



JISC Project Plan: mapping security services to the e-framework

Project Information			
Project Acronym	-		
Project Title	Mapping security services to the e-Framework		
Start Date	May 2008	End Date	November 2008
Lead Institution	Curtis+Cartwright Consulting Ltd		
Project Director	Dr Geoff Curtis		
Project Manager & contact details	Dr Claire Davies, claire.davies@curtiscartwright.co.uk, +44 (0)1483 295022		
Partner Institutions	-		
Project Web URL			
Programme Name (and number)			
Programme Manager	James Farnhill		

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Author(s) & project role	Dr Claire Davies, Project Manager		
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Document History		
Version	Date	Comments
0.1	19 March 2008	Draft for comment by JISC Programme Manager

Overview of Project

1. Background

The JISC-managed e-Learning Framework (ELF) began work in 2003, to help systematise the emerging service-oriented approach to software engineering, within e-Learning. The ELF approached the problem by defining sets of User Agents, Learning Domain Services and Common Services. These “services”¹ were used as a filing system to categorise JISC research projects, and any appropriate implementations or specifications. The ELF has been extended to encompass a wider scope than originally foreseen, was re-launched as the e-Framework, and now incorporates international partners (Australia, New Zealand and the Netherlands). The e-Framework is currently being populated, with a number of projects currently generating Service Usage Models (SUMs), and others providing high-level support.²

The mapping of security models from federated access and grid systems to the e-Framework is ongoing, with SUMs from NZMoE and the Australian MAMS federation complete, and those for OpenID in development.

2. Aims and Objectives

JISC has funded a large number of projects in recent years that are focused on secure access to information resources. Similar work has been conducted by JISC’s international e-Framework partners, including recent initiatives in Australia and New Zealand which has mapped their respective security federations to the e-Framework. Accordingly, the objectives of this study are to:

- contribute UK service-based developments in the area of security to the international e-Framework, the primary aim of which is to facilitate technical interoperability within and across the education and research sectors through improved strategic planning and implementation processes;
- compare and contrast the security mechanisms in place across the partner countries in the e-Framework to support increased interoperability.

Building an international picture of service-based security measures will allow the e-Framework partners to maximise benefit and value by making best use of the available resources, and minimising duplication of effort. It will also help to bridge the gap between the different access management technologies (eg Shibboleth and Grid technologies).

3. Overall Approach

The scope of this project is limited to: the UK National Grid Service Certifying Authority (NGS CA); the UK Access Management Federation; and the access management federations of JISC’s key partners in the e-Framework.

This project will accomplish its objectives through an iterative process of information capture, documentation and validation. The activities are split into three phases:

- Phase 1 will engage the key stakeholders in the project and establish the landscape of the security systems of the e-Framework partners;

¹ The term “service” is ambiguous, and the e-Framework has now developed a clear vocabulary. The term “service”, for the purposes of the e-Framework, refers to a technical service that promotes interoperability between systems. The “services” within the e-Learning framework encompasses service genres, service expressions, and even entire domains within the new terminology.

² Including HiLDA, and the Reference Models: Synthesis of Sources projects.

- Phase 2 will describe and document the core technical components of the UK security systems (the level of detail will be matched to the effort available);
- Phase 3 will compare the e-Framework partner SUMs and document the findings from the project including a model of current international activity and a roadmap for increased integration.

4. Project Outputs

The outputs of this project will be:

- a high-level synopsis of current progress of e-Framework partners' security service definitions and SUMs, and UK Federation and NGS CA security policies and systems;
- documentation of the technical components of the security services that are currently in place in the UK (submitted to the e-Framework Community Wiki for comment);
- a comparison of the international partner SUMs;
- a final report which will provide a high-level view of the international landscape and ongoing developments, and a roadmap to help JISC (and its partners) to understand what subsequent activities to undertake.

5. Project Outcomes

The outcome of this project will be:

- better international interoperability between Higher Education Institutions (HEIs);
- improved international collaboration;
- a coherent picture of UK activity and security systems.

Building an international picture of service-based security measures will allow the e-Framework partners to maximise benefit and value by making best use of the available resources, and minimising duplication of effort. It will also help to bridge the gap between the different access management technologies (eg Shibboleth and Grid technologies).

