

# JISC DEVELOPMENT PROGRAMMES

## Project Document Cover Sheet

### STARGATE PROJECT PLAN

<b>Project Acronym</b>	STARGATE	<b>Project ID</b>	
<b>Project Title</b>	Static Repository Gateway and Toolkit: Enabling small publishers to participate in OAI-based services		
<b>Start Date</b>	1st Oct 2006	<b>End Date</b>	31 May 2006
<b>Lead Institution</b>	Centre for Digital Library Research, University of Strathclyde		
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<b>Partner Institutions</b>	Heriot Watt University <i>Journal of Digital Information</i> Professor Tom Wilson ( <i>Information Research: an international electronic journal</i> ) Library & Information Research Group ( <i>Library &amp; Information Research</i> ) CILIPS/SLIC ( <i>Information Scotland</i> )		
<b>Project Web URL</b>	<a href="http://cdlr.strath.ac.uk/stargate/">http://cdlr.strath.ac.uk/stargate/</a>		
<b>Programme Name (and number)</b>	JISC PALS II Metadata & Interoperability Projects ITT		
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## Document

<b>Document Title</b>	<i>Stargate Project Plan</i>		
<b>Author(s) &amp; project role</b>	Jane Barton (Project Director); Alan Dawson (Technical Director); R. John Robertson (Project Officer)		
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## Document History

Version	Date	Comments
1	31/10/2005	Draft Project Plan submitted to JISC
1.1	09/11/2005	Revised Project Plan submitted to JISC

# STARGATE

**(Static Repository Gateway and Toolkit:  
Enabling small publishers to participate in OAI-based services)**

## Project Plan

### *Overview of Project*

#### **1. Background**

The STARGATE project will explore the use of static repositories as a means of exposing publisher metadata to OAI-based disclosure, discovery and alerting services within the JISC IE and beyond. Static repositories were developed as an alternative to fully fledged OAI-compliant repositories [1] and have been implemented successfully within the Open Language Archives Community [2] as a means of widening participation in OAI-based systems and services. Their use in the HalRST project was highlighted as one of the key pieces of learning from the JISC's FAIR Programme [3].

The project is predicated on the same argument as, and builds on the technical architecture developed by, the PALS I project carried out at Heriot Watt University in 2003 [4]. Specifically, it will implement a series of static repositories of publisher metadata, demonstrate the interoperability of the exposed metadata through harvesting and cross-searching via a static repository gateway, and conduct a critical evaluation of the static repository approach with publishers and service providers.

The project brings together an experienced technical team and a group of publishers representative of the type that might require an even simpler approach to the exposure of its metadata and yet sufficiently familiar with the concepts of metadata-driven information access, standards compliance and interoperability to be able to contribute to an informed evaluation of the approach adopted within the project.

#### **2. Aims and Objectives**

The project's primary aim will be to lower the technical barriers to the implementation of OAI-compliant repositories, thereby enabling small publishers of electronic resources to participate more readily in OAI-based disclosure and delivery services within the JISC IE and beyond.

The project will have two key objectives:

1. To build an interoperability demonstrator based around the static repository gateway developed in the HalRST project and dovetailing with the OAI-based architecture developed in PALS I.

It will incorporate a series of static repositories containing metadata from a range of small e-journal publishers, and will enable an exploration of the issues surrounding the deployment of this technology and its applicability to the exposure of publisher metadata via OAI-PMH.

It will also expose publisher metadata via the static repository gateway to the HalRST ARC harvester [5] for aggregation with other publisher metadata and other related repositories, and to the EEVL Xtra service [6] for cross-searching alongside a range of relevant resources. Other opportunities to test and/or demonstrate the interoperability of the exposed metadata will be sought during the project.

Static repositories will initially be hosted and managed centrally, although by the end of the project it is likely that at least one will be hosted and managed by the publisher. Persistent URIs will be used to provide access to the full text of articles, which will continue to be hosted by the publisher, although if possible the potential for the full text to be incorporated into the static repository will be explored.

2. To develop tools and guidelines that will facilitate the implementation of static repositories by small publishers that wish to expose their metadata to OAI-based services.

Tools to be developed within the project will include documented case studies as described above, scripts to convert various metadata sources into OAI-compliant static repositories, and templates to create DC-compliant metadata sources suitable for conversion.

Guidelines will take the form of a critical analysis of the static repositories approach to exposing publisher metadata, including an evaluation of project experiences, a comparison with alternative approaches to exposing publisher metadata, and recommendations on how and in what circumstances publishers and/or services might implement the static repositories approach.

