

## Repositories and Preservation Proposal Cover Sheet

<b>Cover Sheet for Proposals</b> (All sections must be completed)	<b>JISC Capital Programme</b>
<b>Name of Capital Programme:</b> Repositories and Preservation Programme	
<b>Bid for Call Area :</b> (Please tick ONE BOX ONLY, as appropriate)	
<b>Tools and Innovation (Strand B)</b>	
<input type="checkbox"/>	<b>Call Area I – Tools and Innovation Projects</b> Please specify area of proposed project eg <i>'metadata generation and validation'</i>
<b>Discovery to Delivery (Strand C)</b>	
	<b>Call Area II – Discovery to Delivery Projects</b> <input type="checkbox"/> a) Version identification framework <input type="checkbox"/> b) Persistent identifier interoperability demonstrator <input type="checkbox"/> c) Federated access management and repositories <input type="checkbox"/> d) Semantic interoperability demonstrator
<b>Repository Start-Up and Enhancement (Strand D)</b>	
	<b>Call Area III – Repository Start-Up and Enhancement Projects</b> <input checked="" type="checkbox"/> a) Repository start-up projects <input type="checkbox"/> b) Repository enhancement projects
<b>Digital Preservation and Records Management (Strand H)</b>	
	<b>Call Area IV – Digital Preservation and Records Management Projects</b> <input type="checkbox"/> a) Digital preservation across the lifecycle <input type="checkbox"/> b) Models and implementation of preservation services <input type="checkbox"/> c) Preservation tools development
<b>Shared Infrastructure Services (Strand I)</b>	
	<b>Call Area V – Shared Infrastructure Services Projects</b> <input type="checkbox"/> a) Pilot implementation of licence registry <input type="checkbox"/> b) Pilot national name and factual authority service <input type="checkbox"/> c) Scoping an architecture to support digital policy management <input type="checkbox"/> d) Scoping a terminology registry
<b>Name of Lead Institution:</b> University of Manchester	
<b>Name of Proposed Project:</b> wALTer	
<b>Name(s) of Project Partner(s):</b> Association for Learning Technology, Cranfield University	
<b>Full Contact Details for Primary Contact:</b> <b>Name:</b> Dr. Jim Petch <b>Position:</b> Head of Distributed Learning	

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Length of Project: 2 years

Project Start Date: April 2006 Project End Date: March 2008

Total Funding Requested from JISC: £60,000

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

Apr06 – Mar07	Apr07 – Mar08	Apr08 – Mar09
£81,650	£60,150	

Total Institutional Contributions: £81,800

Percentage Contributions over the Life of the Project:	JISC 42%	PARTNERS 58%
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**Outline Project Description:**

wALTer is a repository start up project . It will deliver a set of services to e-learning professionals based on a set of three linked repositories and associated tools. It will be hosted by the University of Manchester, Cranfield University and ALT. The repositories will be of best practice exemplars and templates, a knowledge base supporting process mentors for a wide range of e-learning practices built on the On-Line Knowledge Garden, process mentors and supporting knowledge base for professional accreditation on the CMALTR programme and research articles and EPrints. Cross repository search and retrieval will be supported both in context specific and stand alone modes.

I have looked at the example FOI form at Appendix A and included an FOI form in the attached bid (Tick Box)	YES/ N/A no FOI restriction applied.	NO
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I have read the Circular and associated Terms and Conditions of Grant at Appendix B (Tick Box)	YES/	NO
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## **JISC Capital Bid: Repositories and Preservation. The wALTer Project**