6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
JISC	JISC has funded a large number of projects that will be reviewed as part of this work. JISC is also a partner in the e-Framework and is more broadly interested in the outcomes of this project.	H
International e-Framework partners	Will inform international education and research communities of UK activities	M
The Grid community	Will document the security services of the Grid community	M
The UK Access Management Federation	Will document the security services of the UK Federation	M
UK HEIs	Will assist HEIs in planning, prioritising and implementing their IT infrastructure in a better way.	M

7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
The international partners do not fully support the proposed work, leading to difficulties scoping the partners' security policies and systems and conducting the remainder of the work.	1	4	4	Ensure that JISC, and then the project team, engages with the international e-Framework partners from the beginning of the project, and achieves buy-in by promoting the benefits of the work.
The information gathered is not sufficient to develop UK SUMs, service genres and service expressions which would delay or impede the conduct of the review.	1	4	4	Work with JISC upfront to identify appropriate stakeholders, and keep JISC informed of how the information gathering activities progress.
JISC-funded project information is not easily available and is fragmented, requiring additional effort to collate relevant information.	3	2	6	We have engaged with many of the key stakeholders before and have widespread knowledge of the relevant initiatives. We will work closely with the relevant programme managers to obtain the necessary information.
The effort required to develop the SUMs, service genres and service expressions is underestimated, leading to delays.	2	1	2	Engage with stakeholders who have experience of developing such documentation early in the project and refine the project schedule as necessary, and reallocate effort.
Proposed Curtis+Cartwright staff are not available.	2	3	6	We have alternative staff with similar experience to replace or support Claire, Matt and Max.

8. Standards

We will not be developing code, but the work will be expected to reference standards including:

- X.509
- SAML
- Shibboleth
- The various Grid software packages available
- WS-*
- XACML

10. Intellectual Property Rights

The IPR provided in any deliverables and the rights to all other outputs will become the property of the Higher Education Funding Council (HEFCE) on behalf of JISC and the other funding councils.

Project Resources

11. Project Partners

Curtis+Cartwright is the sole contractor.

12. Project Management

The work will be carried out under the direction of the JISC Programme Manager (James Farnhill). We will use JISC project management and our internal management process. Regular progress meetings will be held to ensure close working with the JISC, as well as exception-reporting to identify and resolve specific issues rapidly.

Project team

Project manager: Claire Davies (claire.davies@curtiscartwright.co.uk)

Consultant: Matt Shreeve (matt.shreeve@curtiscartwright.co.uk)

Consultant: Jim Barker (jim.barker@curtiscartwright.co.uk)

Researcher: Max Hammond (max.hammond@curtiscartwright.co.uk)

13. Programme Support

We would like the following support from the JISC project manager:

- attendance at regular progress meetings
- support throughout the project to discuss matters as they arise, including defining the level of detail of documentation and spending of the flexible budget
- provision of stakeholder contact details as necessary
- introductions to stakeholders as necessary
- review of outputs

14. Budget

The firm price quotation for the work proposed is £85,080 (eighty five thousand and eighty pounds), excluding VAT (£99,969 including VAT). The price includes an element for travel and subsistence, and £8,000 of flexible budget (considered necessary due to the exploratory nature of the project). This budget can be deployed as required during the project with the agreement of the JISC programme manager.

Detailed Project Planning

15. Workpackages

WP1: Initiation

WP2: Stakeholder engagement and information gathering

WP3: Landscape study

WP4: Documenting core UK security services

WP5: SUMs comparisons

WP6: Final report

Appendix B contains more detail regarding these workpackages.

16. Evaluation Plan

All outputs will be submitted to the JISC programme manager for review. In addition:

- The draft documentation (SUMs, genres and expressions) for the UK security services will be posted to the e-Framework Community Wiki for comment.
- The output of WP5 will be validated by the e-Framework partners.

- The final report (WP6) will be submitted to key stakeholders for comment.

