JISC Project & Quality Plan - EERN

Overview of Project

1. Background

The project aims to deploy and pilot an East of England Educational Resource Network (EERN). The EERN solution is based on the JISC funded DELTA system that utilises the power of the semantic web in the searching of educational resources located in distributed repositories. By adopting EERN HE and FE Colleges in the region can share, deposit and annotate a full range different types of learning resources. Sharing these resources not only improves efficiency but also has the potential for teachers to reflect and improve their practice. A less tangible benefit arises from a greater sense of community that can result from sharing and critically, evaluating each others learning resources. DELTA adopts a web service architecture. However DELTA needs to be extended to create EERN through its integration with VLE's, authoring tools, and an authentication system (Shibboleth). DELTA is also pedagogically advanced in advocating and supporting a number of different types of courseware, including the concept of 'growing context' and vicarious learning. Users of EERN will not only be able to share repositories but also to author quality materials, and to collaborate in creating innovative courseware to serve the region.

JISC has been developing a strategy with associated frameworks and infrastructures to improve e-Learning within and between HEI, and HEI and schools, FE Colleges and the local community. Critical to this proposal is the open source and service orientated approach adopted by JISC. DELTA in particular was designed to interoperate with other services and to meet much of the functionality described in the JISC's E-learning Framework. The proposed pilot will be in part a test of DELTA's generic and open qualities.

The EERN will require collaboration between the Universities of Essex, Hertfordshire, Luton, Suffolk College and their FHE partners to produce regional repositories of e-learning materials and case studies discoverable via the DELTA system. It will produce two specific archives: core skills (led by Hertfordshire) and teaching case studies (led by Essex). Less specifically it will interface with a VLE (WebCT) thus gaining access to further resources, particularly those used to support work-based learning (led by Suffolk College).

The proposal primarily addresses Theme 2 (Collaborative teaching and sharing resources), but also has implications for aspects of Theme 1 (Facilitating Progression, particularly by integrating HE and work-based learning) and Theme 3 (supporting the independent Lifelong learner, particularly maintaining (and sharing) records of achievements).

The consortium will be led by Prof Chris Fowler (University of Essex). The proposed start date is the 7th January 2005, ending on the 31st March 2006, a duration of 15 months, costing a total of £211,902 (including £37,165 for the Shibboleth integration).

2. Aims and Objectives

The overall aim of the project is to pilot an enhanced version of DELTA within the East of England Region that will benefit practitioners and learners alike and will contribute to the building of a community of practice within the region. To realise this aim the pilot must demonstrate the following quality characteristics:

- Validity: EERN must be able to meet a wide range of valid user requirements (including organisational as well as pedagogical ones)
- Reliability: the EERN system should be robust and simple to maintain
- Usability: the system should be easy to use and with the required level of performance
- Acceptability: the deployment and use of EERN needs to be acceptable to a wide range of stakeholders (including teachers, learners, trainers, managers etc)

In addition to these pilot specific objectives there is also a regional agenda that needs to be addressed. Of particular relevance are the East of England Development Agency's (EEDA) priorities, which include:

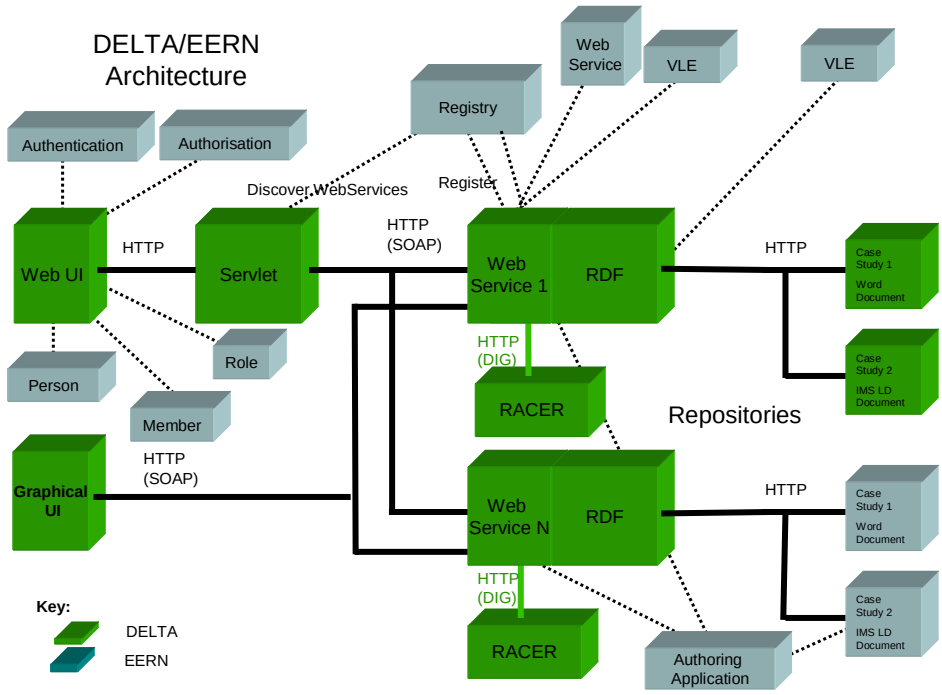
1. Ensuring strong links between regional universities, research institutes, and the private sector in part by establishing close ties between the SME community and the research base to ensure maximum exploitation of intellectual property.
2. Maintaining and building upon the quality of research establishments in the region in part by promoting the strengths and distinctive roles of the region's universities and research establishments to the UK business community.

Three Pilots have been designed to meet the above aims and objectives. Each Pilot involves an HEI and partner organisations. The HEI will own the repositories and the partner organisations will be the main users of the repositories.

3. Overall Approach

The overall approach has been divided into three phases:

Phase 1: System Integration. This will result in the integration of the tools onto the DELTA system to create EERN. The main part of this Phase will begin in January 2005 and be completed by September 2005. There may be some iterations and changes taking place as a result of the first evaluation results, and these improvements would take place in February 2006. The Technical integration and deployment will be managed by Essex and will involve University of Hertfordshire (SMIRK) and Suffolk College (WebCT integration). The DELTA/EERN architecture is illustrated below:



Phase 2: The Pilots. Three pilots are planned (A, B,& C).

Pilot A will focus on tagging, selecting, piloting the use of primary courseware created by and accessed through WebCT. The pilot will utilise Suffolk College's network of their WebCT users of ICT courseware for one of its work-based learning courses. Part of the pilot will involve marking up the existing material to allow for full EERN access. The participants will be responsible for maintaining the EERN system on site, and training staff and learners to use EERN both technically and pedagogically (ie pedagogical deployment of the system). Sustainability will be assured by the adoption of the service as part of Suffolk Institute of Technology (SIT). The activity will be led by Clare Avery from CREATE (Suffolk College).

Pilot B will focus on the authoring of primary courseware with tertiary aspects attachments (annotations etc). The presentation slideshows will available on the Web and the tertiary aspects will be captured from learner inputs. Learners will be able to access the annotations and comments when viewing the slideshow. The technical solution will adopt the JISC funded SMIRKBOARD for the server environment and JSMIRK for authoring presentations. SMIRKBOARD will become one of EERN's repositories. The users will be a set of regional FE colleges (Hertford Regional College, Oaklands College and North Hertfordshire College) and the curriculum area is likely to be study skills. The University of Hertfordshire will be responsible for authoring the content, tagging it, training the users, and the regional colleges will be in the main consumers of the courseware. Sustainability will be addressed by integrating materials produced into participants' VLEs, mediated through EERN. This pilot will be led by David Kraithman, University of Hertfordshire.

Pilot C will focus on Tertiary Courseware: in particular the sharing of case studies of effective teaching practice using e-learning solutions. It will draw upon already existing Case Study repositories developed as part of the DELTA service. It is envisaged that EERN will also be used to create new content to be placed in the University's Courseware Repository. The main consumers will be teachers within the University of Essex, managed through the University's Learning and teaching Quality Unit Staff Development Programme; and the two regional FE colleges that have strong links with the University (i.e. Writtle College and South East Essex College) through delivering Foundation Degrees. Focusing on FD case studies will also provide a more vocational orientation (e.g. work based learning).