These tools and guidelines would not only form the basis of a toolkit for publishers, but would also be a valuable resource for services that seek to broaden the range of information available to their users, either by advocacy or by providing technical support and/or hosting facilities for publishers.

### **3. Overall Approach**

The initial phase of the project will receive or capture metadata from publishers, process it and set up static repositories for each of the journals. It is likely that this will involve processing the data through a simple database and may involve data manipulation. These static repositories will then be registered with a gateway and exposed to the wider Information Environment. They will then also be harvested by the HaiRST harvester and made available for cross-searching by EEVL Xtra.

Towards the end of this period the initial meeting with project partners will take place to review and reflect on the process of setting up the repositories. Subsequent to their set-up some initial dissemination and interim reporting will take place.

This will be followed by a period of desk-based research, which alongside the experiences of project partners using other methods of exposing OAI metadata will form the basis of the comparative elements of the study.

Following this the second seminar will take place discussing the suitability of the SR approach for the publishing community and further dissemination and final reporting will take place.

### **4. Project Outputs**

The main project deliverables will be as follows:

1. Interoperability demonstrator – based on persistent URIs and OAI-PMH – to include:

- a series of static repositories containing publisher metadata;
- a gateway in which static repositories are registered;
- harvesting of publisher metadata using HaiRST's ARC harvester;
- cross-searching of publisher metadata using the EEVL Xtra service.

2. Tools and guidelines – to include:

- a series of case studies documenting the setting up of the static repositories;
- an initial suite of tools that could form the basis of a static repositories toolkit for publishers;
- a critical analysis of the static repositories approach to exposing publisher metadata, including:
  - an evaluation of project experiences;
  - a comparison with alternative approaches to exposing publisher metadata;
  - recommendations on how and in what circumstances publishers and/or services might implement the static repositories approach.

Project reporting will be as set out in the tender document: a project plan will be submitted by the end of October 2005, an interim report by the end of February 2006 and a final report by the end of May 2006.

Project deliverables, including the components of the demonstrator, will be made available in the short term via the project web site. In the longer term, access to documentary deliverables will be via the project web site, which will be maintained for at least three years by CDLR, and via the JISC. Long term availability of the interoperability demonstrator cannot be guaranteed, as some of its components are part of the general technical infrastructures of CDLR and ICBL, and may be redeveloped or redeployed at any time.

## 5. Project Outcomes

### Benefits to UK HE and FE

The primary benefit to the JISC community will be the improved visibility of and access to the publications of smaller publishers. A second key benefit will be the lowering of barriers to participation in JISC IE disclosure and discovery systems for the many small publishers based within HE and FE institutions.

Although the project will initially focus on e-journals, the approach also lends itself to other types of publishing, including e-books, e-learning materials and other digital resources, and consequently its investigation will unlock an even broader range of benefits for the JISC community.

### Contribution to JISC development programmes

The project will make a valuable contribution both to the aim of this call for proposals and to other JISC development programmes. In particular, it will build on the work of the PALS I programme to highlight and explore some of the issues facing smaller publishers and demonstrate one approach which might enable them to contribute to interoperable metadata-based services. Also, it will build on work done in the FAIR and Portals programmes and complement the development work currently underway in the Digital Repositories programme, in particular the PerX and IRIScotland [12] projects.

### Other benefits

In addition to delivering benefits for UK HE and FE institutions and for the JISC as outlined above, the project deliverables will also be of value to the wider publishing community, and particularly to smaller publishers and those who are reluctant to invest in metadata interoperability. The demonstrator will be useful for advocacy purposes and as an aid to implementation, whilst the toolkit and guidelines will assist publishers who wish to expose their metadata via OAI to select and implement a suitable approach.

## 6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
CDLR	Project provides chance to explore issues in Static Repository technology and the foundation of OAI-based communities	High
Publishers involved in project	Project provides improved visibility and accessibility of their publications	High
ICBL (PerX and EEVL Xtra)	Project provides opportunity to consolidate and expand cross-searching work and evaluate the use of static repositories	High
Wider publishing community	Project provides opportunity to assess the viability of the technology as a means of participating in the Information Environment and other services	Medium
JISC development Programmes	Project provides opportunity to assess the viability of the technology and its contribution to enhancing the Information Environment	Medium
UK HE and FE	Project provides opportunity to develop technical infrastructure and to improve access to publications	Medium/ Low
OAI implementers' community	This is a new application of static repository technology	Medium/ High

