FOI Withheld Information Form

We would like JISC to consider withholding the following sections or paragraphs from disclosure should the contents of this proposal be requested under the Freedom of Information Act.

We acknowledge that the FOI Withheld Information Form is of indicative value only and that JISC may nevertheless be obliged to disclose this information in accordance with the requirements of the Act. We acknowledge that the final decision on disclosure rests with JISC.

Section / Paragraph No.	**Relevant exemption from disclosure under FOI**	**Justification**
none		

Please see http://www.ico.gov.uk for further information on the Freedom of Information Act and the exemptions to disclosure it contains.

E-Learning Proposal Cover Sheet

Cover Sheet for Proposals (All sections must be completed)	***JISC Capital Programme***

Name of Capital Programme: e-Learning

Bid for Call:
(Please tick ONE BOX ONLY, as appropriate)

Supporting lifelong learning

☐	**Call I – HE in FE**				

Technical developments to support learning and teaching

	Call II – Assessment ☐ **a)** Item Authoring Tool ☐ **b)** Item Bank Software ☐ **c)** Assessment Delivery Tool		**Call IV – Admissions demonstrators** ☐ **a)** structured personal profiles, course entry profiles and pre-assessment; ☐ **b)** improving applicant feedback; ☐ **c)** accreditation of prior experiential learning; ☐ **d)** e-portfolio based admissions.	☐	**Call VI – Course validation**
☐	**Call III – Technology supported learning environments**	✚	**Call V – Course description and discovery**	☐	**Call VII – Domain maps**

Name of Lead Institution:	Oxford University
Name of Proposed Project:	OXCRI: integrated use of XCRI at Oxford University
Name(s) of Project Partner(s):	

Full Contact Details for Primary Contact:

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Length of Project: **5 months**

Project Start Date:	1st March 2007	**Project End Date:**	1st August 2007

Total Funding Requested from JISC: £9,809

Funding Broken Down over Financial Years (April – March):

Apr06 – Mar07	Apr07 – Mar08	Apr08 – Mar09
£1,930	£7, 879	

Total Institutional Contributions:

Percentage Contributions over the Life of the Project:	**JISC** **60%**	**PARTNERS** **40%**

Outline Project Description

Oxford University Computing Services, working with Oxford University Careers Service and Department of Continuing Education, will create web services using SOAP and REST to deliver information about CPD courses from university departments using the XCRI format. This will cover public courses and internal staff and student development courses. The work will include a review of the XCRI schema against local practice, development of templates for delivering XCRI from databases, and a local integrated service.

I have looked at the example FOI form at Appendix A and included an FOI form in the attached bid (Tick Box)	**YES X**	**NO**
I have read the Circular and associated Terms and Conditions of Grant at Appendix B (Tick Box)	**YES X**	**NO**

OXCRI — integrated use of XCRI at Oxford University

Sebastian Rahtz *November 2006*

1 Introduction

1. Oxford University Computing Services, working with Oxford University Careers Service and Department of Continuing Education, will create web services using SOAP and REST to deliver information about CPD courses from university departments using the XCRI format. This will cover public courses, and internal staff and student development courses. The work will include a review of the XCRI schema against local practice, development of templates for delivering XCRI from databases, and a local integrated service.

2. The OXCRI work will meet the needs of the JISC programme by providing a test of XCRI against a very diverse range of course types.

3. The JISC-funded project will form part of a larger program of work at Oxford looking at course management using XCRI.

4. The project will last for 5 months from March 1st 2007.

2 Project Description

5. The emphasis in this test of XCRI for JISC is on the diversity of courses at Oxford University which will be examined by the work. The courses have a variety of learning methods (entirely online, assisted by online resources, entirely face to face), and a variety of learning outcomes (technical training, CPD, diplomas, degrees, and post-graduate degrees). Some courses (from Continuing Education) are degree components, others may be a 1 hour refresher on using Powerpoint.

