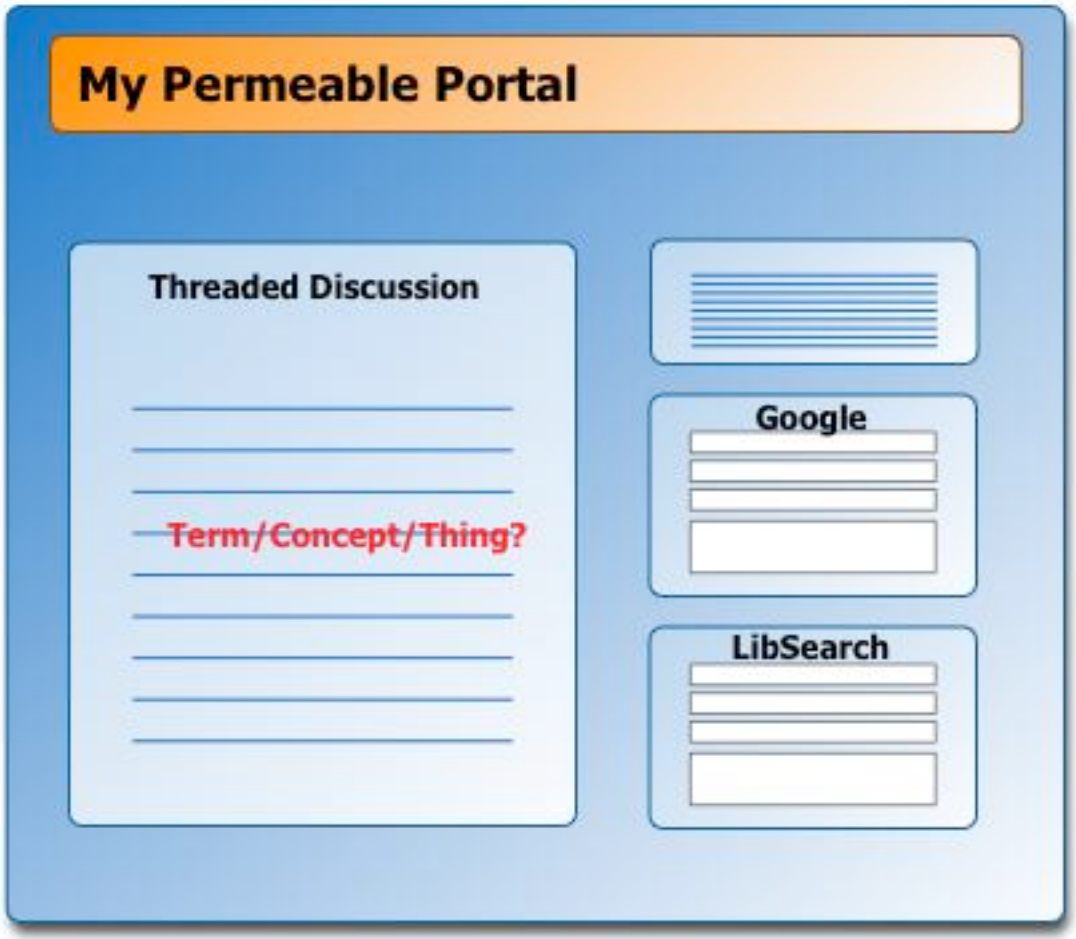
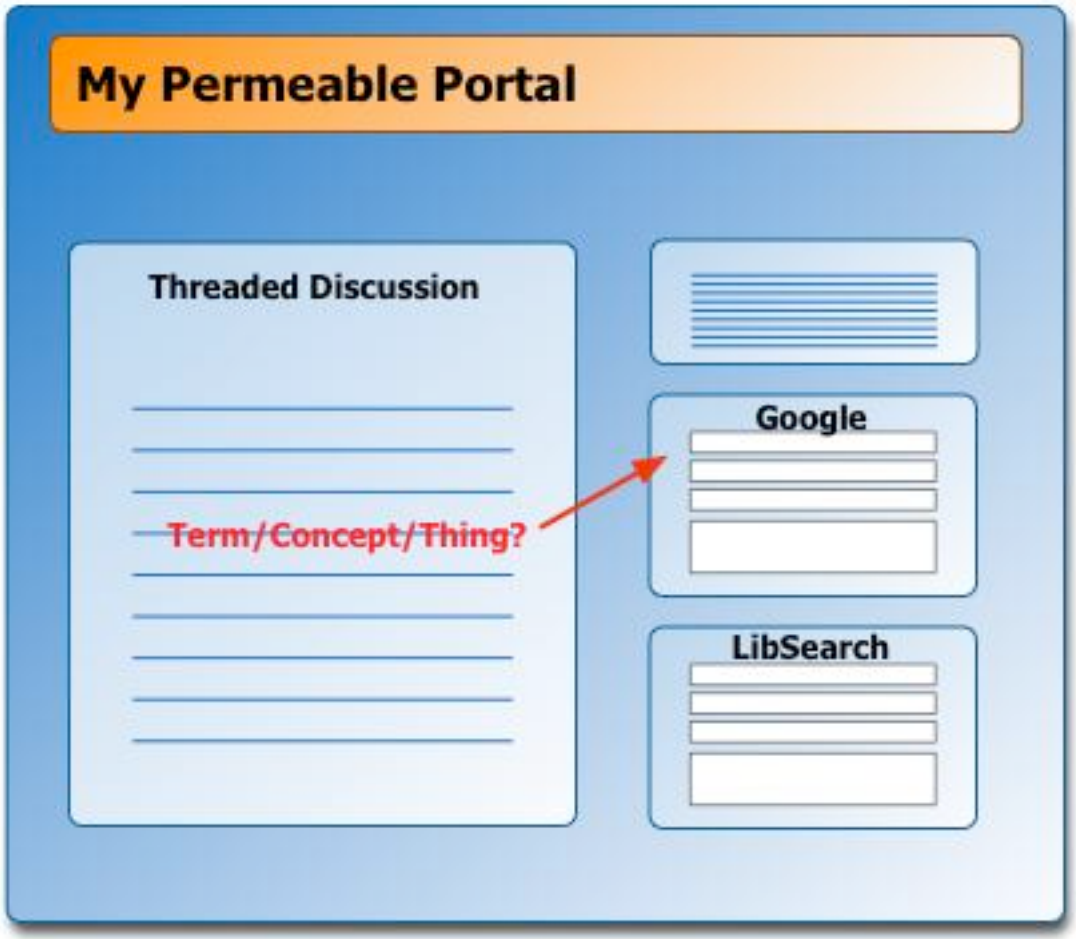