### **Introduction**

1. This proposal aims to provide a common, sustained high-quality resource to stimulate and support e-learning professional development in the UK HE sector. It is aimed at all e-learning professionals involved in the design, development and delivery of e-learning and in particular supports professional accreditation in the field. The output from the proposed project is a single web service to support e-learning professionals in practice and in achieving professional recognition.
2. A key aspect of the bid is the involvement and support of the Association for Learning Technologies (ALT). This involvement provides a focus for professional development and therefore a rationale for the design and use of the resource, it provides a motivation for use and a vehicle for dissemination and guarantees, as much as any situation can, sustained demand and therefore support and growth.
3. This project is a direct response to the HEFCE/JISC Strategy for e-Learning (2005) that had in Section 4.4 an action for 'The Academy and JISC to support the work of the Association for Learning Technology and the Staff and Educational Development Association in developing and implementing a professional framework for learning technologists.' It also has relevance for a number of other objectives in the strategy.
4. There is a plethora of sites in HE, FE and elsewhere, both in the UK and internationally, that support e-learning but almost all serve small communities. Even those that serve large communities such as the EDUCAUSE site or ones funded by EU projects, although they have rich resources, do not have the support mechanisms necessary both for professionals to access resources for their own development or accreditation and for practitioners to use resources directly in their work. An exception is the On-line Learning Knowledge Garden at Cranfield University ( <http://olk.g.mcs.cranfield.ac.uk/> ) and this resource will be incorporated, developed and extended in this project.
5. Additionally, the main sites for e-learning do not provide Web2 technologies and these have come to be recognised as necessary to support communities and to build knowledge resources as the sector adopts new ways of working with network technologies.
6. A key issue for the sector is the skills and knowledge of new entrants to a rapidly growing professional body. In order to be effective a resource base for such staff development requires frameworks both to support practice and for professional accreditation. This proposal is for a resource base and supporting technologies to ensure effective support for e-learning professionals. It build on a number of existing resources, bodies of knowledge and expertise, technologies and professional frameworks and provides the first stage in a planned evolution path for a growing sustainable resource base.
7. The existing elements supporting this bid are:
  - An ontology of e-learning – Cranfield/Manchester;
  - Wiki technologies - ALT/Manchester/ Open source;
  - An existing framework for planning, designing, developing and delivering e-learning – Cranfield/Manchester;
  - An existing framework for professional accreditation – ALT CMALT programme;
  - An existing high quality resource in the On-line Knowledge Garden- Cranfield;
  - Existing repository of good practice- Manchester;
  - Supported repository technologies – Manchester/Cranfield;

- Research journal resources – ALT;
  - Search tools – open source.
8. The objective of this bid is a single service to support e-learning professionals:
- ensuring they meet professional criteria for skills and knowledge;
  - undertaking their own staff development by providing a rich, context specific resource base within a recognised, navigable knowledge domain;
  - executing their work by providing knowledge structures and context specific resources for professional practices;
  - researching their practices by providing context specific research outputs, exemplars of good practice and other resources.
9. The core elements of the proposed services are:
- A repository of resources for e-learning professionals that can be searched and accessed in multiple ways composing:
    - exemplars of best practice;
    - guides for good practice in design and use of education technologies;
    - research papers;
    - reports from the sector related to e-learning;
    - journal articles.
  - A semantic wiki for the e-learning and learning technologies domains linked to the repository that can be added to and extended by practitioners.
  - A guide to the CMALT Scheme with guidance and support for accreditation linked to the repository based on metrics of skills, competencies and experience and on tools to map these to personal development in a structured manner designed to meet accreditation criteria. Supporting self instruction will also be provided.
  - A pedagogic planner to guide practitioners through processes of planning, design, development and delivery of e-learning linked to the repository comprising knowledge based process tools based on checklists, work flow management tools, and good practice exemplars. Supporting self instruction will also be provided.
10. These services delivered through a web interface will be based on a set of linked technologies comprising:
- A semantic wiki;
  - A state of the art repository comprising a content management system, content development system, rights management system, work flow control system;
  - A set of knowledge driven process interfaces (Dexter and Petch, 2006).
11. The services will be developed by the consortium and hosted and managed initially at the University of Manchester with linked repositories at the University of Cranfield.
12. The project consortium (Manchester, ALT and Cranfield) each has considerable experience in the various aspects of supporting e-learning professionals that are brought together under this bid. Together they constitute one of the most progressive groups in developing support systems and in advanced technological applications in this area. Additionally, they have a long record of working collaboratively and of delivering successful projects.
13. The creation and maintenance of a repository to support e-learning professionals is coincidentally an objective of each organisation. The JISC Capital call provides an opportunity to realise a fuller and wider scope to each of their ambitions and together to deliver a nationally available resource that has every prospect of being sustained.