17. Quality Plan

The work will be evaluated using Curtis+Cartwright's internal quality assurance procedures.³ These include a formal planning meeting, formal internal peer and customer review of our work and outputs and a formal post-completion review. Outputs will be reviewed against the Terms of Reference and the desired outcomes as articulated in the ITT.

18. Dissemination Plan

The final documentation of the UK security services (SUMS, genres and expressions) will be submitted to the e-Framework. This will provide a coherent picture of UK activity and security systems, and facilitate international interoperability.

19. Exit and Sustainability Plans

Project Outputs	Action for Take-up & Embedding	Action for Exit
Documentation of UK security services	Submit to e-Framework to assist UK and international education and research communities in planning, prioritising and implementing their IT infrastructure in a better way.	Ensure documentation is on the e-Framework.
Final report	JISC needs to ensure the roadmap is made available to help JISC (and its partners) to understand what subsequent activities to undertake, including key milestones	Action for JISC to promote elements of final report

Also, to raise the profile of the project, it may be useful to attend the JISC Conference in April.

³ CA003D001 Curtis+Cartwright Quality Assurance policy and procedures.

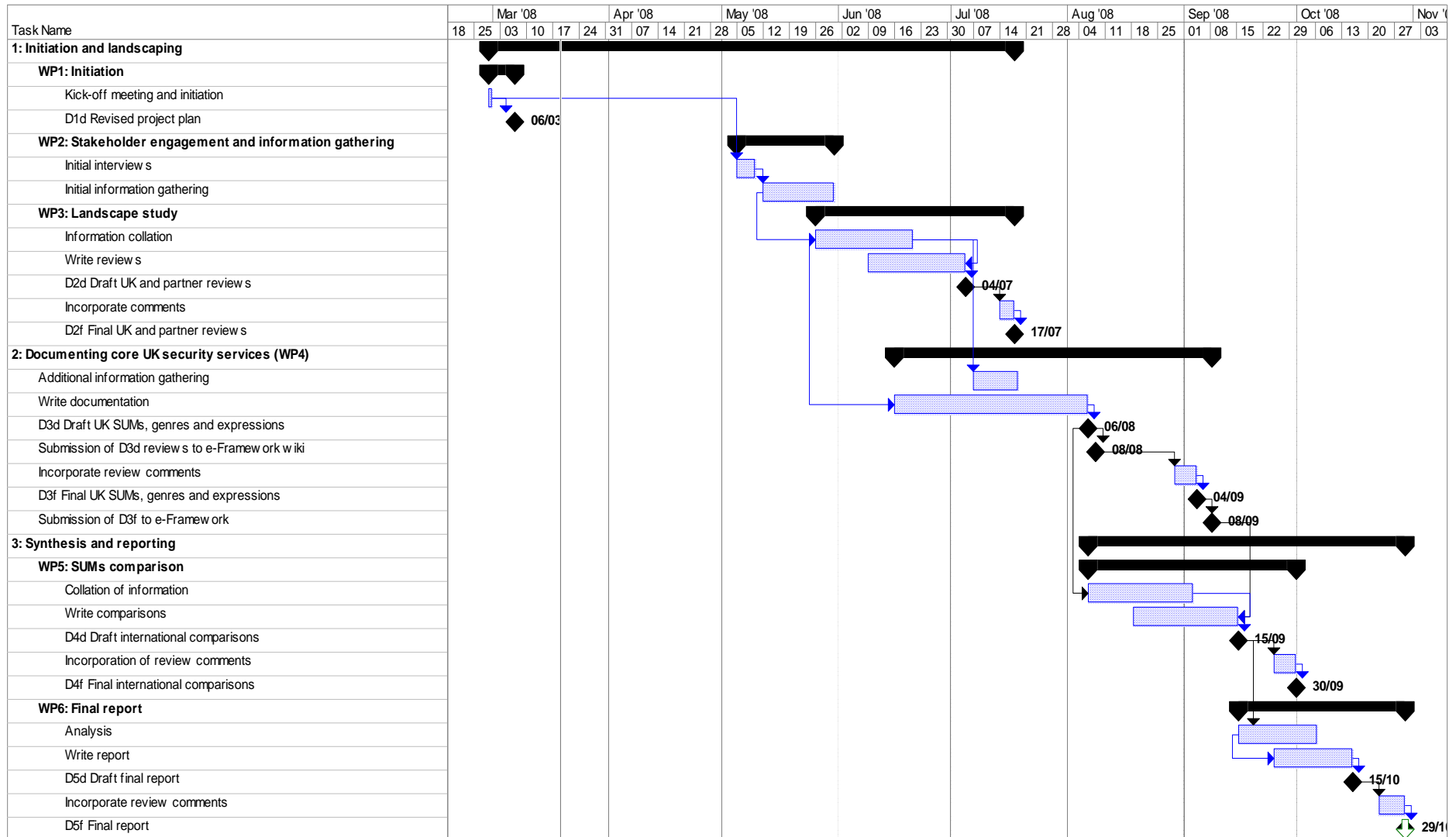
Version: 0.1
Contact: Dr Claire Davies (claire.davies@curtiscartwright.co.uk)
Date: 27 February 2008

