A Plain English Description of the SOURCE project:
(Sharing Objects Under Repository Control with Everyone)
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The multimedia-cast version of this report is available at www.bbk.ac.uk/lib/life/source

A Plain English Summary of the SOURCE project

Birkbeck, University of London
As part of the Bloomsbury Colleges:

www.source.bbk.ac.uk

This 'plain-English' report is intended for anyone who wants a quick introduction to the project, but without the technical jargon or acronyms.

Intended audience: 1.) Bloomsbury College Consortium Members, 2.) Other JISC projects, 3.) virtual learning environment managers, 4.) digital repository managers and technicians, 5.) learning technologists, 6.) librarians, 7.) cataloguers, 8.) e-learning administrators, 9.) multimedia developers, 10.) e-learning developers, et al

Technical keywords: digital repository; learning object; content object model; application profile interface; service oriented architecture; open knowledge initiative; open service interface definition; JISC project.

For those interested in the technical developments please subscribe to our RSS feed on our web site or one of our team blogs: www.source.bbk.ac.uk

Context of the project:
The SOURCE project has been funded by the Joint Information Systems Committee (JISC) for two years as part of the Capital Programme, under the Tools and Innovations strand[i]. The project is based at Birkbeck College Library, and is working on behalf of the Bloomsbury Colleges Consortium which includes six colleges: The Institute of Education, The London School of Hygiene and Tropical Medicine, The Royal Veterinarian College, The School of Oriental and African Studies, The School of Pharmacy and Birkbeck College. Our other primary project partners are the National Learning Object Repository Jorum[ii] and the Open Knowledge Initiative[iii].

Project Aim:
The primary aim of the SOURCE project is to create a standard and commonly used repository "plug" which will enable a bulk-migration tool to "plug-in" and automatically transfer content from one repository to another; this is reflected in the name of the project: Sharing Objects Under Repository Control with Everyone. This project will therefore create two new tools to use with digital repositories.

Aim: To create an interoperable repository "plug" which will enable a bulk-migration tool (or any other service tool) to "plug-in" and automatically transfer content from one repository to another.

The first tool SOURCE will create is plug that will allow data to move out of the repository in a format that other repositories and services can immediately understand and will therefore enable a commonly understood method ("plug") for access to the repository. The idea behind having a common defined plug is for the sake of enabling future tools and services to also use this plug. This type of 'interoperable plug' will assure that repositories do not develop customized plugs that require adapters for new tools and services (analogous to electrical plug adapters required whenever travelling abroad). This plug will be created according to the Open Knowledge Initiatives definition for a repository service interface[iv].
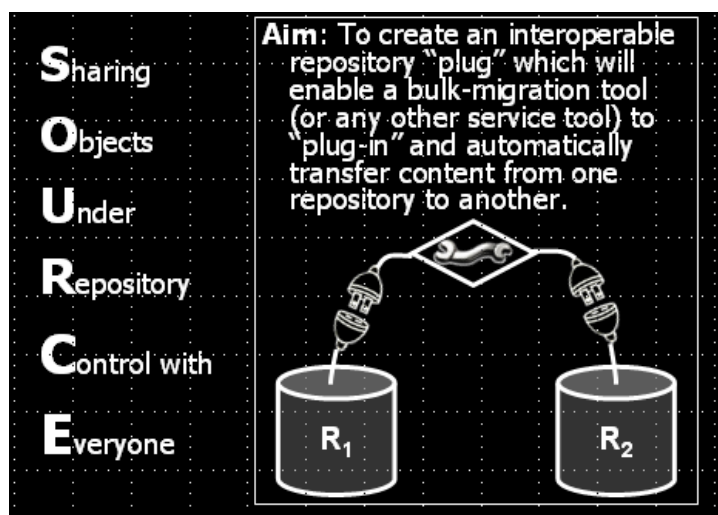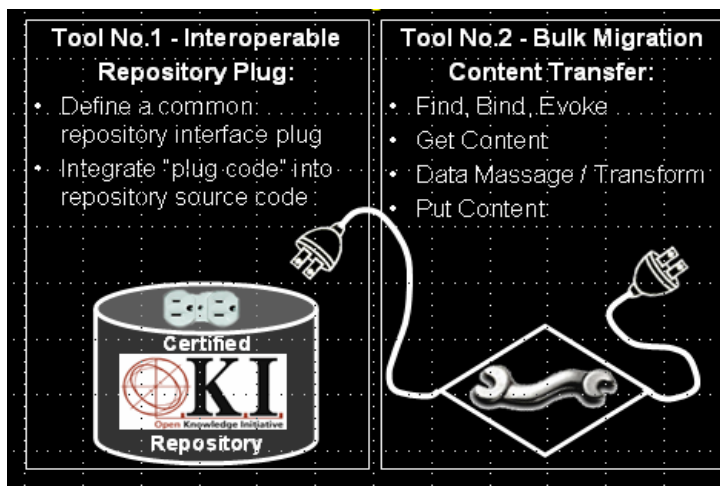
The second tool to be created will be a bulk migration tool that can plug into the common repository plugs of two or more repositories and migrate content interchangeably from one repository to another. This tool will also require the examination of different objects and how they should be represented and described in a repository. This tool has the potential to also act as a data massage tool that can transform content into new forms and representations as it gets and puts content between repositories. For example, this would be an opportunity to transform multimedia content with enhanced description and granularity for greater reuse.

