

JISC DEVELOPMENT PROGRAMMES

Project Document Cover Sheet

PROJECT PLAN

Project

Project Acronym	CLAReT	Project ID	
Project Title	Contextualised Learning Activity Repository Tools project		
Start Date	01 October 2006	End Date	31 October 2007
Lead Institution	University Of Southampton		
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Partner Institutions			
Project Web URL	http://www.elanguages.ac.uk/research/index.html#claret		
Programme Name & No	Capital Tools and Repositories, Tools and Innovations		
Programme Manager	Phil Vaughan		

Document

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Document History

Version	Date	Comments
0a	14 November 2006	Initial Draft of Project Plan



JISC Project Plan Template

Overview of Project

1. Background

*HEFCE has identified languages as a 'strategically important and vulnerable subject' (HEFCE June 2005/24) and as language learning materials are used extensively to support **lifelong learning** a key aim of this project is to promote sharing and re-use of RLOs **across institutions and across sectors**.*

The *National Language Strategy* (2002) sets out to highlight the importance of a multilingual and culturally aware society to a modern economy, whilst recognising that languages also have an important role to play in the development of personal skills. A recent update¹ on the implementation of the *Strategy* recognises the need to “develop strong regional and local networks in support of languages”. It is against this background of regional and national need that CLARET is proposing to build on existing experience and networks to develop and pilot repository web services.

Languages have been identified by HEFCE as a vulnerable subject within UK education as a whole, though they are strategically important in a number of ways. Language learning is associated with learners across the whole spectrum of education from schools to adult learning, through many types of institution and in many different contexts, for both formal and informal learning.

2. Aims and Objectives

The CLARET project will explore the relationship between Learning Object Contextual metadata (www.elanguages.ac.uk/sharing) and the teaching and learning context as defined by working with practitioners. An ontology will be developed from the shared understanding of this context, and made available to the wider community, and this will be used to build on the JISC DeL Pilot L20 project's contextual (or pedagogic) metadata to create a folksonomy for resource discovery, and the sharing of ideas and practice. These two will form the basis of prototype web services that can enable visual exploration and the use of social bookmarking of contextual metadata in a repository context. To achieve this, the project will engage with an existing Community of Practice (CoP) to understand how practitioners perceive the context of teaching and learning, and how this might aid them discover and reuse RLOs. The practitioners will be from existing partnerships at HE institutions, Colleges and Schools in the SE Region, and from existing teaching networks facilitated by the SE Comenius Centre

The Contextualised Learning Activity Repository Tools project (CLARET) will address two key aims; the first is to:

1. Engage the language teaching and learning community in a body of shared practice. This will be done by creating a terminology that derives directly from a shared language and understanding of the teaching and learning context.² The project will explore contextual metadata in relation to sharing expertise and practice, professional development, as well as contextual metadata³ more closely associated on a micro level

¹ <http://www.dfes.gov.uk/languages/uploads/Languages%20Booklet.pdf>

² For instance, the Sharing Language Learning Objects (L20) project and LJUBOJEVIC, D., COOK, J. & BOYLE, T. (2004) Towards Contextual Metadata to Increase Learning Object Technology Effectiveness. IN KOMMERS, P. & RICHARDS, G. (Eds.) *World Conference on Educational Multimedia, Hypermedia and Telecommunications (EDMEDIA) 2004*. Lugano, Switzerland, AACE. REPOMANN project <http://www.hull.ac.uk/esig/repomman/>

³ (JISC Distributed E-Learning Regional Pilot Project Sharing Language Learning Objects L20 – <http://www.languages.ac.uk/sharing>)

with the Re-Usable Learning Object (RLOs) themselves. (JISC Distributed E-Learning Regional Pilot Project 'Sharing Language Learning Objects' L20.) Additionally, the teaching and learning context will be explored in relation to the Eduserv-funded 'Management, Use and Re-purposing of Language Learning Objects' Project (MURLLO) literature review on contextual metadata.

The second aim is to:

2. Facilitate resource discovery. This will be done by creating prototype repository web service(s) that will explore visualisation of Learning Object metadata and teaching and learning context.