Appendixes

Appendix A. Workpackages

WORKPACKAGES	Month	1	2	3	4	5	6	7
1: Initiation		X						
2: Stakeholder engagement and information gathering			X					
3: Landscape study			X	X	X			
4: Documenting core UK security services				X	X	X		
5: SUMs comparisons						X	X	
6: Final report							X	X

Project start date: 5 May 2008
Project completion date: 29 October 2008
Duration: 6 months



Version: 0.1

Contact: Dr Claire Davies (claire.davies@curtiscartwright.co.uk)

Date: 27 February 2008

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Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
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WORKPACKAGE 1: Initiation <u>Objective:</u>					
1. Hold kick-off meeting	25/02/2008	29/02/2008	Hold kick-off meeting		C+C, JISC
2. Generate project plan	3/03/2008	21/03/2008	Project plan consisting of elements agreed at kick-off meeting		C+C
WORKPACKAGE 2: Stakeholder engagement and initial information gathering <u>Objective:</u>					
3. Initial interviews	05/05/2008	09/05/2008	Conduct initial interviews with key stakeholders to solicit their views and to develop a good working relationship.		C+C with support from JISC
4. Initial information gathering	12/05/2008	30/05/2008	Conduct follow-up interviews with stakeholders and information gathering activities (eg web searches, JISC project reviews) to elicit information relating to: UK Access Management Federation policies and systems; NGS CA policies and systems; e-Framework partners security systems definitions and SUMs.		C+C

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Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
WORKPACKAGE 3: Landscape study					
<u>Objective:</u>					
5. Information collation	26/05/2008	20/06/2008	Collate and synthesise the information gathered in WP2.		C+C
6. Write reviews	09/06/2008	04/07/2008	Write high-level synopsis of the current progress in terms of: e-Framework partners' security service definitions and SUMs, and UK Federation and NGS CA security policies and systems. Engage with JISC throughout to discuss issues such as level of granularity	✓	C+C with support from JISC
WORKPACKAGE 4: Documenting core UK security services					
<u>Objective:</u>					
7. Additional information gathering	07/07/2008	18/07/2008	As required.		C+C with JISC support
8. Write documentation	16/06/2008	06/08/2008	Develop set of documentation - initial activity of drafting SUMs (in line with the use cases identified in Phase 1) to provide high-level models of the systems.		C+C
9. Submit documentation to e-Framework wiki	08/08/2008	08/08/2008	Post draft documentation to the e-Framework Community Wiki for comment.	✓	C+C

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Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
WORKPACKAGE 5: SUMs comparison					
<u>Objective:</u>					
10. Collation of information	06/08/2008	03/09/2008	Synthesise the information gathered throughout the project to compare and contrast the e-Framework partners' SUMs.		C+C with JISC support
11. Write comparisons	18/08/2008	15/09/2008	Write a comprehensive overview of the e-Framework partners' service-based security measures.	✓	
WORKPACKAGE 6: Final report					
<u>Objective:</u>					
12. Analysis	15/09/2008	06/10/2008	In-house analysis and synthesis of information.		C+C
13. Write report	25/09/2008	15/10/2008	Write final report, including a roadmap.	✓	C+C