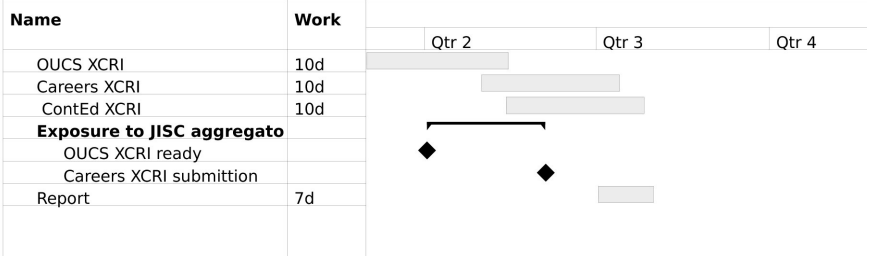
6. The development of XCRI will use the XCRI Course Advertising Profile, and discussion of this against the R1.0 schema will be included in the report.

7. The OXCRI project will provide JISC with a test of a rich variety of course descriptions from several distinct university departments. It is based on existing experience of XCRI output from different databases.

2.1 Project plan and methodology

8. The project will be conducted under the project methodology and management of Oxford University Computing Services. Work will use the software environment and development servers of the web services team. The work will take place in five overlapping parts, described below.

WBS	Name	Start	Finish	Work	Duration
1	OUCS XCRI	Mar 1	May 15	10d	60d
2	Careers XCRI	May 1	Jul 13	10d	60d
3	ContEd XCRI	May 14	Jul 26	10d	60d
4	**Exposure to JISC aggregator**	**Apr 2**	**Jun 4**		**45d**
4.1	OUCS XCRI ready	Apr 2	Apr 2	N/A	N/A
4.2	Careers XCRI submittion	Jun 4	Jun 4	N/A	N/A
5	Report	Jul 2	Jul 31	7d	24d



9. Software will largely be written in PHP 5, as this is the common development language between the collaborating departments. If necessary, test web service consumers will also be developed. XML generated will be validated against two XML parsers.

10. In additional to the main development, we will investigate the storage of XCRI in an XML database (eXist or Berkeley DB XML) and exposure to the aggregator using web services utilizing XQuery.

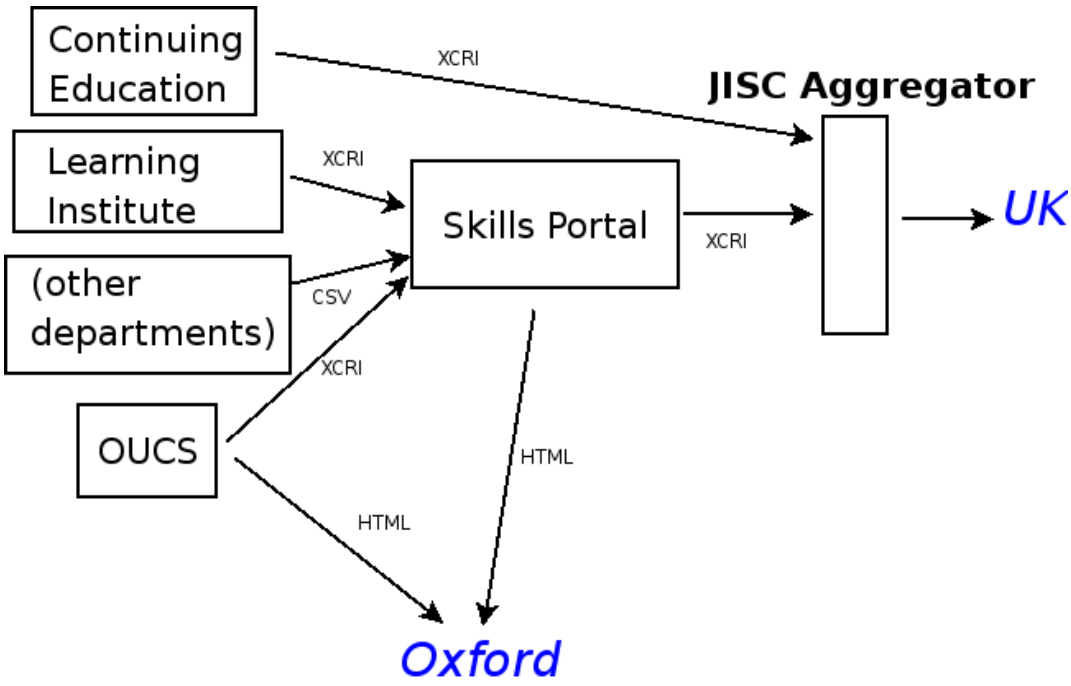


Figure 1: *

Course information flow for OXCRI

2.1.1 OUCS XCRI generator

11. This work package will produce a robust, template-based, retrieval from the Oxford University Computing Services (OUCS) course database of all its public presentations. The retrieval will be written in PHP using the Smarty templating package against a Postgres SQL database. It will be available as REST and SOAP web services, supporting:

1. selection of courses added or modified after the specified date
2. selection of courses with matching ID
3. filtering courses by keyword
4. filtering of courses between given start and end dates
5. filtering of courses by category

The course database describes c. 800 course objects. Many of these are private one-off courses, but over 200 are regularly presented. In many cases there are multiple presentations during the year, and each presentation may have multiple sessions. Prerequisites, levels, keyword categorization, teaching resources (people and rooms) are all recorded. Summary and complete descriptions for courses are recorded, in the latter use using inline XML markup for formatting.

2.1.2 Continuing education XCRI output

12. This aim of this work package will concentrate on a different set of course types (those intended for the general public, with some being examined) and test the XCRI schema against them. Data will be generated in response to queries from the JISC XCRI aggregator.

2.1.3 Careers Service aggregator XCRI output

13. This work package will take the templates from the OUCS work and test them by application to a different database. The same style of web services will be tested, to make available REST and SOAP interfaces, supporting:

1. selection of courses added or modified after the specified date
2. selection of courses with matching ID
3. filtering courses by keyword
4. filtering of courses between given start and end dates
5. filtering of courses by category

Only courses which are publicly available will be exposed to the JISC aggregator.

2.1.4 Exposure of XCRI to aggregator

14. During each of the XCRI-generating phases, the relevant services will be tested against the JISC XCRI aggregator, and iterative development will carry on in liaison with the aggregation service.

2.1.5 XCRI review

15. The final workpackage will be to write a review of the XCRI schema. This will cover

- Discussion of the organisational and technical issues encountered during the various phases of the project
- Evaluation of XCRI schemas, including specific technical proposals for any enhancements suggested
- Recommendations to JISC, and to Oxford University, resulting from the XCRI evaluation

2.2 Dissemination, standards and IPR

16. All reports and generated software will be made available on a project web site hosted by OUCS for the duration of the project and for three years thereafter.

17. Documents will be written in XML against the standard TEI schema and licensed with a Creative Commons Share-alike licence. Software will be licensed under an OSI-approved licence to be agreed when the project starts.

18. Members of the OXCRI team will present their work at JISC-organised workshops and conferences as appropriate.

2.3 Institutional commitment

19. In addition to the FEC component contributed by Oxford University, work on XCRI editing in a CMS environment by OUCS Information Services team will proceed in parallel with the OXCRI work, and will provide additional input to the report. Oxford University will continue to make use of the XCRI schema for internal management beyond the lifetime JISC project, ensuring continued sustainability for the work.

2.4 Risk assessment

20. OUCS already has experience of XCRI export from its material, and developing a variety of web services. The work required to complete the JISC objectives does not involve new technology or staff, and the required expertise is available from several members of staff. The work being undertaken is part of an ongoing institutional development.

21. We assess the risk to this project as low.

3 Key personnel

22. The following staff will be contributing to the project. OUCS will supply management and the main development resource, working at a level of 30% FTE over the life of the project.

1. Sebastian Rahtz is Information Manager for OUCS, director of the JISC OSS Watch service, and one of the lead technical architects for the Text Encoding Initiative, for which Oxford is one of 4 host sites. His work on the TEI within OUCS provides considerable expertise in schema design, XML manipulation and delivering web services.
2. Keith Lewis is a senior web programmer at OUCS who has been working with XCRI since early 2006 and has successfully implemented a trial XCRI export from an SQL database.

3. Alys Morgan has developed the Oxford SkillsPortal website in her role as Skills Training Information Systems Coordinator. She works with departments to coordinate the sharing of course information, making it available through searches and newsfeeds on Skills Portal.