The CLARET project will further develop the regionally-based cross-sector community of practice which focuses on moving towards a shared culture of use, re-use and re-purposing of online resources in order to succeed in its aims. The CLARET project will study the teaching and learning context across institutions and across sectors, and the sharing and dissemination of good practice. CLARET will focus on language providers in the university and post-16 education sector as language learning has been identified by HEFCE as a valuable subject for addressing the agendas of lifelong learning and widening participation. This community-driven approach will extend the work already undertaken by the L20 and MURLLO projects

3. Overall Approach

The project will use a sample of re-usable learning objects (RLOs) provided through the L20 project that include contextual metadata in addition to UK LOM Core. The project will integrate and engage the fledgling MURLLO Community of Practice⁴ (CoP) through the use of weblogs, to facilitate and engender discussion and community contribution. The CLARET project will develop a teaching and learning context ontology through a series of workshops and in conjunction with the CoP weblogs.

The experimental E-prints-based Contextualised Learning Activity Repository (CLARe)⁵ developed by the University of Southampton will be used as a test bed to offer social bookmarking, and the facility to browse using web services such as metadata tag clouds/lists formed from the teaching and learning context ontology. The web services will be used to align the CLARET project with the E-Framework.

CLARe will act as a suitable test bed for the web services for a number of reasons:

- Support for the L20 defined contextual metadata.
- The additional web services will extend CLARe to be a learning and teaching repository.
- To enable active contribution and experimentation of the L20/MURLLO CoP.
- To support the MURLLO Digital Rights Management (DRM) metadata and IPR recommendations.
- Development can be controlled as CLARe is not a 'live' system.

The project will have considerable impact since it will facilitate collaboration and the sharing of expertise in the teaching and learning community through development of a repository web service based on teacher requirements, whilst contributing to the national and regional JISC e-Learning agenda. Cultural issues and usability of CLARe in different teaching and learning contexts will be inherent to the project work. It will present a model of community-driven collaboration together with a number of scenarios, which can be adopted by other subject areas, by other institutions within the region, or by partnerships of employers and institutions.

4. Project Outputs

Tangible Deliverables

The result of the work packages (see Appendix B) is a set of deliverables. The project comprises of eight deliverables (D1-D8).

⁴ <http://www.elanguages.ac.uk>

⁵ <http://eprints.clare.org>

- Deliverable 1: Domain ontology and concept maps based on shared understanding of pedagogical experts from the Community of Practice.
- Deliverable 2: User validation of domain concept maps for Learning Object Repository
- Deliverable 3: Concept map navigation tool for EPrints Learning Object Repository.
- Deliverable 4: An evaluation of the usability of Learning Object repository with the concept based interface will be carried out, involving peers from the Community of Practice
- Deliverable 5: Demonstration implementations of semantic web service tools to provide Learning Object discovery from EPrints Learning Object repository, integrating applicable social networking web services (e.g RSS, Flickr)
- Deliverable 6: The demonstration tools will be piloted with groups from the Community of Practice to evaluate their usability.
- Deliverable 7: User guide and concept map tool programmer documentation

Intangible Deliverables

It will be important to disseminate the activities of the project widely. They will be of particular interest to the languages community in all sectors but will be of relevance to all subject areas. The HE Academy Subject Centre for Language Linguistics and Area Studies will be responsible for the dissemination activities, which will include:

- National and international dissemination events.
- In February 2007 there will be a JISC/HE Academy/LLAS funded 2 day eLearning conference that has a one day focus on the sharing and re-use of learning materials.
- Regional dissemination events – workshops/seminars
- The LLAS newsletter and other bulletins
- Item in LLAS conference programme
- Flyers/bookmarks/postcards to publicise the project
- Project website to publicise case studies, use cases, and ontology on the project website.
- The availability of prototypes at the end of the project.

In addition the project team will endeavour to publish the work through conferences and journal proceedings.

5. Project Outcomes

CLARET will be beneficial in following these areas:

- The project will serve as a pilot to test prototype repository web services, and facilitate understanding of the teaching and learning context in relation to language learning.
- increased sharing and re-use of R Language Objects through better exploration and conceptualisation tools based on practitioner domain knowledge
- increased access and discovery of the pool of quality assured e-learning resources available online to each student in the region.
- The visual display of metadata and the ontology will also encourage and enable the sharing of expertise and good practice that will assist with professional development for both experienced practitioners and those still in training, in addition to meeting the needs of language learners
- Shared ownership. Engaging in a collective enterprise will encourage a sense of shared ownership of the CoP social spaces, and all parties will be more motivated to use and promote them. Cultural issues such as Intellectual Property and Ownership will be considered as part of the project work.
- Collaboration with teachers to share and disseminate an understanding the teaching and learning context in relation to RLOs, and the provision of a model of the domain and its cultural issues will inform the JISC Capital Programme eLearning strand evaluation of use of web 2.0 semantic tools to support social networks of practitioners.
- The visual tool techniques for resource discovery and sharing of repository items are themselves re-usable knowledge.