Phase 2 will begin in June 2005, with the trial starting in October and finishing in March 2006. It is hoped, if successful, that the chosen Institutions will continue to use the system after the completion of the trial. Key to this phase is the pedagogical deployment of EERN. This will include staff training and support, and acceptability issues both at the user and management level (see also Phase 3).

Phase 3: Evaluation. This will involve the preparation of the evaluation (including choice of methods, selection of subjects and evaluation methods), the data collection itself, and the analysis of the evaluation data. The evaluation will take into account technical, usability and organizational issues. The first evaluation report (formative) will be available in January 2006 and may result in design improvements. The evaluation will be lead by the University of Luton (supported by Terry Mayes) who will not be involved in any of the technical or pilot activities and can thus remain independent.

4. Project Outputs

There is one major external deliverable from the project**: The Final Report**. The Final Report will cover:

1. Aims, objectives and benefits of running the Pilot.
2. Description of the EERN System (including relevant use cases and scenarios drawn from the DELTA project)
3. Description of the Pilot Sites
4. The Pilot Study (including aims, methods, evaluation criteria, case studies and other results)
5. Implications of the Pilots for EERN (including sustainability)
6. Recommendations and Conclusions

It is envisaged that Topics 1-3 will be available in draft form by July 2005, topic 4 and 5 by Jan 2006, and the whole report by end of March 2006.

There will also be a number of internal deliverables that contribute to the management of the project and/or to the final report. These are

ID1	Project and Quality Plans	Jan 31st 2005
ID2	Overall Architecture and Testbed Requirements	March 31st 2005
ID3	Pilot Plans	April 30th 2005
ID4	Testbed management Reports	Monthly (from September)
ID5	Formative Evaluation Report	Jan 31th 2006

All of these Internal Deliverables, however, will be made available to JISC and the wider community.

5. Project Outcomes

The creation and implementation of a new architecture for selecting and sharing valuable teaching and learning resources should result in the following:

1. Acceptance of vicarious learning and tertiary courseware into mainstream teaching and learning. This will have an impact on assessment methods, increase reflectivity on the part of learners, and learner empowerment.
2. Greater sharing of good quality case material of effective practice. This should be particularly important for both initial teacher training and continuous professional development.
3. Standard ontology or metadata for tagging and accessing distributed and shared resources. Important for user groups to have an agreed, valid and easy-to-use metadata scheme.
4. An architecture that interoperates with other systems, is extendible and is acceptable to the relevant user communities (including developers).
5. Insights into the acceptability of sharing resources and of building sustainable communities of practice around resource sharing.

The underlying pedagogical principles of vicarious learning and peer sharing are new to current practice, and the creation of the system should stimulate a debate about new approaches, and enable teachers and learners to experience and judge their effectiveness. It should also make teachers more reflective about their own practice, and indeed for some may lead to a ‘rediscovering’ of pedagogy.

6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
Teacher Training Agency (TTA)	Initial Teacher training resources	Medium
Qualifications and Curriculum Authority (QCA); Quality Assurance Agency for Higher Education; Quality Assurance Office (Uni of Essex)	New assessment methods, plagiarism and QA issues etc	High
British Educational Communications and Technology Agency (Becta)	Evaluation of new technology	Medium
Learning & Skills Council	Foresight	Medium
Teaching Services Unit in Universities & FE Colleges	Foresight, Continuous Professional Development	High
E-learning researchers and developers	Evaluation results and pedagogical insights from the Pilot Studies	High
Teachers/Practitioners	New practices and teaching approaches – greater sense of a practitioner community	High
Learners	Improved teaching quality	

Educational Standard Making Bodies	Validation of existing standards, specification of new standards	High
JISC	Validation and evaluation of tools to support effective eLearning practices.	High

7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Staffing	2	4	8	Most of the key members of staff on this project are already in post and fully committed to this project. There is a small risk of disruption if a key member of staff leaves during the course of the project. In this situation we have access to other staffing and expertise both within our own Universities and in other organisations, and would hope to easily replace any member of staff. And there is a second risk if we are unable to recruit suitable staff (the evaluator and Training & Support Officer) in time.
Organisational	1	4	4	The project is partially dependent on the goodwill in the form of 'institutional contributions' of other parts of the collaborative or partner organisations. All parties have however received support from the highest levels of their institutions.
Technical	1	5	5	The pilots are dependent on Version 3 of DELTA being delivered on time and of sufficient quality. However, the DELTA teams and EERN teams overlap and problems and issues will be visible at very early stage allowing remedial actions to take place.
External suppliers	1	1	1	None involved
Legal	1	1	1	We do not intend to use any 3rd party content and therefore do not anticipate any IPR risks or issues to arise.