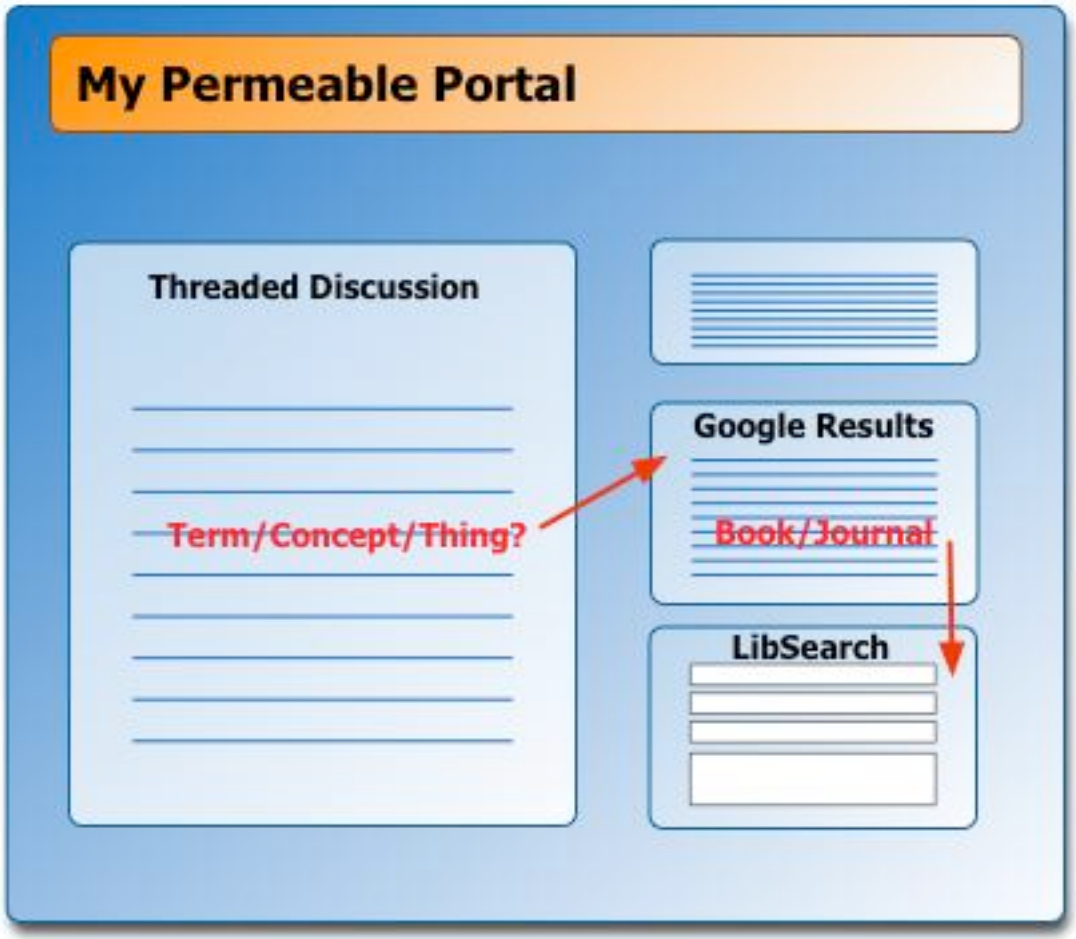
CREE Scenario 2