6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
JISC-CETIS, eLanguage Communities of Practice e-Language teachers and students	JISC are funding this project to enable increased sharing and re-use of R Language Objects through better exploration and conceptualisation tools based on practitioner domain knowledge JISC –CETIS have an interest in increase the uptake of previously funded projects by increasing the access and discovery of the pool of quality assured e-learning resources available online to each student in the region.	High
JISC & Wider UK HE and FE Community	The visual display of metadata and the ontology will also encourage and enable the sharing of expertise and good practice that will assist with professional development for both experienced practitioners and those still in training, in addition to meeting the needs of language learners	Medium
Researchers on repositories Researchers on the use of web 2.0 technologies for building and supporting Communities of Practice	This project will further demonstrate the lessons learned from the e-framework reference model project , FREMA (framework reference model for assessment)	Low

7. Risk Analysis

Risk	Probability	Severity	Score	Action to Prevent/Manage Risk
Staffing	2	3	6	The project team includes experienced knowledge engineers, web service developers and learning technologists who have demonstrated their ability to achieve solutions using similar technologies. Domain expertise is supplied by an existing Community of Practice. Further refine project plan to allocate individuals to activities and identify critical path. Develop contingency plan with partners to identify key people who can step in to support critical activities.
Organisational	2	3	6	Clearly define roles and responsibilities with partners from the start and agree upon a set of SMART objectives. Strong project management to prevent project drift, and ensure milestones are reached on time. Adequate time for workshops and case studies to be developed. Develop project lifecycle to form basis of project plan.
Technical	2	3	6	The project will use tried and tested Flash and Java and scripting techniques to develop the visual navigation tools. These tools alone will improve the resource discovery, sharing and re-use capability of the RLO repository. The integration of existing web services will reduce the risk of providing social networking capabilities. Use of IMS and well-known protocols for interoperability and maximum potential for re-use and longevity of outputs. Project technical team experience will ensure technical aims remain to plan. Adequate time for revision and retesting of outputs.
Legal	1	4	4	Project IPR and copyright agreed at outset.

8. Standards

The project will take a Service Oriented Architecture (SOA) approach. Coding standards will be adopted to ensure readability, testability and installability. Code will be unit tested and integration tested. The project will build upon existing specifications and standards from JISC, IMS, and other projects. In particular, any SOAP based web services will reference agreed standards such as SOAP and WSDL of the W3C. Compliance with SOAP will be assured using an appropriate testing package (e.g. SOAPscope). Full account will be taken of issues relating to accessibility of Web-based systems and software and the outputs of this project will conform to published standards and guidelines. HTML resources will be produced to W3C html 4.01 strict and to W3C WAI guidelines to double A conformance.

9. Technical Development

The technology used in this project will be FLASH, JAVA and PHP script based. The project will follow the development set out in this project plan. All source code will be 'booked' in and out a CVS repository and on booking in a record of the IDE used to develop the code will be recorded. This will ensure that, should a state arise where the code developed produces an undesirable output; the code can be 'rolled back' to a stable earlier development stage.

A web based 'issues and bug tracker' will be used to both to monitor task progress against plan and ensure that quality standards are maintained.

10. Intellectual Property Rights

While the code will be made available under an appropriate open source agreement use within any educational establishment and in-line with JISC's requirements, the IPR will also remain with the University of Southampton thereby allowing Southampton to further exploit the IP. Sustainability of the code produced is through ensuring other universities and JISC/CETICS projects have access to the code and documentation for the system, through Creative Commons licences (the code being published in Source Forge). IPR and licences of integrated services will be recorded in a 'licence manifest'. Quality factors built in to the work packages will ensure successful community engagement and community stated need.

The developed system will be promoted through the JISC-CETIS Special Interest Group on Repositories and other national and international forums. All reports, tools and code from the project will remain on the project server for a minimum period of 2 years and archived in the institutional repository (E-Prints) and appropriate JISC repository.

Project Resources

11. Project Partners

The project team is a collaboration between the School of Electronic and Computer Science (ECS), University of Southampton and the School of Modern Languages, University of Southampton.