So what is the point of creating a tool that can move content from one repository to another? The effect we want to see this tool have on UK higher education can be reflected in the set of outcomes or vision statements we have for this project.

Project Outcomes and Vision:
Depending on your point of view, the overall affect that we want this project to have on UK HE is a *more* competitive and open digital repository environment: one that encourages institutions to try repositories without having to fear that their content will be "locked in" (parallels can be drawn with the current state of VLEs); in addition we see this competitive repository environment as beneficial to the repository vendor who can further specialise for their users/customers and not try and be everything to everyone (the 80/20 rule being a good benchmark to set). The Open Source Repository Community can also benefit from this project by enabling them to develop interoperable standards side-by-side with vendor repositories without having to keep pace with all "the latest cutting-edge" features and functionality. The HE/FE administrator(s) benefits the most by encouraging this type of "service oriented architecture", as it directly acts as a way to free up the institution's intellectual digital property for use in other systems beyond that of a Virtual Learning Environment or single Institutional Repository; other systems like the library catalogue and student/staff directory along with future technologies such as image management systems and Wikis are made available for collaboration and greater reuse.

Which Repositories Should We Use?
So which repositories will we be examining? As of the start of the SOURCE project, we have agreement from three vendor repositories that they will participate and integrate these tools into their systems. This includes: Harvest Road's Hive[v], Intralect's Intralibrary[vi] and The Learning Edge's Equella[vii]. The SOURCE project will also work with one Open Source repository to develop tools for integration. Thus far it is the Open Source Fedora[viii] repository service which offers the most extensibility for development. However, prior to selecting the repositories that SOURCE will work with, we will survey the higher education community to establish which repositories are most likely to be the most significant in years to come. It is important to note that documentation and support for other repositories that wish to create SOURCE tools for their architecture will be provided via the Open Knowledge Initiatives web site and SourceForge.

Other platforms that will be considered and examined for interoperability will be Content Management Systems by Blackboard, WebCT, Moodle, and Sakai: all of which have repository functionality partially built into their systems.

The Opportunity for Bloomsbury:
The significant opportunity that exists for Bloomsbury within this project is the opportunity to evaluate repositories and their use within the context of the Bloomsbury Colleges. This evaluation provision has been built into the project budget and JISC is keen to see this type of consortium collaboration.

The evaluation committee that the SOURCE project will host on behalf of Bloomsbury is for the purpose of evaluating the opportunities to share resources for a consortium based digital repository. This includes examining the opportunities for sharing:

- Staff (repository manager, programmers, developers)
- Hardware (servers, computers)
- Software (vendor repository, other repository services)
- Metadata / Cataloguing (metadata application profiles, cataloguing workflows)
- Digital Content (reuse of digital content, especially multimedia content)

In addition, this committee would be well paced to evaluate the digital content that is in critical need of management throughout the Bloomsbury Consortium including: ePrints/eDocs, images, personal development portfolios, learning objects, multimedia assets and data sets.

Project Evaluation Framework:
The project will have three overall evaluation committees. The UK Higher Education Committee will be evaluating the applicability and usability of this tool for the higher education community. Its job will be to align the tools that this project creates with other projects and platforms taking place throughout the HE e-infrastructure.