4. Nic Hollinworth is a departmental lecturer in mathematics and computing with The Department for Continuing Education, and also an associate lecturer in computing for the Open University. He has been a tutor for the Diploma in Computing since 1999, and also teaches web design for weekend schools and evening classes. Prior to working for the department, Nic was a senior lecturer in computing at London Metropolitan University, where he taught multimedia and web development.

4 Institutional use of XCRI

23. As a component of the university's Continuing Professional Development (CPD) program, Oxford University's Careers Service manage a skills portal, available at `http://www.skillsportal.ox.ac.uk/`. This brings together most of the non-examined courses available to staff and students, and is designed to improve training opportunities for research students and contract research staff. The university is a very distributed heterogeneous institution, and the many departments who offers skills training maintain course databases in many different data formats and styles. In addition, the Continuing Education department offers both examined and non-examined courses to the general public.

Figure 2: *

Oxford University Skills Portal

24. An important component of the skills offering is the IT Learning Programme of OUCS, which has a portfolio of over 250 courses for students and staff. OUCS has been delivering an integrated course discovery and booking system making use of XML since 2001. Retrieval from a relational database is in the form of XML against the schema of the Text Encoding Initiative (`http://www.tei-c.org/`), and in RSS 1.0. In early 2006 OUCS was able to rapidly develop a module to create XCRI from the database in order to pass information to a Careers Service database. This JISC project will build on that work.

25. The skills portal is currently constructed by receiving *ad hoc* feeds of data from various departments in various forms, integrating it into a single database and then producing web pages. The feed of data from OUCS, and the Oxford Learning Institute, uses the XCRI XML format.

26. This system of internal aggregation and dissemination provides a useful microcosm against which to consider management of course data.

27. The work at Oxford will be developed in four ways:

1. Other departments will be assisted to develop XCRI output from the course data, in order to provide simpler and consistent input to the skills portal.
2. The Continuing Education courses system will be enhanced to produce XCRI, not only for possible use by the internal skills aggregator, but also for national consumption.
3. The skills portal will be developed further to generate XCRI output as well as accepting it for input.
4. OUCS will experiment with using XCRI in an XML database as its master record for course information, separating out this static information from its booking and resource management database.

The first three parts of this work can provide the direct framework for the JISC package, and the last will provide a broader analysis of the usefulness of XCRI.

28. ASPIRE, Oxford University's electronic PDP system (based on the LUSID OSS) provides a portfolio for staff and students to record details of, amongst other things, courses attended. This system will benefit greatly from being able to electronically retrieve details of courses rather than asking attendees to manually enter the course data.

5. OXCRI Budget

Directly Incurred Staff	**March 07**	**April 07– March 08**	**TOTAL £**
[redacted]	[redacted]	[redacted]	[redacted]
Etc.	£	£	£
Etc.	£	£	£
Total Directly Incurred Staff (A)	**£ 1,247**	**£ 4,988**	**£ 6,235**
Non-Staff	**March 07**	**April 07– March 08**	**TOTAL £**
Travel and expenses	£	£ 258	£ 258
Hardware/software	£	£	£
Dissemination	£	£	£
Evaluation	£	£	£
Other	£	£	£
Total Directly Incurred Non-Staff (B)	**£**	**£ 258**	**£ 258**
Directly Incurred Total (A+B=C) (C)	**£ 1,247**	**£ 5,246**	**£ 6,493**
Directly Allocated	**March 07**	**April 07– March 08**	**TOTAL £**
[redacted]	[redacted]	[redacted]	[redacted]
Estates	£ 284	£ 1,136	£ 1,420
Other	£	£	£
Directly Allocated Total (D)	**£ 608**	**£ 2,433**	**£ 3,041**
Indirect Costs (E)	**£ 1,363**	**£ 5,451**	**£ 6,814**
Total Project Cost (C+D+E)	**£ 3,218**	**£ 13,130**	**£ 16,348**
Amount Requested from JISC	**£ 1,930**	**£ 7,879**	**£ 9,809**
Institutional Contributions	**£ 1,288**	**£ 5,251**	**£ 6,539**
Percentage Contributions over the life of the project	**JISC 60 %**	**Partners 40%**	**Total 100%**