## Consortium Partners

14. The **Association for Learning Technology** has a mission to support learning technology professionals and to disseminate good practice. In 2005 ALT launched its certified membership scheme, CMALT, which accredits members' learning technology skills and experience by means of a portfolio judged by two assessors. ALT sees enormous potential in the proposed repository for the development of CMALT. Potential CMALT applicants would greatly benefit from a repository devoted to the support of learning technologists, and CMALT holders would use the repository to update their skills, exchange views on approaches and disseminate good practice in support of the growing community.

A second vital use of the repository is to provide a permanent home for ALT's publications. The Association's journal, ALT-J, now in its fourteenth volume, has published a wealth of good practice in the application and theory of learning technology. ALT now wishes to make both pre- and post-prints of ALT-J articles available to the educational community in an open access repository, and has secured the agreement of the publisher, Routledge Taylor and Francis, to this endeavour. ALT's other publications, such as Research Proceedings and Abstracts from conferences and occasional papers, would also be added to the repository.

### **Cranfield**

Cranfield University has a prestigious record of delivering high quality e-learning with its flagship courses for the Defence Academy. These provide one of the few examples of truly world class provision outside the Open University and the courses represent a model for much of the HE sector. Their potential role as a model relates to a number of aspects; educational design, design processes, development processes, graphic design, use of repositories in learning content design, development and management.

The OLKG is an elegant and accessible resource that encapsulates a well thought out and practical approach to course design that has proven useful in training and practice. It provides an excellent model for a national service. Fuller details are provided in an Appendix.

The university has recently adopted a strategy of having major elements of all courses on-line and as part of this strategy is committed to adopting repository technologies This project give a stimulus to this initiative.

### **Manchester**

The University in its ambitious 2015 plan is seeking to embed technology based teaching and learning throughout the university. Part of this involves consolidating its massive teaching resources and taking more professional approaches to the development of on-line materials and the use of repositories is central to that. Additionally it has major challenges for staff development and I seeking to establish well supported processes similar to those in the On-Line Knowledge Garden. It has recently embarked on a major repository pilot and with the adoption of Blackboard/WebCt Vista is set to make a step change in staff training. A dedicated server has been purchased for this work. In this endeavour it is taking the rigorous and highly effective approaches to process analysis, modelling and implementation that have been developed over the last few years by the e-Learning Research Centre.

15. The extent of the institutional investment in this project from each organisation is testimony to the commitment and therefore to the likely continuation of the system and resources being proposed. As always, there is a risk of good projects not being taken up by the sector but in this bid the combination of three organisations each with long term objectives and

commitments and with the people and technical resources to back these up is as good a guarantee of sustained delivery as is possible.

### **Project Description**

16. The core elements of the proposed services are:
- A repository of resources for e-learning professionals that can be searched and accessed in multiple ways composing:
    - exemplars of good practice;
    - guides for good practice in design and use of education technologies;
    - research papers on an 'e-prints' system;
    - reports from the sector related to e-learning;
    - journal articles.
  - A semantic wiki for the e-learning and learning technologies domains linked to the repository that can be added to and extended by practitioners.
  - A guide to the CMALT Scheme with guidance and support for accreditation linked to the repository based on metrics of skills, competencies and experience and on tools to map these to personal development in a structured manner designed to meet accreditation criteria. Supporting self instruction will also be provided.
  - A pedagogic planner (The On-line Knowledge Garden –see accompanying sheets) to guide practitioners through processes of planning, design, development and delivery of e-learning linked to the repository comprising knowledge based process tools based on checklists, work flow management tools, and best practice exemplars. Supporting self instruction and forms for reflection and feedback are also provided.
17. These services delivered through a web interface will be based on a set of linked technologies comprising:
- A semantic wiki;
  - A browsable web site;
  - A state of the art repository comprising a learning content management system, content authoring tool, rights management system, work flow control system;
  - A set of knowledge driven process interfaces (Dexter and Petch, 2006);
  - Search tools.
18. The services will be developed by the consortium and hosted and managed initially at the University of Manchester with linked repositories at the University of Cranfield and by ALT's hosting service provider.

### **Project Plan**

19. The Project will comprise a set of linked work packages in three main phases:
- System design and set up;
  - System build;
  - Test, evaluation and delivery.
- The project will last two years beginning April 2007.