The project will work closely with a Community of Practice which will provide invaluable domain expertise.

The project community of practice is formed from teachers that have worked together in the past in a number of ways. The core HE institutions involved are the Universities of Portsmouth, Reading and Surrey who are acting as hubs helping to coordinate activities with local partner colleges. These regional collaboration has encompassed projects include the SEEDA funded project to establish language needs in the South-East region business sector and on a TLTP 1 (Teaching and Learning Technology Programme) language materials online development project, an FDTL 2 (Fund for the Development of Teaching and Learning) independent learning project *CIEL*, the TLTP 3 technology-based project *Alladin* and the LLAS Subject Centre materials development Dissemination Project, the aforementioned L20, and MURLLO projects. The CoP will provide consultancy paid for on a daily rate.

12. Project Management.

There are two partners in the project:

The Learning Technologies Group at Southampton will lead the project and will retain a senior researcher (*Soton RF*) to manage the project day to day, to organize the liaison with the wider community, to arrange the dissemination and to take responsibility for reporting. Southampton will also employ two programmers (*RAs*) to work on implementing the prototypes.

The Community of Practice, comprising members from Universities of Portsmouth, Reading and Surrey and their local partner colleges will provide consultancy to the project in the form of their time.

The project will begin with an initial project start-up face-to-face meeting with all those taking part in the project. A similar team meeting will occur at monthly intervals to monitor progress against objectives. There will be a final, project closure meeting. Public versions of the minutes of these meetings will be published on the project Website. Each of the work packages will require formal review and sign-off meetings, and these are spaced a month intervals. There will be weekly technical meetings of the project staff, making use of Virtual Presence Technologies. Financial reports will be supplied by ECS financial management, Interim project reports will be produced at 6 months and a Final Report will be produced at the end of the Project.

List of members of the project team.

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13. Programme Support

The main support beyond the usual programme support may be in facility meetings to arrange the use of software developed in other projects under JISC programmes.

14. Budget

The budget is as agreed in the project proposal, see appendix A for the budget template.

Detailed Project Planning

15. Workpackages

The project comprises four work packages which are described in detail in Appendix B

WORKPACKAGE 1: Project Initiation, Domain and Repository Analysis

The purpose of the first workpackage is to capture domain knowledge held by domain experts as a set of concepts. This will support the development of Resource Discovery tools for the CLARe repository in Work Package 2. The activities will include:

- Analysis of domain concepts from the perspective of stakeholders within the community of practice
- Development of an ontology of ePrints repository for learning objects

The concept maps and repository ontology will be validated by review with domain experts (the Community of Practice) Review Domain Concept Maps with CoP

WORKPACKAGE 2: Concept based resource discovery tool Development

In this workpackage, the domain concepts and repository ontology will be used to develop visual tools for repository users to explore and discover Re-usable Language Objects. The activities that will be undertaken include:

- Map Domain Concepts on to ePrints Repository for Learning objects
- Design and build RDF database to hold mapping of EPrints Repository learning objects to domain concept maps
- Populate RDF database
- Design and develop concept map interface to the EPrints learning object repository

The Concept map repository interface tool usability will be evaluated with the CoP.

WORKPACKAGE 3: Demonstrator Semantic Web Service Tools Development

The purpose of the third workpackage is to extend the repository interface by the integration of semantic Web 2.0 services to enable community sharing of RLO discoveries. The activities will include.

- Design and implement semantic web service demonstrator tools, to provide LO discovery from EPrints LO repository integrating applicable social networking web services (e.g RSS, Flickr)
- Pilot tools with Community of Practice

The usability of the tools will be evaluated with the CoP

WORKPACKAGE 4: Collaboration and dissemination

This workpackage runs through the life of the project; its purpose is to disseminate the project outcomes to the JISC and wider community by means of:

- Web site, workshops, conference posters & papers, journal articles
- Collaboration with Community of Practice

There are two milestones in this project represented by ♦ in Appendix B, **Error! Reference source not found.** The first is the evaluation of the concept map interface to the CLARe repository. The second represents the evaluation of the CLAReT tools pilot with the CoP. See Appendix B for the detailed work plan.

