



JISC Project Plan Template

The Project Management Guidelines have detailed instructions for preparing project plans.

Expand tables as appropriate.

Fill in the information for the header, e.g. project acronym, version, and date.

Prepare a cover sheet using the cover sheet template and attach to the project plan.

Overview of Project

1. Background

Summarise the background to the project (and how it builds on previous work) and the need for it (and why it's important).

SMIRK began as a learning and teaching project within the University of Hertfordshire to facilitate the creation of multimedia lectures and tutorials by academics. This is important because the tools that exist and which are in common use by academics today (such as PowerPoint) do not make it easy to include spoken commentary, moreover export to highly proprietary formats and do not attempt to make accessible outputs. The other side of the project, SMIRKBOARD is an archive of such presentations, which are capable of being commented on by students as they watch. This will make the querying of such lectures a much simpler activity than at present, and moreover will encourage a more engaged and content based use of discussion boards in education. The project will build upon the RELOAD tool: it will leverage its classes in order to make SCORM compliant packages of the content created.

2. Aims and Objectives

List the broad aim or purpose of the project, and the specific objectives you intend to achieve.

The project will produce an open source java based authoring tool for generating audio visual slide shows. Outputs will be SCORM compliant and capable of playback within tools such as the RELOAD Scorm player. Outputs will also be uploadable to a server environment SMIRKBOARD where such presentations can be viewed and commented upon by viewers. The broad aim of the project is to make SCORM compliant multimedia authoring open to all lecturers and students.

3. Overall Approach

Describe the overall approach you will take to achieve the objectives outlined above, including:

- *Strategy and/or methodology and how the work will be structured*
- *Important issues to be addressed, e.g. interoperability*
- *Scope and boundaries of the work, including any issues that will not be covered.*
- *Critical success factors.*

The work will be organized according to a truncated waterfall model of software development. A full requirements documentation for both SMIRKBOARD and JSMIRK will be developed. A subsequent architectural decomposition of the system into component functionalities will be created. In cases of complex functionality (audio recording in JSMIRK, XSLT and DOM based content transformation in SMIRKBOARD) a

detailed specification of those sections will be done. Implementation of the component functionalities will be undertaken, and in critical parts of the system, validation will be explicitly signed off. Because of the timescale of the project, it will be difficult to envisage more than one real trial of the integration of the components, but we believe this will be enough and will be undertaken approximately in January.

The major issues to be addressed in terms of development will be

- Sitting on top of reload
- Cross platform audio recording in java
- Mechanisms for DOM based XML transformation in java

Because of the timescale, advanced features we might desire in the JSMIRK client, e.g. importation of content from proprietary formats, sophisticated audio editing features, such as audio resampling will not be undertaken. Similarly, we will implement the IMS content packaging standard, we will investigate the incorporation of ACCLIP metadata and Dublin Core, but nothing beyond that.

The critical success factor will be compliance with the project plan and swift communications regarding any problems arising from deviation from it. Secondly will be communication and coordination between the SMIRKBOARD and JSMIRK development efforts

4. Project Outputs

List the tangible deliverables (including reports) your project will create, and the less tangible knowledge and experience you hope to build and share.

1. JSMIRK
 - a. Windows Install Version
 - b. Linux Install Version
 - c. Full Sourcecode Download
2. JSMIRK Documentation
3. SmirkBoard
 - a. Release purely as source code download
4. SmirkBoard documentation

Less tangible outputs will involve contributing to the incorporation of accessibility in educational software design.

5. Project Outcomes

List the outcomes you envisage, including their impact on the teaching, learning, or research communities, and what change they will stimulate or enable.

1. A vast increase in the amount of expository, SCORM-compliant, multimedia content for exchange between learning providers
2. The possibility of increasing the use of responsible peer evaluation in courses through student use of JSMIRK

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
University Lecturers	The largest potential user and the gatekeeper for student use of JSMIRK. Their interest is that the tool could facilitate the recording of lectures.	HIGH
Students	Potentially the largest beneficiary of the use of JSMIRK/SMIRKBOARD, and whose enthusiasm about it or otherwise may impact upon later dissemination of the tool	MEDIUM
Technical Support Services	They would need to install SmirkBoard on a server in order to give JSMIRK users a guaranteed location for their presentations. On large courses this might have performance implications for the server that hosts it.	HIGH

7. Risk Analysis

List factors that could pose a risk to the project's success, assess their likelihood and severity, and how you will prevent them from happening (or manage them if they if they occur). Cover the types of risks listed and any others that apply.

