hydra
in Hull

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Hydra

• A collaborative project between:
  – University of Hull
  – University of Virginia
  – Stanford University
  – Fedora Commons/DuraSpace
  – MediaShelf LLC

• Unfunded (in itself)
  – Activity based on identification of a common need

• Aim to work towards a reusable framework for multipurpose, multifunction, multi-institutional repository-enabled solutions

• Timeframe - 2008-11 (but now extended indefinitely)
Hydra in Hull

• JISC-funded Repositories Take-up and Embedding project
  – February – September 2011
• Working with MediaShelf to implement Hydra at University of Hull
• Three phases
  – Read-only interface – April 2011
  – Ingest and metadata edit functionality – June 2011
  – Full CRUD capability for limited range of genres – September 2011
  – Replacing existing repository interface – September 2011
Hydra take-up and embedding

• Hydra is about developing flexible interfaces over a repository (in our case Fedora) that allow for the management of different types of content in the same repository
  – Hydra aims to support embedding by allowing a single repository to serve multiple needs
  – Hydra supports take-up through the flexible development of end user interfaces (create) that are designed for end user use according to content type
    • Management interfaces (edit/delete) are designed for repository staff use
• Hydra provides a framework to support adaptability
Four Key Capabilities

1. Support for any kind of record or metadata
2. Object-specific behaviors
   - Books, Images, Music, Video, Manuscripts, Finding Aids, <any>
3. Tailored views for domain or discipline-specific materials
4. Easy to augment & over-ride with local modifications
Hydra partnerships

• From the beginning key aims have been and are:
  – to enable others to join the partnership as and when they wished (MediaShelf LLC have since joined, Northwestern, and Notre Dame waiting in the wings)
  – to establish a framework for sustaining a Hydra community as much as any technical outputs that emerge
    • Establishing a semi-legal basis for contribution and partnership

• We hope Hydra in Hull will provide
  – a UK reference implementation
  – “local” knowledge that others can tap and learn from
  – the basis on which to develop a UK Hydra community
Content and delivery

• The Hydra project has developed a lot of guidelines around the organisation and structure of content which can then be implemented using its technology stack.
  – Although the guidelines could also be implemented using other technologies

• Technically, Hydra has been implemented using:
  – Fedora 3.x repository software
  – Ruby on Rails
  – Blacklight
  – Solr
  – Active Fedora and associated Ruby gems (MediaShelf LLC)
What about Hydrangea?

• Hydrangea was Hydra’s initial reference beta implementation
  – It served its purpose in getting the partners all up and running
  – It has now been deprecated

– For all current code availability
  • http://github.com/projecthydra
The technical bit

• See [http://prezi.com/1lmhfhcjhmm/ hydra-technical-framework/](http://prezi.com/1lmhfhcjhmm/ hydra-technical-framework/)

• See also [http://prezi.com/tf_dcoaatqz/hydra-at-or2011/](http://prezi.com/tf_dcoaatqz/hydra-at-or2011/) for an overview of the Hydra project overall, as given at OR2011
Why these technologies?

• Fedora
  – All Hydra partners are Fedora users
    • It was Fedora Commons that brought us together

• Solr
  – Very powerful indexing tool, as used by...

• Blacklight
  – Prior development at Virginia (and now Stanford/JHU) for OPAC
  – Adaptable to repository content

• Ruby
  – Agile development / excellent MVC structure / good testing tools
The home page is a fusion of the existing repository home page and a fairly standard Blacklight layout.

The repository security is multi-level and you only see what you are allowed to see. This is the ‘public’ view (note the resource types and ‘canned’ searches).

NB: all the screenshots are from our development server with only limited content for testing and currently missing the ‘advanced search’ option.
Logged in (here as a student) I see more.

Examination papers have appeared in the resources facet and I have more journal articles listed.

The ‘canned’ searches are different – chosen to match students’ needs.
Hydra in Hull search return

- Choosing a facet (here theses) generates a search return
- I can refine my search by choosing more facets and/or using the search bar.
- Normally the search bar starts a new search – but on a search return page it searches within the result set
Choosing an item gives me its ‘splash page’.

Different splash page layouts for different content types (here a PhD thesis)...

Link(s) at the right download the resource(s)

‘Show additional resources’ lets you view metadata in different formats
... here a splash page for a journal article (note the publication information at the bottom)

- For images (say) the splash page will be different again

- The QR code resolves to the splash page URL
Before incoming content is exposed it goes through a QA procedure. With an appropriate login, editing is available. Whilst splash pages normally show a sub-set of the available descriptive metadata, the QA team see it all.

This is part of the QA screen for the previous journal article.
Digital objects can, where appropriate, be created within the Hydra head by users with the necessary permissions (here an examination paper).

User sees a form only for the metadata we need from them and can upload only file types appropriate to the form of resource.

When they submit an object it goes into the QA queue before being made available to end users.

Extra metadata (MIME-type, filesize, etc auto-generated) ‘behind the scenes’
Usability

• Usability testing carried out using early read only implementation
  – “Immediately looks nicer than current version which is a bit clumsy. This is more professional”
  – “…this has cleaner look and gives more info at this stage.”
  – “Clear. “
  – “Good – look forward to something like this.”
  – “System looks simpler than catalogue and is good – would be good for the catalogue as well.”

• Plenty of advice on improvements as well, which we are endeavouring to address

• Few people, but valuable feedback
Contacts and links

Project Director: Chris Awre (c.awre@hull.ac.uk)
Project Manager: Richard Green (r.green@hull.ac.uk)

Blog:  http://hydrangeainhull.wordpress.com

Temporary test site:  http://hydra-test.hull.ac.uk

Watch this space:  http://hydra.hull.ac.uk (currently the original proof-of-concept site but will become the production site)

(Current repository:  http://edocs.hull.ac.uk)
Where to learn more...

Web:  http://projecthydra.org
Wiki:  http://wiki.duraspace.org/display/hydra
List:  hydra-tech@googlegroups.com
Code:  http://github.com/projecthydra/
JIRA:  https://jira.duraspace.org/browse/HYDRA
Meet:  Fedora UK&I meeting, Manchester, 15th September
       Hydra Camp, Minneapolis, October 2011
Thank you