16. Evaluation Plan

Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
Feb 2007	Domain conceptual knowledge captured for visualisation tool	Have we captured the concepts that domain experts use to describe their knowledge of the domain.	Focus meetings with Community of Practice	Concepts used reflect the knowledge and experience of domain experts
May 2007	The usability of Learning Object repository with the concept based interface	Does the concept map visual interface improve the usability of the CLARe EPrints Learning Object repository	Questionnaires, interviews, with CoP	Analysis of CoP responses shows that users find it easier to locate appropriate resources over versions without the concept map interface
September 2007	The demonstration tools will be piloted with groups from the Community of Practice to evaluate their usability	Do the demonstration tools improve the sharing of resource knowledge amongst users Do the demonstration tools help collective ownership and re-use of RLOs	Questionnaires, interviews, with CoP. Metrics from repository interface	Analysis of CoP responses and and site metrics show increased re-use of RLOs
September 2007	Documentation	Can the end users use the system	Questionnaires, Interviews, Focus groups.	Qualitatively and quantitatively the users found that the system was easy to use.

17. Quality Assurance Plan

Output	Concept Map Interface for CLARe EPrints Repository				
Timing	Quality Criteria*	QA Method(s)	Evidence of Compliance	Quality Responsibilities**	Quality Tools*** (if applicable)
March 2007	Fitness for purpose	Internal quality Review	Minutes of Meetings	Technical Manager	
March 2007	Terms of reference	Peer review	Feedback	Technical Manager	
March 2007	JISC Report Guideline	Proof Reading	Sign off	Project manager	Template
April-June 2007	Coding/installing	best practice for processes	Logbook update	Research Fellow	Subversion repository
April-June 2007	Test Plan (Adherence to specifications)	Unit test	Sign off testplan (with a record of the results)	Research Fellow	Bug Tracking Software
April-June 2007	Reliability, Fitness for Purpose (Adherence to specifications)	System test	Sign off testplan (with a record of the results)	Research Fellow	Bug Tracking Software, Subversion
June 2007	Fitness for Purpose, Usability	User Evaluation	User evaluation results	Technical Manager	Evaluation Plan
April-June 2007	JISC Open Source Policy	Licence Check	Creative Commons Licence and Licence manifest and source code published in SourceForge	Technical manger	Subversion
Output	Semantic Web Service Tools for RLO discovery and sharing				
Timing	Quality Criteria*	QA Method(s)	Evidence of Compliance	Quality Responsibilities**	Quality Tools*** (if applicable)
June 2007	Fitness for purpose	Internal quality Review	Minutes of Meetings	Technical Manager	
June 2007	Terms of reference	Peer review	Feedback	Technical Manager	
September 2007	JISC Report Guideline	Proof Reading	Sign off	Project manager	Template
June-September 2007	Reliability, Fitness for Purpose (Adherence to specifications)	System test	Sign off testplan (with a record of the results)	Research Fellow	Bug Tracking Software, Subversion
September 2007	Fitness for Purpose, Usability	User Evaluation	User evaluation results	Technical Manager	Evaluation Plan
April-September 2007	JISC Open Source Policy	Licence Check	Creative Commons Licence and Licence manifest and source code published in SourceForge	Technical manger	Subversion
September 2007	JISC Report Guideline	Proof Reading	Sign off	Project manager	

Output	Evaluations				
Timing	Quality Criteria*	QA Method(s)	Evidence of Compliance	Quality Responsibilities**	Quality Tools*** (if applicable)
June-September 2007	Evaluation Plan (usability, accessibility, validity)	Design Review	Minutes kept and design signed off	Technical manager	
October 2007	JISC Report Guideline	Proof Reading	Sign off	Project manager	Template

* **Quality Criteria:** specify the criteria against which the quality of the output will be measured, e.g. fitness for purpose, best practice for processes, adherence to a specific standard or specification, usability, accessibility, validity, etc.

** **Quality Responsibilities:** list who is responsible for monitoring and ensuring the quality.

*** **Quality Tools:** list any tools to be used to help ensure the quality.

18. Dissemination Plan

Timing	Dissemination Activity	Audience	Purpose	Key Message
1 st month and continuing there after	Web site	General and technical audience	Awareness, Inform, Engage, and Promote	About CLAReT and its developments
1 st month and other mandatory meetings.	JISC Kick off meetings and subsequent project meetings	Technical Audience	Inform and Engage	CLAReT developments and feedback
Each mile stone	Deliverable report	Technical audience, and wider informed research and educational research community.	Inform	CLAReT developments
Throughout the project	Conference papers, workshops and/or posters	Technical audiences, and wider informed research and educational community.	Engage and Promote	CLAReT development
Throughout the project	Demonstration to institutions and Community of Practice organisations.	Technical and domain audiences	Awareness, Inform, Engage, and Promote	About CLAReT and its developments