#### ***System Design and Set up:***

#### **Work Package 1 System definition:**

20. This work package will last most of the first year of the project. This will comprise a set of linked activities based on studies undertaken by staff at Cranfield and Manchester on domain ontologies, at Cranfield on design and development

processes, at Manchester on process modelling and process driven knowledge bases, and at Manchester and ALT on professional accreditation and competencies frameworks. The activities will comprise:

- Design of domain ontologies;
- Design of domain ontologies and developing a Metadata schema;
- Process modelling;
- Workflow modelling;
- Design of process based knowledge bases for e-learning practices;
- Design of competencies and skills framework;
- Design of Semantic Wiki;
- Set up protocols for open standards.

### **Work Package 2 System Set Up**

21. This work package will commence as system design is rolled out and continue in to the first quarter of the second year.

Three repository system will be installed; one on the hosting company of ALT, Positive Internet, with the ePrints application, one at Cranfield University housing the On-line Knowledge Garden and one at the University of Manchester using a repository hosted on a dedicated server belonging to Distributed Learning. Cross repository search tools will be installed based on JISC guidelines and commonly accepted standards in the JISC community. As far as possible reliable open source components will be employed. The Manchester system will be built and maintained by Distributed Learning Staff. Process knowledge bases will be constructed based on methods developed at Manchester with staff from the three institutions. As the project develops, depending on the scope and nature of related repositories to which access might be secured, the project team will install authentication tools and communication tools for the user community.

- Installation, configuration and testing of repositories;
- Installation and configuration of semantic wiki;
- Web interface design and build;
- Process mentors;
- Building of process driven knowledge bases;
- Installation of search engines;
- System integration;
- System testing.

### **System Build**

#### **Work Package 3 Resource collection**

22. This work package will run throughout the project. One repository, of ePrints, will be made available by ALT to host *inter alia*, pre- and post-prints for the ALT Journal. Substantial resources have already been collected at Cranfield, ALT and Manchester and permissions will be secured to incorporate these in to a generally accessible site. JISC, HEA, HEFCE and other bodies will be approached to contribute materials or allow access.
23. The project will develop a collections strategy in consultation with JISC and ALT in order to establish a long term programme of collection related to professional development that goes beyond the resources planned in this project. Resource collection is envisaged as an ongoing activity that will continue beyond the life of the project.

#### **Work Package 4 Resource Quality Assurance and Metadata-tagging**

24. This work package will begin in q3 of year 1 following delivery of aspects of Work Package 1 and continue through the project.

This work package will deal with quality issues for all the internal and external resources that are to be made available through the proposed service. A set of procedures will be set up to establish a robust process of quality assurance of resources dealing with:

- Metadata;
  - XML Wrappers;
  - Editorial control;
  - Content file formats;
  - Access and disability aspects.
25. The procedures will align with the quality control procedures of ePrints so that a common quality standard can be maintained through the service
26. All items in the collections will be allocated metadata to allow search and reuse.

#### **Work Package 5 Repository build, testing and evaluation**

27. This work package will commence in Q1 of year 1 and continue throughout the life of the project.  
This work package will deal with populating the repositories and building the web site.
28. EPrints version 3 repository will be set up with standard deposit types, metadata and workflow that is customized for:
- visual identity;
  - structure for browsing and searching;
  - authentication for registered user accounts.
29. The On-line Knowledge Garden and accompanying content will be re-engineered in to an on-line repository.
30. The good –practice site being developed at the University of Manchester together with content from work packages 3 and 4 will be added to the repository at Manchester.
31. The web site for the full set of services including cross repository search and retrieval will be constructed at Manchester.

#### ***Test and Evaluation***

#### **Work Package 6 System Testing, Evaluation and Quality Control**

32. This work package will begin in Q1 of year 1 and continue through the life of the project.  
This work package will deal with testing the viability and robustness of three site system, performance testing and bug fixing. It will form part of the work being conducted under work packages 1, 2 and 5.
33. It will also deal with assessing the quality of the outputs of search and retrieval, accreditation support and practice support through the process knowledge bases.