8. Standards

DELTA is being developed according to the JISC open standards approach. Any extensions of DELTA to create EERN will also be sensitive to these standards and the JISC approach to standards. The standards cover resource types, metadata, and vocabularies. A full description of the standards used by DELTA can be found at http://www.elframework.org/common_services/content_management/delta/Standards%20and%20DELTA-Issue%201.pdf/view

9. Technical Development

EERN will not undertake any development work. The system integration activities will assume that all components have been tested and quality assured (see also section 11), and therefore only system testing will be required. This will involve creating a system test plan and testing the integrated system on the DELTA testbed.

10. Intellectual Property Rights

We do not intend to use any intellectual property owned by third parties. In terms of content, an appropriate clause concerning copyright will be negotiated as part of the agreements between the participating institutions.

11. Quality Assurance

All Project deliverables will be formally reviewed by selected members of the project team. The project manager will be responsible for selecting the review team and authorising the final version of the deliverable.

Internal deliverables will be informally reviewed by members of the appropriate Workpackage team. The workpackage leader will be responsible for selecting the reviewers and authorising the deliverable.

The overall direction and progress of the project will be overseen by the Steering Group. This group will meet quarterly or around a key milestone, and be chaired by the project manager. It will consist of the Workpackage leaders as well as other key stakeholders (tbd).

The workpackage leaders will meet at least once a month for a checkpoint meeting. The Issues List and Deliverable logs will be updated at these meetings. These will be arranged and chaired by the project manager. Many of these will be undertaken through audioconferences.

The Workpackages leaders are expect to call technical meeting as and when required.

The project documentation will include:

Meeting Minutes (including actions) – private to the project
Quarterly Reports to JISC – private to the Project and JISC
Issue List– private to the project
Deliverable Log – private to the project
Internal Deliverables – normally private to the project
External Deliverables – public access
Working papers – normally private to the project
Published Papers – public access

The Steering Board will decide which Internal Deliverables and Working Papers should be made publicly accessible. Documents classified as private to the project will also be available on request to JISC.

The documentation will be saved on the Chimera's (University of Essex) Internal Server, which is regularly backed up.

The integrated system (EERN) will be tested following normal software quality testing practices specified in the High Level Requirement deliverable.

The deployment and evaluation of EERN will follow the ethical guidelines for subject testing specified by the British Psychological Society's code of practice.

Project Resources

12. Project Partners

List all project partners (including subcontractors), their roles, and the main contact. Indicate the date a consortium agreement was signed (or will be signed), and send a copy to the programme manager.

The DELTA project is comprised of the following partners:

Partner	Role	Main contacts
The University of Essex	Lead partner,project manager, and Workpackage 4 activity leader	**Chris Fowler** Michael Gardner John Scott Katherine Fung
University of Hertfordshire	Project partner responsible for Workpackage 3 and contributions to Workpackage 1 and 6. They will also manage the Training and Support officer and their associate FE/HE Colleges	**David Kraithman** Steve Bennett Training and Support Officer
Suffolk College	Project partner responsible for Workpackage 2 and contributions to Workpackage 1 and 6. They will also manage their learner organisations.	**Clare Avery** Aaron Burrell
University of Luton	Project partner responsible for Workpackage 5 and contributions to Workpackage 6. They will also manage the Evaluator and external Consultant (Terry Mayes).	**Nik Bessis** Des Stephens Ian Robertson Evaluator
Glasgow Caledonian University	Evaluation consultant (sub-contract) to Workpackage 5.	Terry Mayes

The TSO will be responsible for ensuring content is appropriately tag, users trained, first line support and general on site pilot management.