## 7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Staffing	2	5	10	There are other suitably qualified staff within CDLR who could assist if need be. Project work could be concentrated into a shorter period by allocating staff on a full-time basis.
Organisational – publisher withdrawing	2	3	6	The involvement of multiple publishers offsets the risk of one of them withdrawing. Other publishers could also be recruited if required.
Organisational – ICBL withdrawing	1	3	3	Several staff at ICBL have an active interest in the technology.
Organisational – publisher delays	3	2	6	The involvement of multiple publishers offsets the risk of delays with one of them.
Technical	1	5	5	Protocols and technical infrastructure already established in a test environment
Legal –IPR issues over metadata	2	2	4	Publishers have given explicit consent to use and re-expose metadata

## 8. Standards

Name of standard or specification	Version	Notes
OAI PMH	2.0	
OAI SR	2.0	
OAI SR Gateway	2.0	
DC Metadata Element Set	1.1	

## 9. Technical Development

As indicated the project will take a standards-based approach to the development of static repositories for articles from a journal issue, it will expose these repositories in a gateway and test their interoperability. The project will use existing technical infrastructure including suitable back-up mechanisms and practice.

The project will document the development of the repositories as part of the case-study deliverables.

## 10. Intellectual Property Rights

As the project is based within a HE institution, project deliverables will be freely available to the JISC community and IPR for project deliverables will rest with the JISC.

IPR for any research papers and journal articles, which draw on project findings but are not in themselves project deliverables, will rest with authors and their institutions as appropriate.

The project participants have explicitly granted the project the right to use and re-expose their article-level metadata in their letters of support.

## *Project Resources*

## 11. Project Partners

The project will be led, and the bulk of the work carried out, by the Centre for Digital Library Research (CDLR) at the University of Strathclyde. Four small publishers of e-journals will participate in the project by providing access to article-level metadata, testing components of the toolkit and

contributing to a critical evaluation of the static repositories approach to exposing publisher metadata to the wider community.

Publishers of the following e-journals have agreed to participate:

- Journal of Digital Information (JoDI) – published by Texas A&M University, edited by Prof Cliff McKnight of Loughborough University – international peer-reviewed open access journal, available in electronic format only [7];
- Information Research – independently published and edited by Prof Tom Wilson – international peer-reviewed open access journal, available in electronic format only [8];
- Library and Information Research (LIR) – published by CILIP's Library and Information Research Group, edited by Lizzie Gadd of Loughborough University – mix of peer reviewed and practitioner articles, available in print on subscription and in electronic format on open access [9];
- Information Scotland – published by SLIC on behalf of CILIPS – professional journal, available in print on subscription and recently also in electronic format via the SAPIENS service [10].

These publishers represent a range of journal types and methods of publication. All are enthusiastic about the concept of exposing their metadata to aggregators, cross-searching services, etc, and are already exposing article-level metadata in some way, or developing the means to do so. None of these publishers currently has an OAI-compliant repository in house and all but one do not have the staff skills and resources necessary to develop their own repository.

Colleagues at Heriot Watt University have also agreed to participate in the project by cross-searching the metadata exposed via the static repositories gateway using EEVL Xtra, and by providing feedback on the static repositories toolkit in the context of the PERX project's advocacy role among publishers of engineering journals, particularly professional and trade publications [11].

## 12. Project Management

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## 13. Programme Support

We would appreciate advice about other venues of dissemination to the publishing community from the programme steering group. In particular we would like to know about publications, email lists, and conferences serving small to medium publishers that we should consider targeting.

We believe that technologies underpinning this project are of particular interest to the digital repositories programme and would appreciate advice about the best way to interact with that programme strand and promote mutual awareness.

## 14. Budget

We have added the time of a project consultant and the ICT infrastructure to support the project as an institutional contribution to the budget.

## Detailed Project Planning

### 15. Workpackages

See Appendix B

### 16. Evaluation Plan

During the project there will be two formative evaluations of the project in the form of the two seminars. Specifically these will be a seminar with project partners on the experience of setting up static repositories, and a seminar with project partners, and the wider community of publishers and service providers about the utility of the technology.

The success of the project will largely be dependent on the reaction of the participating publishers and the wider publishing, service providing, and OAI communities. Though the response of the participants will be assessed in the seminars and final report, the wider success of the project can not be evaluated within the project as it is dependent on the uptake of the technologies within the interested communities. A degree of early evaluation will be available through the reaction of other projects such as PerX.