***Parallel work package will deal with the management of the project and with dissemination.***

#### **Work Package 7 Project Management**

34. This work package runs the entire length of the project.  
Working in accordance with JISC project management guidelines, this work package will:
- Develop a management structure and processes to manage project activities and resources;
  - Ensure adherence to the project plan;
  - Develop a consortium agreement and maintain good communication;
  - Manage the project budget;
  - Manage intellectual property issues in accordance with JISC policy;
  - Ensure the sustainability of the project and disseminate its outputs.
35. We will use Prince 2 principles for a small project. There will be monthly meetings of all work package leads, with regular email contact, face to-face contact as needed at other times, and close communication between consortium partners.

### Work Package 8 Dissemination and handover

36. This work package runs the entire length of the project.  
This work package will deal with:
- awareness of the project and its outcomes and services;
  - promotion of the services;
  - support of users including workshops and presentations.
37. We will work with ALT to promote the project and to focus on new and established practitioners for the CMALT programme.
38. The project will be publicised through a range of channels and we have every expectation that scholarly publication in conferences and journals will be based on the work programme and on its impacts on practice.
39. On completion the resources developed in the project will be handed over to the three collaborating institutions to continue to run.

### Project Deliverables

Work package 1	Domain ontology, system design, metadata schema, process designs
Work package 2	3 repositories, search engines, integrated virtual web interface, process mentors, process driven knowledge bases
Work package 3	ePrints collection, good practice materials, -eLearning knowledge base
Work package 4	Metadata, quality reports
Work package 5	3 populated repositories, populated web site
Work package 6	Test reports, evaluation reports, quality reports
Work package 7	Project plan, consortium agreement, IPR agreement, budget, risk register, issues log
Work package 8	Web, email and event promotions, reports, articles, workshops

### Risk Management

The following table articulates the key risks envisaged in the planning stage and the planned responses to them. Work package 7, Project management, will maintain and constantly review the risk register.

Risk	Likelihood	Impact	Actions
Unstable technical infrastructure	Low	High	Careful selection of components. Thorough testing. Dedicated server. Solid SLA.
Poor system performance	Low	Medium	Performance testing
Cross-site project management ineffective	High	High	Careful and systematic project management. Focus on phased deliverables. External assessor.
Lack of take up by e-learning professionals	Medium	Medium	Ensure ALT strategy addresses issue and secure buy-in from JISC/HEA
Inadequate resources in repository	Low	Medium	Develop resourcing plan
Slow contributions from users	Medium	Medium	Provide incentives through quality ontology and through

			recognition
Service effectively ends with project	Medium	High	Ensure early working system, promotion through ALT and partners, publicise practitioner results
Tools and resources do not match user needs	Medium	High	Careful requirements analysis, requirements tracing

#### Value of Project and its Outcomes to the JISC Community

40. The project will be of value to the community as a single resource identified with the leading UK professional body in the field designed to support e-learning professionals in everyday practice of design, development, build and delivery of e-learning.

#### Statement on IP

41. The IPR of the current systems and their content resides with the applicants or is made available to the community under a licence agreement. The object of the project is to make these resources freely available to the JISC community.

#### Budget

<b>Directly Incurred Staff</b>	<b>April 07– March 08</b>	<b>April 08– March 09</b>	<b>TOTAL £</b>
Research Assistant, Grade 5, 0.4FTE Cranfield + on costs	£6000	£6000	£12,000
Developer/System Designer, Grade 5, 0.4 FTE, Manchester + on costs	£6000	£6000	£12,000
Admin Assistant, Grade 4, 0.3 FTE, ALT + on costs	£3750	£3750	£7500
<b>Total Directly Incurred Staff (A)</b>	<b>£15,750</b>	<b>£15,750</b>	<b>£31,500</b>
<b>Non-Staff</b>			
	<b>April 07– March 08</b>	<b>April 08– March 09</b>	<b>TOTAL £</b>
Travel and expenses	£500	£500	£1000
Hardware/software	£	£	£
Dissemination	£500	£500	£1000
Evaluation	£400	£400	£800
EPRints service and hosting	£8500	£	£8500
<b>Total Directly Incurred Non-Staff (B)</b>	<b>£9900</b>	<b>£1400</b>	<b>£11,300</b>
<b>Directly Incurred Total (A+B=C) (C)</b>	<b>£25,650</b>	<b>£17,150</b>	<b>£42,800</b>
<b>Directly Allocated</b>			
	<b>April 07– March 08</b>	<b>April 08– March 09</b>	<b>TOTAL £</b>
Dexter – Manchester 0.1 FTE	£5000	£5000	£10,000