19. Exit/Sustainability Plan

Project Outputs	Action for Take-up & Embedding	Action for Exit
All Reports	Will be posted on the project website and in the institutional achieve.	<p>Access– The School of Electronics and Computer Science will host the server.</p> <p>Preservation– All reports will be archived in the appropriate JISC repository</p> <p>Maintenance – The server will come under the maintenance policy of the School</p> <p>Intellectual property. All report will be copyrighted.</p>
Software: Implementation of Services	The program code developed by the University of Southampton CLAReT project will be freely available to any Higher or Further Education institution.	<p>Access– The School of Electronics and Computer Science will host the program code for downloading.</p> <p>Preservation– The program source code will be archived in the appropriate JISC data centre.</p> <p>Maintenance– The system will be free to use by HE and FE establishments. All supporting documentation (specification, user manuals, and technical manuals) will be freely available via the project website. No on going maintenance will be available for the project after the closing date.</p> <p>Intellectual property– To install their own version of the demonstrator toolkit, institutions will need to buy their own licences for 3rd party components.</p> <p>IPR of third party integrated services will be maintained according to the licence used</p>

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
Concept map interface and demonstrator services) Case Studies, User evaluations	Can be used by other JISC projects, developers and researchers	The repository discovery toolkit can be used as a technology demonstrator for other repositories. The demonstrator can be built upon by integrating more services.	Ensuring HE/FE staff have access to the code and documentation for the system.

Appendix B. Workpackages

Workpackage	wks	Oct 2006	Nov 06	Dec 06	Jan 2007	Feb 07	Mar 07	Apr 07	May 07	June 07	July 07	Aug 07	Sept 07	Oct 07
1 Project initiation and Domain analysis Repository ontology	31	1 RF	1 RA 1 RF	1 RA 1 RF	0.5 RA 1 RF	1 RF	0.5 RF	♦						
2 Concept Map Tool	17				0.5 RA	0.5 RA 0.5 RA	0.5 RA							
3 Semantic web 2.0 tool investigation Semantic Tool integration	17						0.5 RF 0.5 RA	1 RF 0.5 RA 0.5 RA	1 RF 0.5 RA 0.5 RA	1 RF 0.5 RA 0.5 RA	1 RF 0.5 RA 0.5 RA	1 RF 0.5 RA 0.5 RA	1 RF 0.5 RA 0.5 RA	1 RF 0.5 RA 0.5 RA
4	56	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF	0.15 RF

Project start date: 01-10-2006

Project completion date: 31-10-2007

Duration: [13] months

Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
YEAR 1					
WORKPACKAGE 1: Project Initiation, Domain and Repository Analysis Objective: To provide the domain analysis to support tool development in WP2 and WP3	October 2006 –	March 2007			
1. Project Initiation, literature review of the area,; Review relevant projects and standards identify reusable technologies and Lessons Learnt from similar projects including the FREMA reference model.	October 2006 –	November 2006	Internal Report to be made available on the project Web site. Domain scope Standards		Project manager, Lead RF Team
2. Analysis of domain concepts from the perspective of stakeholders within the community of practice. 3. Technical session and domain knowledge capture Sessions with Community of Practice	November 2006	March 2007	D1: Domain concept maps		Lead RF, Project manager & Team
4. Develop ontology of ePrints repository for learning objects	November 2007	March 2007	Learning Object repository Ontology		RA
5. Review domain concept maps with CoP and Review repository ontology	March 2007	April 2007	D2: Concept Map Evaluation, Internal Report to be made available on the project Web site	1	Project manager
WORKPACKAGE 2: develop Concept map interface Objective: To develop a concept map visual interface for CLAReT repository	March 2007	June 2006			
6. Map Domain Concepts on to ePrints Repository for Learning objects	April 2006	June 2006			RA
7. Design and build RDF database to hold mapping of EPrints Repository learning objects to domain concept maps	April 2006	June 2006			RA