### 17. Quality Plan

The progress of the project and its approach will be assured through the following means:

- Project administration
  - The project plan
  - The interim report
  - The final report
- Internal CDLR management structures and monitoring mechanisms (including monthly staff meetings)
- Formative evaluations
  - Seminar one
  - Seminar two
- Peer review of publications for dissemination
- We would also welcome and collaborate with any programme wide evaluation sponsored by JISC

### 18. Dissemination Plan

Timing	Dissemination Activity	Audience	Purpose	Key Message
Nov/Dec 05	Initial web site	General	Awareness raising	Project aims and objectives
Nov/Dec 05	Announcements on mailing lists	General	Awareness raising	Project aims and objectives
Jan-May 05	Webpage	General	Access to project outputs	Project overview and outputs
Feb 06	Seminar one	Project partners	Reporting initial findings and inviting feedback	Issues relating to set up and use of SRs, resulting interoperability
Feb 06	Interim Report	JISC and general	Project reporting	Progress and initial findings
Mar 06	Case studies	General	Documenting set up and use of SRs	How to and lessons learnt
Apr 06	Seminar two	Project partners, publishers, service providers	Reporting key findings and inviting feedback	Issues relating to set up and use of SRs, resulting interoperability
May 06	Final Report	JISC and general	Project reporting	Progress and final

				recommendations
May 06	Technical paper	OAI/technical community	Raising awareness of SR application	Application of SRs to non-static content
May 06	Paper for publishing community	Publishing community	Raising awareness of SR application	SRs as means of exposing metadata to JISC IE
Jun 06	EIPub conference paper	Cross-domain audience	Raising awareness of SR method and application	SRs as solution to problem of technical overhead

## 19. Exit and Sustainability Plans

Project Outputs	Action for Take-up & Embedding	Action for Exit
Reports and case studies	Publicise availability	Deliver to JISC; put on website
Tools and guidelines	Publicise availability	Package to support further community development and use
Demonstrator	Not sustained within CDLR infrastructure	Document to support further community development and use

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
Reports	Experience of use of SR technology	Make available on website for at least three years	
Tools and guidelines	Basis for possible future development	Make available to wider community for development	Sustainability will be dependent on demand by publishers. Demand is dependent on the success of the project and appropriate advocacy
Demonstrator	Proof of concept only	Make documentation available to wider community for development	Sustainability will be dependent on demand by publishers

## 20. References

- [1] Hochstenbach, P. et al. (2003) *The OAI-PMH static repository and static repository gateway*. Available from: <http://public.lanl.gov/herbertv/papers/jcdl2003-submitted-draft.pdf>
- [2] Open Language Archives Community (OLAC) Static Repository Gateway. <http://www.language-archives.org/sr>
- [3] Brophy, P. (2005) *HalRST Project summative evaluation: report*. Manchester: CERLIM.
- [4] PALS I Project: OAI-compliant Metadata Repository for a Specialist Publisher of E-journals. [http://www.eevl.ac.uk/projects\\_503.htm](http://www.eevl.ac.uk/projects_503.htm)
- [5] HalRST arc harvester. [http://speirserver.cdrl.strath.ac.uk:8088/arc/hairst\\_search.jsp](http://speirserver.cdrl.strath.ac.uk:8088/arc/hairst_search.jsp)
- [6] MacLeod, Roddy. (2005) *EEVL Xtra: the hidden web at your fingertips*. Ariadne, Issue 44, July 2005. Available from: <http://www.ariadne.ac.uk/issue44/eevl/>.
- [7] Journal of Digital Information (JoDI). <http://jodi.tamu.edu/>
- [8] Information Research. <http://informationr.net/ir/>
- [9] Library and Information Research (LIR). <http://www.cilip.org.uk/specialinterestgroups/bysubject/research/publications/journal>
- [10] Information Scotland. <http://www.slainte.org.uk/publications/serials/infoscot/contents.html>
- [11] Pilot Engineering Repository Xsearch (PerX) Project. <http://www.icbl.hw.ac.uk/perx/>
- [12] Institutional Repositories Infrastructure for Scotland (IRIScotland) Project. [http://www.jisc.ac.uk/index.cfm?name=project\\_iriscotland](http://www.jisc.ac.uk/index.cfm?name=project_iriscotland)



## Appendix B. Workpackages

WORKPACKAGES	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
<b>1: Project Administration</b>								
<b>2: Technical Development</b>								
<b>3: Analysis and Evaluation</b>								
<b>4: Dissemination</b>								

