



JISC Project Plan

Overview of Project

1. Background

The Taverna scientific workflow system, produced by the myGrid project, has achieved extensive use and built up a significant user community within the life sciences – the software has over 35,000 downloads from SourceForge and in June 2007 is in the top 200. Taverna enables scientists to create, edit and run workflows, and the typical Taverna user is the individual scientist in their lab (it is widely deployed as client-side software as opposed to an enterprise solution). In contrast to other digital objects in eScience, workflows capture pieces of scientific process and this makes them even more powerful for reuse. Hence there is tremendous value in being able to share workflows, and within the Taverna user community we are seeing the beginning of this with workflows on Websites and wikis (we found 400 public workflows with a Google search).

myExperiment addresses this need by building a VRE for sharing workflows, using social web site techniques. While Taverna provides a very valuable case study with a community already wanting to share workflows, myExperiment transcends Taverna to address other workflow systems (such as Triana) and other disciplines, as well as supporting additional digital assets which form parts of experiments. It also builds on the experience of scholarly publishing in the CombeChem project and associated activities such as eBank so that the workflows will fit in the scholarly knowledge cycle.

2. Aims and Objectives

1. Develop open source web site software and run a public myExperiment service which is used to support research
2. Make the software available and documented for others to run their own myExperiment instances which can optionally be connected to the public service, and show this in use to support research within at least two laboratories or projects
3. Expose myExperiment services through simple APIs and show that other Web sites can make use of myExperiment functionality
4. Show that myExperiment can integrate with other back-end services such as EPrints
5. Throughout the project to be user-led

3. Overall Approach

myExperiment embraces a Web 2.0 design and development approach. Users will be engaged throughout, and the public service will be a “perpetual beta”. The myExperiment team comprises developers together with staff whose role is to liaise with the targeted user communities. The myExperiment web server is a Free Software project using Ruby on Rails software and is committed to a RESTful architecture, providing simple APIs for ease of reuse and community code development.

We anticipate that software will be created within user communities and associated projects, and we will also attract funding from other sources to develop activities associated with myExperiment. So the VRE software development activity is focused on the Web Site itself, and on exposing services and integrating services.

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4. Project Outputs

1. Open source web site software with documentation including documented APIs
2. The public myExperiment service, available to the HEI community
3. Demonstrations of Web sites or Wikis making use of myExperiment functionality
4. Demonstration of myExperiment making use of multiple backend stores such as S3 and EPrints
5. Dissemination in the eScience and scientific community

5. Project Outcomes

1. The project provides an investigation into social networking in the context of science, and will show whether the "network effects" of community participation in sites such as facebook are also evident in the research context with more restricted access to information.
2. The project also serves as an experiment in adopting a Web 2.0 design methodology within a JISC project and will test whether community development is better achieved in this way.
3. The project will also address educational use as one of its exemplars.
4. Ultimately, the project will enable new science to occur.

6. Stakeholder Analysis

<List key stakeholder groups and individuals that will be interested in your project outcomes, will be affected by them, or whose support/approval is essential, both within your institution and in the community, and assess their importance (low/medium/high).>

Stakeholder	Interest / stake	Importance
Researchers using myExperiment	Requirements, content, evaluation..	H
myGrid	Develops and supports Taverna, I myExperiment uses Taverna and engages with Taverna users. Bioinformaticians are primary user group. So myGrid provides software and users.	M
CombeChem	myExperiment draws on CombeChem activities and the e-Bank project. Chemists are key user group.	M
OMII-UK	myGrid team is an OMII-UK partner. Also funded WHIP project which runs alongside myExperiment	M
OGF Semantic Grid Research Group	Provides grid community engagement. myExperiment is exemplar of Web 2.0 and eScience	L

7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Staffing	3	1	3	Draw on staff in larger teams at both Manchester and Southampton
Organisational	1	3	3	Project manager has backup
Technical	1	3	3	Multiple possible technology paths
External suppliers	2	2	4	We don't have full control of user engagements and some will go better than others – mitigation is multiple experiments
Legal	1	3	3	Issues of sharing, copyright etc. Taken early advice.

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8. Standards

<List the standards the project will use in the table below. Also indicate:

- Any deviations from the standards that JISC recommends.
- Where choices exist in an area, the reasons for the standards selected.
- Where proprietary standards are selected in an area where open ones are available, the reasons for their use and their scope of deployment.>

Name of standard or specification	Version	Notes
HTTP		For RESTful interfaces
AJAX		
RSS		
RDF		Resource Description Framework

9. Technical Development

The project is using agile development methods, working directly with the end user community. It is also working directly with the developer community as a free software product.

10. Intellectual Property Rights

Third parties are able to use the project itself. Where we draw on 3rd party software we follow standard developer practices and we fully attribute it. Note myExperiment data also contains intellectual content. See agreement.

Project Resources

11. Project Partners

This is a joint project between University of Southampton and University of Manchester. The Manchester activity is led by Carole Goble.