Petch – Manchester 0.1 FTE	£7000	£7000	£14,000
Scott – Cranfield 0.1 FTE	£6500	£6500	£13,000
Shurville – Cranfield 0.1 FTE	£5500	£5500	£11,000
Schmoller – ALT 0.05 FTE	£3000	£3000	£6000
Riachi	£5500	£5500	£11,000
Server and software licence –Man	£15,500	£2500	£18,000
<b>Directly Allocated Total (D)</b>	<b>£48,000</b>	<b>£35,000</b>	<b>£83,000</b>
<b>Indirect Costs (E)</b>	<b>£8,000</b>	<b>£8,000</b>	<b>£16,000</b>
<b>Total Project Cost (C+D+E)</b>	<b>£81,650</b>	<b>£60,150</b>	<b>£141,800</b>
<b>Amount Requested from JISC</b>	<b>£30,000</b>	<b>£30,000</b>	<b>£60,000</b>
<b>Institutional Contributions</b>	<b>£51,650</b>	<b>£30,150</b>	<b>£81,800</b>
<b>Percentage Contributions over the life of the project</b>	<b>JISC 42 %</b>	<b>Partners 58 %</b>	<b>Total 100%</b>

#### FOI Withheld Information Form

42. There is no information in this proposal that we wish to be withheld under the Freedom of Information Act.

#### Key Personnel

##### Dr Hilary Dexter

Hilary Dexter is e-learning Advisor at the University of Manchester. She was Research Fellow in the e-Learning Research Centre and formerly a systems analyst and architect with Israel Electric. She is a principal contributor to the developing systems methodology in the field of Service Oriented architectures and model driven approaches to systems development in the JISC arena having made major contributions to the COVARM projects, the HORUS projects, the Frameworks scoping study and the HEA Benchmarking pilot. She is currently involved in the HEA Pathfinder project and projects on process improvement at the University of Manchester.

##### Dr Jim Petch

Jim Petch is head of Distributed Learning at the University of Manchester, late co-director of the e-Learning research centre, a member of the HEFCE/JISC/HEA e-Learning Partnership Board, a past member of JISC Committees, founding chair of JISC Technology Watch. He has had a leading role in over ten JISC funded projects over a fifteen year period including most recently the HORUS and COVARM projects and the HEA Benchmarking and Pathfinder projects. He has led or had prominent roles in many EU funded projects on e-learning and web delivery of content and database. He is the author of over 20 papers on e-learning, has presented many keynote addresses to UK and European conferences as well as leading workshops and conferences. He was co-chair of the 2005 ALT Conference.

##### Rhonda Riachi

Rhonda Riachi is the Director of ALT. Rhonda's work concentrates on publications, marketing and events, and in particular on ALT-C, ALT's annual international conference. She leads the production and editing of the ALT-C Abstracts and the Research Proceedings. She is a member of the ALT-J Editorial Board, and sub-edits the online and printed versions of ALT-N, the quarterly newsletter.

Rhonda is a member of the JISC Scholarly Communications Group, and has served on the steering groups of various JISC-funded projects including JORUM (2005-2006), and the Bristol

BioMed Learning and Teaching project (1999-2001). She was project manager for the HEFCE-funded CAMEL project (2005-2006) and is a consultant to the JISC-funded CAMEL eLIDA project. A graduate in Modern Languages from the University of Oxford, Rhonda joined ALT as its first employee in 1993, taking on the role of Programmes Manager, then Director in 1998. Before joining ALT she worked in publishing and marketing.

**Dr. Bernard Scott**

Head of the Flexible Learning Support Centre, Cranfield University (CU), Defence College of Management and Technology (DCMT), The Defence Academy, Shrivenham).

Dr Scott's early career was that of a full-time researcher, an experimental cognitive psychologist and cognitive modeller. In the 1970s, Dr Scott worked with Gordon Pask at System Research Ltd, developing conversation theory and computer-based systems for teaching, course assembly and knowledge elicitation. Later, he qualified and worked as an educational psychologist. In 1990, he returned to HE as an educational technologist, researcher and staff developer. His research interests include: theories of learning and teaching; individual differences important for learning and teaching; principles of course design; adaptive tutoring systems; institution wide issues concerning the deployment of ICT and organisational change. He has published extensively on these topics.