Key milestones and deliverables	Oct05	Nov05	Dec05	Jan06	Feb06	Mar06	Apr06	May06
Project planning								
Awareness raising								
Gather and prepare metadata from publishers								
Create and register SRs for each publisher								
Test interoperability via harvesting and cross-searching								
Document setting up of SRs								
Initial evaluation of SR approach								
Seminar 1 (dissemination / evaluation - partners only )								
Interim report								
EIPub paper								
Further investigate SR approach								
Consolidate SR toolkit components & documentation								
Further evaluation of SR approach								
Comparative analysis of SR approach								
Draw up guidelines for publishers & wider community								
Seminar 2 (dissemination / evaluation - partners & wider community)								
Papers for publishing and technical communities								
Final report								

Project start date: 01-10-2005

Project completion date: 31-05-2006

Duration: 8 months

Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
<b>WORKPACKAGE 1: Project Administration</b>					
<i>Objective: Manage project</i>					
1. Project plan	01/10/05	31/10/05	<b>Project Plan</b>		JB/JR
2. Interim Report	01/02/06	28/02/06	<b>Interim Report</b>		JR
3. Final Report	01/05/06	31/05/06	<b>Final Report</b>		JR
4. Internal management meetings	01/10/05	31/05/06	Effective project management		AD/JR
5. Liaison with project partners	01/10/05	31/05/06	Effective partnership		JB/JR
<b>WORKPACKAGE 2: Technical Development</b>					
<i>Objective: Develop and document SRs, gateway, and associated tools</i>					
6. Gather metadata	01/11/05	30/11/05		Article-level metadata acquired	JB/JR and publishers
7. Prepare metadata for upload	01/11/05	31/12/05		Article-level metadata ready for upload	AD/JR
8. Create and populate SRs for publishers	01/12/05	31/01/06	<b>SRs created</b>		AD/JR
9. Register SRs with gateway	01/12/05	31/01/06	<b>SRs registered with gateway</b>		AD/JR
10. Demonstrate harvesting from gateway	01/01/06	31/01/06	<b>Successful harvest</b>		AD/JR
11. Demonstrate cross-searching via EEVL Xtra	01/01/06	28/02/06	<b>Successful cross-search</b>		AD/JR and ICBL
12. Upload a second issue for at least one journal	01/01/06	31/03/06		Updated SR; Workpackage 3 informed	AD/JR
13. Explore limits and customisability of SR	01/02/06	31/03/06		Information gathered;	AD/JR and

approach				Workpackage 3 informed	publishers
14. Document technical development and prepare case studies	01/12/05	30/04/06	Case studies and technical documentation	Case studies and documentation made available	AD/JR
15. Prepare tools for dissemination	01/02/06	30/04/06	Tools	Tools made available	AD/JR
<b>WORKPACKAGE 3: Analysis and Evaluation</b>					
<b>Objective: Analyse and evaluate SR approach</b>					
16. Evaluate the process of creating SRs	01/01/06	31/03/06	Seminar one (evaluation element)	Findings documented and guidelines informed	AD/JR
17. Evaluate the results of exposing metadata via SRs	01/01/06	31/03/06			AD/JR
18. Compare SR approach with alternatives (ease of implementation)	01/03/06	30/04/06	Seminar two (evaluation element)	Findings documented and guidelines informed	AD/JR
19. Compare SR approach with alternatives (effectiveness)	01/03/06	30/04/06			AD/JR
20. Make recommendations on circumstances in which SR approach may be useful	01/04/06	31/05/06	Guidelines drawn up	Guidelines disseminated	JR
21. Make recommendations on how publishing community can develop SR approach further	01/04/06	31/05/06			JR
<b>WORKPACKAGE 4: Dissemination</b>					
<b>Objective: Raise awareness about the project and disseminate results and recommendations</b>					
22. Initial website creation	01/11/05	30/11/05		Basic website live	JB/JR
23. Ariadne article to announce and describe project	01/11/05	31/12/05		Article published	JB/JR
24. Announcements on mailing lists	01/11/05	31/12/05		Announcements made	JB/JR
25. EIPub abstract and paper	01/11/05 01/02/06 14/06/06	21/11/05 28/02/06 16/06/06	Paper delivered at EIPub conference		AD/JB/JR

26. Seminar one (dissemination element)	01/01/06	15/02/06	Seminar one (dissemination element)		JR
27. Seminar two (dissemination element)	01/03/06	15/04/06	Seminar two (dissemination element)		JR
28. Practitioner paper (publishing community)	01/04/06	31/05/06		Paper written and submitted	AD/JR
29. Practitioner paper (technical community)	01/04/06	31/05/06		Paper written and submitted	AD/JR
30. Participation in JISC programme meetings	01/11/06	31/05/06		Communication with other projects	JR

Members of Project Team:

AD = Alan Dawson  
 JB = Jane Barton  
 JR = John Robertson