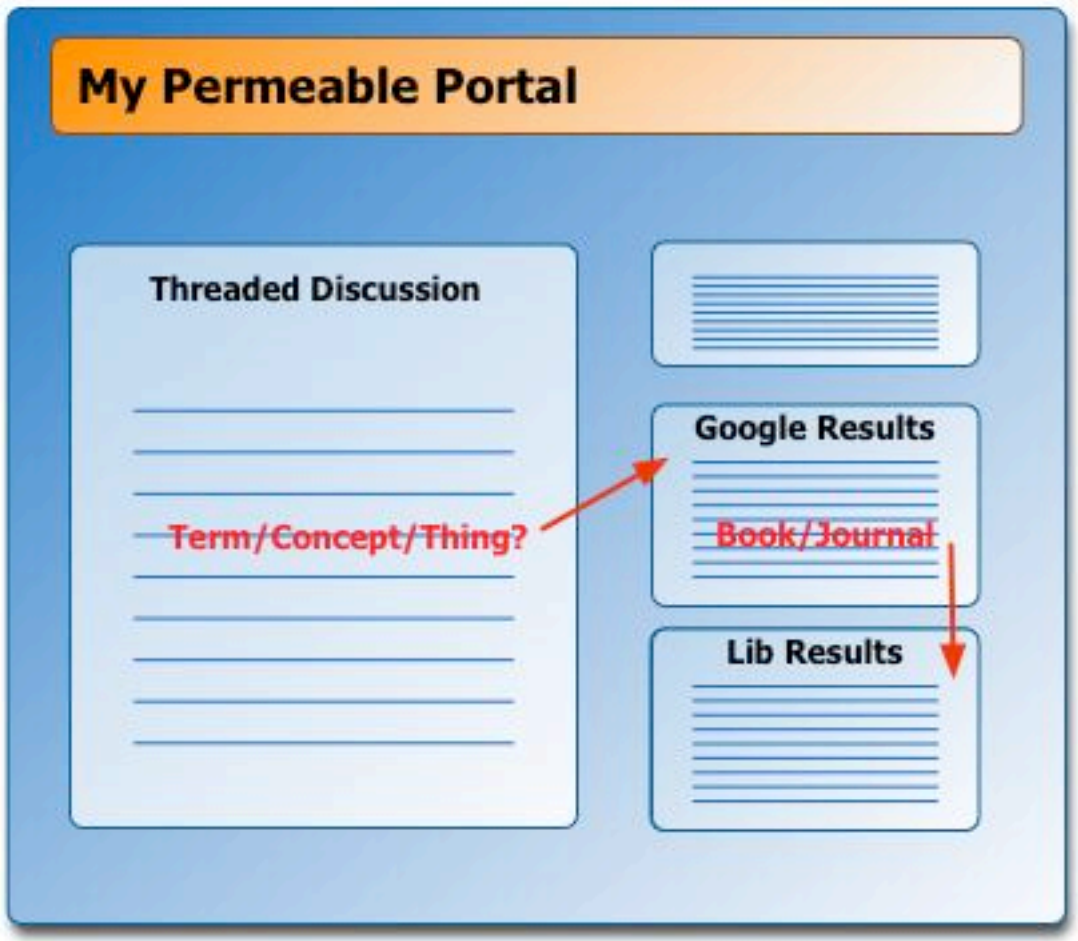
CREE Scenario 3

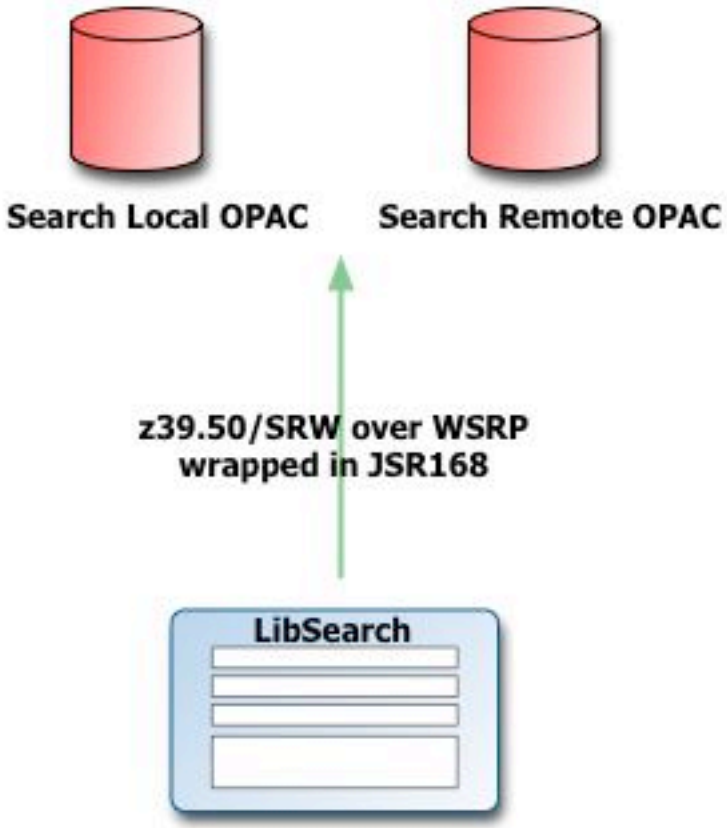


CREE Scenario 4



CREE Scenario 5





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Demonstrators

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- Institutional portal
  - Google, library catalogue, GetRef, ADS, RSS feeds
- LMS (webpage mock-up based on Sakai)
  - Google, library catalogue, zetoc, ADS, Dictionary
- Webpage
  - Google, library catalogue, zetoc, ADS
  - Resource Discovery Network

CREE outputs - out soon!

JISC

- Full survey and focus group evaluations
- Report on portlet development
  - Ongoing to incorporate new features and WSRP
- Literature review
- Results of user testing with demonstrators
- http://www.hull.ac.uk/esig/cree/documents.html

Thank you

JISC

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http://www.hull.ac.uk/esig/cree