A consortium agreement will be signed and sent to JISC by the 31st March 2005.

13. Project Management

Chimera (University of Essex) will act as Lead Partner for the project and will be the primary point of contact between the participants and JISC. Prof Chris Fowler will act as Project Manager.

As the Project Manager, he will have the following responsibilities:

- Prepare the project plan
- Coordinate and manage project work
- Monitor project progress and performance
- Ensure that project outputs are delivered on time
- Identify risks, problems, and issues, and escalate them as appropriate
- Manage communication within the project and with the programme manager
- Prepare progress, final, and other reports
- Arrange meetings (e.g. management committee) and write the minutes
- Manage project resources, including the budget
- Coordinate work on any legal agreements, e.g. consortium, vendor, or license agreements

- Maintain the project web site
- Maintain project documentation
- Ensure that the project abides by the letter of grant, the JISC Terms and Conditions, and the JISC Project Management Guidelines.

The project team will be made up of the following members:

Person	Role	Contact details
Prof Chris Fowler (CF)	Project manager, and Leader of WP4	Chimera, The University of Essex, Ross Building, Adastral Park, Ipswich, IP53RE cfowler@essex.ac.uk 07710 302629
Dr Michael Gardner (MG)	Design consultant	Chimera, The University of Essex, Ross Building, Adastral Park, Ipswich, IP53RE mgardner@essex.ac.uk 0711 411848
Prof Terry Mayes (TM)	Evaluation Consultant	Glasgow Caledonian University Rose St, Room RS207, Glasgow G3 6RN j.t.mayes@gcal.ac.uk 0141 2701315
John Scott (JS)	System Integrator	Chimera, The University of Essex, Ross Building, Adastral Park, Ipswich, IP53RE jrscott@essex.ac.uk 07710 010855
Katherine Fung (KF)	System Integrator	Chimera, The University of Essex, Ross Building, Adastral Park, Ipswich, IP53RE kscfun@essex.ac.uk
Steve Bennett (SB)	System Integrator	School of Computer Science, University of Hertfordshire College Lane, Hatfield , AL10 9AB s.j.bennett@herts.ac.uk 01707 284000
Aaron Burrell (AB)	System Integrator	CREATE, Suffolk College, Ipswich, IP4 1LT Aaron.burrel@create.suffolk.ac.uk 01473 296679
David Kraithman (DK)	Leader of WP3	Principal Lecturer in Economics University of Hertfordshire Business School, College Lane, Hatfield AL10 9AB d.a.kraithman@herts.ac.uk 01707 285476
Dr Nik Bessis (NB)	Leader of WP5	Department of Computing and Information Systems University of Luton, Park Square, Luton Beds,LU1 3JU Nik.bessis@luton.ac.uk 01582 743476
Dr Ian Roberston (IR)	Evaluation Consultant	Division of Psychology University of Luton, Park Square, Luton Beds, LU1 3JU Ian.robertson@luton.ac.uk 01582 489304
Des Stephens (DS)	Evaluation Consultant	Department of Computing and Information Systems University of Luton, Park Square, Luton, Beds, LU1 3JU Des.stephens@luton.ac.uk 01582 489244
Clare Avery (CA)	Leader of WP2	CREATE, Suffolk College, Ipswich, IP4 1LT clare.avery@create.suffolk.ac.uk 01473 296679
Evaluator (E)	Evaluator	University of Luton
Training and Support Officer (TSO)	Training and Support	University of Hertfordshire

The project manager will spend 10% of his time on project management activities. The TSO will be responsible for ….

The College Teams will consist of link members in the Universities of Essex and Hertfordshire, their opposite numbers in the H/FE Colleges, and selected practitioners within those H/FE Colleges.

The project team will not have any additional training needs.

14. Programme Support

We do not anticipate any additional support needs beyond the standard JISC programme management framework.

15. Budget

Use the budget template and attach the project budget as Appendix A. Explain any changes from the budget in the agreed project proposal.

Appendixes

Appendix A. Project Budget

Appendix B. Project Work-Packages