**Dr Simon Shurville**

Senior Lecturer in Electronically-Enhanced Learning based in the Flexible Learning Support Centre, Cranfield University (CU), Defence College of Management and Technology (DCMT), The Defence Academy, Shrivenham).

Currently Dr Shurville is project lead and technical architect for the e-Learning Platform for DCMT. He directed development and deployment of the Sussex University Managed Learning Environment (2002-2005). Previous research projects have included online student modelling and an intelligent virtual learning environment for post graduate students. His recent foci have been on work-based learning and change/project management for learning technologies in HE. He has developed and delivered a variety of online and blended learning courses, including the development of multimedia interactive learning materials.

**Seb Schmoller**

Seb Schmoller combines independent consulting with half-time employment as Executive Secretary of ALT. His work concentrates on increasing ALT's membership, influence and level of activity, with particular emphasis on representation and on policy development, and on the accreditation of learning technologists. Before joining ALT Seb was Learning Technology Development Manager at the Sheffield College, where he was responsible the college's overall learning technology strategy, and for its online learning provision.

As an independent consultant Seb has undertaken a range of projects including work on the Drafts for Public Comment of 3 of the first 4 e-learning related British Standards (BS 8426, BS8788, and BS8419); managing for the TUC the JISC part-funded Union Education Online project; work for JISC, with Nicky Ferguson and Neil Smith, on personalisation in the information environment, and on a strategic review of JISC's resource discovery services; work for ESRC, with Nicky Ferguson, reviewing the Social Science research information environment.

Seb is an Observer for ALT on the JISC Learning and Teaching Committee. Whilst at the Sheffield College he was a member of the JISC Content Services Committee. Seb has a BA degree in Economics for Cambridge University, a Post-Graduate Teaching Certificate from Leeds University, and an MBA in Education Management from Keele University.

## Appendix

### On-Line Learning Knowledge Garden

*The Online Learning Knowledge Garden* (OLKG) is a browsable and searchable 300 page website 'just-in-time' training resource that supports pedagogical planning. It is located at <http://olkq.rmcs.cranfield.ac.uk/>. The OLKG has been developed as part of an informal collaborative project involving Cranfield University, De Montfort University, the University of the Highlands and Islands Millennium Institute (UHI) and the University of Salford, first begun in 2000. The Project Director is Dr Bernard Scott, Cranfield University (CU). As a conservative estimate, resources invested in developing the OLKG now stand at c. £80,000.

The OLKG site can be used to:

- browse for topics of interest
- search for specific topics using the menu bars or the site map
- scan topic materials and download sections for later study and reference
- work through the topic materials online as self-study materials. The materials contain activities with formative feedback to support learning and critical reflection.
- access reference material.

This is the site map showing topics currently covered:

#### *The Online Learning Knowledge Garden*

##### Pedagogy

Theories of learning and teaching

What is learning?

What do we learn?

Learning as a process of cognitive construction

Learning as conversation

The structure of knowledge

Individual differences

What is resource based learning

Definitions of resource based learning

Dimensions of resource based learning

Pros and cons of resource based learning

What's special about on-line learning

##### Course design

The course design process

Course structure

Aims and learning outcomes

Knowledge and task analysis

Signposts and navigation

Tutorial strategies/learning designs

Using activities and formative assessment

- Using different media
- Using resources
- Using collaborative learning
- Assessment strategies
  - Objective assessment
  - Subjective assessment
- Supporting students
  - Induction
  - Study guides
  - Calendars, bulletin boards, discussion fora
- Supporting tutors
  - Induction
  - Tutor guides
  - Mentoring and monitoring
- Developing courses
  - Planning
  - Team work
- Implementation
  - IT support, help systems
- Evaluation

#### Web Publishing

- Style guides for instructional materials
- Style sheets for HTML and PDF docs
- Accessibility
- Copyright
- Plagiarism

#### References and resources

##### References

##### Useful links and resources

- Computer-Assisted Assessment (CAA)
- Computer-Mediated Communication (CMC)
- Learning Technologies, General
- Managed Learning Environments (MLEs)
- Virtual Learning Environments (VLEs)

The features of the OLKG include (a) a search tool (b) a glossary (c) a list of references (d) a list of links to other resources (e) a download page, with summaries of the content of topics that can be downloaded (f) a web based form to capture user feedback.