Project Evaluation Committees

UK Higher Education Evaluation Committee:
• Ryan Hargreaves –Jorum (Learning Content Management System)
• Sarah DeFritas – London Knowledge Lab, (Learning Management Systems)
• Tom Boyle – London Metropolitan (Technical Learning Design)
• John Casey – University of Ulster, Trust DR (Pedagogical Learning Design)
• Martin Moyle – University College London, ePrints (Research Repositories)

Bloomsbury Consortium Evaluation Committee:
• Birkbeck
• School of Oriental and African Studies
• London School of Hygiene and Tropical Medicine
• Institute of Education
• School of Pharmacy
• Royal Veterinarian College

Birkbeck College Evaluation Committee:
• Library
• Central Computing Services
• Learning Technology Dept
• Centre for Learning and Professional Development
• eLearning Group

The Bloomsbury Evaluation Committee is in place to evaluate the repositories and their applicability to the Bloomsbury Learning Environment Framework. The primary objective being a shared repository infrastructure built upon the successful BLE framework and shared services.

Birkbeck will also maintain quality control by evaluating the repository with its own evaluation committee whose job will be to put forward its position on a repository to the Bloomsbury Evaluation Committee.

Bloomsbury Evaluation Committee Aims and Objectives:
As for responsibilities of the committee, the primary aim is to evaluate and make recommendations for a shared consortium digital repository including opportunities for sharing staff, hardware, software, metadata/cataloguing, and content. So as to have minimum impact on the busy lives of Bloomsbury College Members, the group will look to piggy-back on top of the BLE technology team meeting (a post meeting group with members of the steering committee attending). Objectives for the committee include:

- To evaluate the potential ingest and digest of Bloomsbury specific objects into the repositories
- To observe demonstrations by vendors and the SOURCE team regarding workflow and administration models.
- To recommend potential Bloomsbury repository models including financial sustainability frameworks.

In general the members of the committee will help identify user case studies, questions (in regard to their specific institutional practices) and flag problems (in regards to pedagogical or technological practices).

Timeline:
Over the course of the two years the SOURCE project will make provision and demonstrate ingest and digest of predominate digital collections from throughout the Bloomsbury Colleges Consortium:

- Year One:
  - Organisation of exemplar Bloomsbury digital collections
  - Creation of framework for evaluating the digital repositories
- Year Two:
  - Testing of objects and collections
  - Recommendations for a shared repository

Project Needs:
There are three things that the SOURCE project requires from each of the Bloomsbury Colleges:

1.) Two committee members to sit on a once a term evaluation committee as previously outlined: One from the learning technology department and one from the library. The reason for this is the overall need for cohesion between these two departments if this project is going to be successful and sustainable[ix]. The evaluation committee would also be glad to take on any additional pedagogical support or viewpoint as the primary user of a repository at first will be the lecturer who will be using these digital objects for their teaching and research.

2.) The second need of the project is digital objects that represent digital collections that are in crucial need of being managed within each of the colleges. This will enable the SOURCE team to prep the repositories for demonstrations on how these kinds of objects can be managed.

3.) The final request of the project is for the temporary use of any complex multimedia objects, as the tools that this project will create are primarily concerned with multimedia content which have a high propensity for reuse.

Conclusion:
This opportunity to examine digital repositories within a consortium environment is essential if we are to benefit from the experience of one another as we begin to create the digital collections that will be used for years to come. Furthermore, the potential to reuse digital content within each of our institutions –or even across the consortium- is a future that we must begin exploring and utilising as soon as possible. The SOURCE project gives us this opportunity to take the next step towards digital collection management and preservation.

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[i] http://www.jisc.ac.uk/whatwedo/programmes/programme_capital.aspx

[ii] http://www.jorum.ac.uk/

[iii] http://www.okiproject.org/

[iv] http://en.wikipedia.org/wiki/Osid

[v] http://www.harvestroad.com/products/hive.cfm

[vi] http://www.intrallect.com/products/

[vii] http://www.thelearningedge.com.au/

[viii] http://www.fedora.info/

[ix] This primarily goes towards the need for shared participation in metadata creation for digital objects, which are the primary cost for any repository sustainability model.