12. Project Management

The overall myExperiment initiative is Carole Goble (Director) and David De Roure (Technical Director). The JISC VRE project is led by De Roure (PI) and Goble (Co-PI), and De Roure is the project manager with additional support from Ed Zaluska. There are full-time developers in Southampton and Manchester, and part-time liaison staff to facilitate user engagement.

The meeting cadence is:

1. Daily 5pm meeting of development team (Matt Lee in Manchester, Don Cruickshank in Southampton and additional development staff as appropriate), chaired by DDeR/CAG

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2. Weekly Management Meetings (Thursday 10.30) with developers, DDeR, CAG, Rob Procter and/or Alex Voss, Ed Zaluska (DDeR backup), other liaison staff as appropriate.
3. Monthly hackfests followed by F2F management meeting, as Thursday plus liaison staff (Michaelides, Coles, Hull) and others as appropriate.
4. Liaison meetings with associated projects (WHIP).

Manchester staff are managed on a day-to-day basis by DDeR in liaison with June Finch (myGrid manager); career development, appraisal etc occurs through Manchester with DDeR's input.

David De Roure	dder@ecs.soton.ac.uk	PI and Project Manager
Ed Zaluska	ejz@ecs.soton.ac.uk	Project Manager support
Don Cruickshank	dgc@ecs.soton.ac.uk	Developer
Danius Michaelides	dtm@ecs.soton.ac.uk	Liaison with Social Sciences
Simon Coles	sjc@soton.ac.uk	Liaison with Chemistry
Carole Goble	carole.goble@manchester.ac.uk	Manchester Co-PI
Matt Lee	mattl@cs.man.ac.uk	Lead developer
Duncan Hull	duncan.hull@cs.man.ac.uk	Life Sciences Liaison
David Withers	david.withers@manchester.ac.uk	Taverna Liaison
Rob Procter	rob.procter@manchester.ac.uk	Social lead
Alex Voss	Alex.voss@ncess.ac.uk	Social adviser

The project manager spends 20% of time in project management.

The project Steering Committee consists of

David De Roure - University of Southampton
Jeremy Frey - University of Southampton
Jonathan Essex - University of Southampton
Simon Coles - University of Southampton
Ed Zaluska - University of Southampton
Carole Goble – University of Manchester
Robert Stevens - University of Manchester
Steve Pettifer - University of Manchester
Rob Procter - University of Manchester

External Adviser – Liz Lyon (UKOLN)

13. Programme Support

The project follows agile development methods and as such does not sit squarely in the administrative framework established by JISC. Accordingly there is agreement that the workplan is subject to continuous revision.

14. Budget

See Appendix A

Detailed Project Planning

15. Workpackages

See Appendix B

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16. Evaluation Plan

The project adopts a Web 2.0 methodology, with a “perpetual beta” service and continuous evaluation by the user communities. User trials are coordinated under advice from NCeSS (Rob Procter and Alex Voss). For example, in year 1 the evaluation plan is based around a series of community events: ISMB, UK e-Science All Hands, Taverna EBI workshop, OGF21, Microsoft e-Science workshop, e-Science 2007.

Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
Continuous	Public server			Community uptake and use for real science, showing connectivity and sharing enabled
Continuous	Private servers			At least 2 successful deployments
Continuous	Community development			Integration of myExperiment with existing interfaces, in use to support research

17. Quality Plan

Software quality assurance is the responsibility of the Southampton lead developer, Don Cruickshank (DGC). Note that both teams operate alongside the OMII-UK software engineering activities.

Documentation quality assurance is the responsibility of the Project Manager.

Output	Web Site (service)				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
Ongoing				DGC	
Output	Web Site (download)				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
Ongoing				DGC	

Output	APIs				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
Ongoing				DGC	
Output	Additional software components				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
Ongoing				DGC	

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18. Dissemination Plan

The project is user-led and involves continuous community engagement and dissemination, focused around community events and focused trials.

Timing	Dissemination Activity	Audience	Purpose	Key Message
June 2007	Grid Asia (Workflows)			
July 2007	ISMB			
September 2007	All Hands Meeting			
	Integrative Bioinformatics			
October 2007	Taverna-EBI workshop			
	Sci Workflow workshop			
	OGF21			
	Microsoft e-Science			
December 2007	e-Science 2007			
February 2008	OGF22			
April 2008	WWW2008			
June 2008	OGF23			
July 2008	ISMB			
August 2008	Integrative Bioinformatics			
September 2008	All Hands			
	OGF24			
	e-Social Science 2008			
December 2008	e-Science 2008			

Additionally we will report into JISC events and engage with the VRE community.

19. Exit and Sustainability Plans

The myExperiment Web Server is a Free Software project in order to promote community development.

The project will also work with OMII-UK and OSS_Watch in order to maximise potential for community sustainability.

Additional code generated in project alongside the VRE project, and within the community, will be open source.

The myExperiment Wiki will provide a window onto available software and components.

Appendixes

Appendix A. Project Budget

Appendix B. Workpackages