8. Populate RDF database					RA
9. Design and develop concept map interface to the EPrints learning object repository			D3: Concept Map Interface to CLARE Repository		RA
10. Evaluation of concept Map tool with CoP			D4: Concept Map Tool evaluation		Usability Consultant,
WORKPACKAGE 3:					
Objective: To extend the repository interface by the integration of semantic Web 2.0 services to enable community sharing of RLO discoveries	April 2006	June 2006			
11. Investigate suitable semantic services to integrate	April 2006	June 2006	Internal Report to be made available on the project Web site		Project manager & Team
12. Design and implement semantic web service demonstrator tools, to provide LO discovery from EPrints LO repository integrating applicable social networking web services (e.g RSS, Flickr)	April 2006	June 2006	D4: Software for implementing the service, newly developed code published in SourceForge		Technical manager
Pilot tools with Community of Practice					
13. The usability of the tools will be evaluated with the CoP					
WORKPACKAGE 4: Collaboration and dissemination					
Objective: to disseminate the project outcomes to the JISC and wider community	April 2006	June 2006			
14. Web site, workshops, conference posters & papers, journal articles	April 2006	June 2006	Internal Report to be made available on the project Web site		Project manager & Team
15. Collaboration with Community of Practice	April 2006	June 2006	Internal Report to be made available on the project Web site		Project manager & Team
16.	April 2006	June 2006	D4: Software for implementing the service, newly developed code published in SourceForge	2	Technical manager

WORKPACKAGE 5: System Testing and Validation Objective: This workpackage will test and validate the Web Services built.	April 2006	August 2006		
17. The system testing will take the scenarios and uses cases from work package 1 to ensure that the services operate as required.	April 2006	July 2006	Internal Report to be made available on the project Web site	Technical manager
18. the services will be 'plugged' into the either ASSIS or JELFAD system to ensure that the new services will operate at least as well, if not better than, the QTIRun service	April 2006	July 2006	Internal Report to be made available on the project Web site	Project manager & Team
19. During this package a peer review for OSMM evaluation and Toolkit transition will be undertaken.	April 2006	July 2006	Internal Report to be made available on the project Web site	Project manager
20. Report on Testing & Evaluation	April 2006	August 2006	D5: Project Report to be made available on the project Web site	Technical manager
WORKPACKAGE 6: Documentation Objective: Documentation will be produced for the main stakeholders required to implement the services, for example the developer, and for those who need to understand the operations but are not concerned with detail design.	July 2006	August 2006		
21. Programmer documentation and WSDL for consumer application developers.	July 2006	August 2006	D6: Project Report to be made available on the project Web site	Technical manager
22. User guide for the User Interface Demonstrator.	July 2006	August 2006	D7: Project Report to be made available on the project Web site	Project manager & Team
23. Quick Installation guide	July 2006	August 2006	D8: Project Report to be made available on the project Web site	Project manager & Team
24. Final Report	July 2006	September 2006	Final Report	Project manager

Workpackage and activity	Duration	Outputs	Milestone
WORKPACKAGE 1: Project Initiation, Domain and Repository Analysis	1 October 2006 –	Domain scope Standards	WP1 Review sign-off

Workpackage and activity	Duration	Outputs	Milestone
	31 Mar 2007	Domain concept maps Learning Object repository Ontology	
WORKPACKAGE 2: Ontology and Concept Map linking Map Domain Concepts on to ePrints Repository for Learning objects Design and build RDF database to hold mapping of EPrints Repository learning objects to domain concept maps Populate RDF database Design and develop concept map interface to the EPrints learning object repository Evaluate usability of Eprints LO repository concept map interface with community of practice	1 Mar 2007 – 30 Jul 2007	Mapping from Domain concept to ePrints LO repository RDFS database Populated RDFS database Concept interface to Eprints LO repository Concept based interface evaluation	
WORKPACKAGE 3: Demonstrator Semantic Web Service Tools Development Design and implement semantic web service demonstrator tools, to provide LO discovery from EPrints LO repository integrating applicable social networking web services (e.g RSS, Flickr) Pilot tools with Community of Practice Evaluate usability of tools. WP3 review	1 Jun 2007 – 31 October 2007	Use cases Tool design models (Use cases, service designs) Web service tool demonstrators for LO repository Pilot evaluation Tool usability evaluation Project Final Report	WP3 Review sign-off Project final report
WORKPACKAGE 4: Collaboration and dissemination Dissemination via Web site, workshops, conference posters & papers, journal articles Collaboration with Community of Practice	1 October 2006 – 31 October 2007	Web site Workshops Posters Papers Articles	