Pedagogic planning is supported by the use of a downloadable *Online Learning Quality Evaluation Checklist*. The Checklist has 9 pages with eight sections covering the topics: course content; course structure; tutorial strategies/ learning designs; supporting students, assessment strategies; supporting tutors; developing courses; evaluation. It is accessible from the homepage of the OLKG website, together with instructions for its use, which read as follows:

“The checklist’s primary function is to be an aid in evaluating the quality of online courses. As such it can be used as part of both formal and informal evaluation

procedures. Course developers themselves can use the checklist as a monitoring and reflection tool. The checklist is designed to be used with the *Online Learning Knowledge Garden*, a website with resources to support the course development process. There is a close mapping between the topics referred to in the checklist and the topics included in the Knowledge Garden. A course developer can use the checklist to identify gaps in knowledge and skills and then quickly access relevant support materials located in the Knowledge Garden.

“Course Developers: Please use the checklist to monitor and reflect upon your own practice.

In addition would you please complete the final page giving your feedback on using this evaluation checklist, with any recommendations for improvements.

“Evaluators; Please tick the relevant box for each criterion and complete the comments box at the end of each section. (The comments box is for you to give an overview of the module in relation to each of the sections or to highlight issues which you feel have not been dealt with using the evaluation checklist.) In addition would you please complete the final page giving your feedback on using this evaluation checklist, with any recommendations for improvements.”

A pedagogic planner tool is under development which will

- (i) step the user through stages and substages in pedagogic planning
- (ii) use a topic map based user interface to support non-linear navigation through the tool
- (iii) give access to an augmented set of topics in the OLKG
- (iv) incorporate adaptive routines that direct the user to further stages/topics and sub stages/topics on the basis of responses elicited so far

Users will be provided with a cumulative summary of the state of their plan as elicited, together with reminders of topics not yet addressed and a saveable listing of links to of topics selected as priorities. Plans in progress may be saved and revisited at a later stage.

A key developmental goal is that of migrating the OLKG from its current cascading style sheet configuration to one based on a content management system. This will greatly aid editing, revising and reuse of content.

Dr Scott has prior experience of implementing topic map based adaptive tutorial and advisory systems. (Pask and Scott, 1973, Scott, 2001; Scott and Johnson, 2005). He also has more than fifteen years experience of delivering staff development activities on e-learning and distance learning, including delivering workshops for ALT and for a number of HEIs as a consultant. He is Course Chair for an online MSc course in ‘Learning Design for e-Learning’, currently under development.

Other relevant activities at the Defence Academy in which Dr Scott and his team are involved include:

- (i) Harvest Road's 'Hive' Learning Content Management System is currently used as a dedicated support for MOD projects developing online learning materials for the training of Army Officers. Dr Scott was responsible for sourcing Hive for these projects.
- (ii) Dr Scott is chair of the Cranfield University e-Learning Platform Working Group which is setting out requirements for an LCMS to support the development and delivery of higher education courses and to meet a contractual requirement from the MOD to make "all courseware available online". Hive is being evaluated as a possible solution, as is Alfresco, an open source CMS which has recently been made available as a resource for the Defence Academy on a pilot basis. Plans are also in hand to trial the use The Learning Edge LCMS.

## References

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- Pask, G. and Scott, B. (1973). "CASTE: a system for exhibiting learning strategies and regulating uncertainty", *Int. J. Man-Machine Studies*, 5, pp. 17-52.

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### **JISC Capital Programme: Repositories and Preservation Programme**

The University of Manchester formally supports the project proposal being put forward by Dr Jim Petch for the development of a new repository to support e-learning professionals. We welcome the collaboration with the Association for Learning Technology and the University of Cranfield since the project strongly aligns with our own plans and this collaboration will serve to ensure a successful outcome for us and for the sector.

The university will provide the resources and infrastructure necessary to complete the project and undertakes to comply with JISC conditions regarding IPR, FOI and access to deliverables.

Yours faithfully



Professor Bob Munn  
Vice-President (Teaching and Learning)