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Staffing (SmirkBoard Development)	2	3	6	The system will be specified in a very detailed manner at the beginning of the project such that any problems in development will become apparent very quickly. The specification will be modularized into discrete tasks to allow the employment of short-term programmers should the development effort run into difficulty.
Staffing (JSmirk Development)	1	4	4	JSmirk is almost entirely based on an existing piece of software, and should any problems befall the chief developer on this part of the system (Steve Bennett), David Kraithman could take over and delegate some of the programming to a programmer on a short term contract.
Organisational	1	1	1	No Problems anticipated
Technical	3	2	6	The major unknowns will be regarding sound handling and encoding within Java, and the use of RELOAD libraries in the smirk and SmirkBoard contexts. Sound will primarily be using the JMF (Java Media Framework) and potentially the Tritonus plug-in. However, if difficulties are found there, the program will use the public domain LAME mp3 encoder - which is cross-platform. At the beginning of development on JSMIRK a series of small applications designed precisely to test any of these issues will be undertaken. Work on the

				RELOAD libraries will also begin at the start of the project and should issues arise, contact will be made with the RELOAD team in order to sort them out.
External suppliers	1	1	1	No problems anticipated.
Legal	1	1	1	No problems anticipated.

8. Standards

List any specific standards you will adopt and why they are important.

9. Technical Development

The project will follow a truncated version of the waterfall model. Because of the timescale, the iteration sequences usually envisaged between the various stages of the cycle (requirements, system spec, component spec, component implementation, component integration, maintenance) will only take place between first releases of the software, expected late January, and completion of project in late March. However, because a significant part of the project is the simple porting of the authoring tool from another language, the system implications, certainly at the client end are very well known and should not therefore suffer because of the attenuated nature of the iterative prototyping cycle.

10. Intellectual Property Rights

The likely candidate for doing the audio compression is the lame mp3 encoder. This is GNU based and so will not cause any problems. We may also incorporate other GNU licenced code and algorithms if such prove useful in the development of the project. The initial SMIRK will remain a commercial product and remain distinct from JSMIRK. JSMIRK will be a public domain authoring tool which will have much of the functionality of the existing SMIRK, however it will be released as a tool in its own right, owing no debt of obligation to the existing tool. SMIRKBOARD will be written from scratch, though it too may incorporate existing GNU licenced code and algorithms.

Project Resources

11. 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

In this project, there is only one institutional partner, namely the University of Hertfordshire. However, the division of responsibilities there will be:

- David Kraithman (Project Management, Evaluation and Documentation)
- Steve Bennett (Lead Developer JSMIRK)

- SDS (Lead Developer SMIRKBOARD) - point of contact John Sapsford

12. Project Management

Briefly describe the project management framework, including organisation, reporting relationships, decision process, and the role of any local management committee.

List all members of the project team, their roles, and contact details. Indicate the proportion of time the project manager will spend on project management.

Indicate if the project has training needs and how they will be met.

The project team will be as above. David Kraithman is the project manager and he will a) monitor progress on the project b) validate the intermediate outputs of the two development efforts c) produce documentation on the project outputs and organize the packaging of those outputs for distribution, d) explore and make recommendations regarding meta-data standards in the project.

Steve Bennett will be chief developer on JSMIRK, and will co-ordinate with the SMIRKBOARD developers in the areas of dependency between the two development efforts (most notably in the uploading of media and the SCORM packaging of content).

SDS will develop the server based system SMIRKBOARD where audio visual presentations will be kept. On technical issues they will report to Steve Bennett, and on logistic and project planning matters they will report to David Kraithman.

13. Programme Support

Indicate if there are specific areas where you would like support from the programme or programme manager.

If at all possible, we would seek to have contact with the developers involved in the RELOAD tool in order to have a high-level understanding of the system before proceeding to start coding.

14. Budget

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

Appendix A

Expenses	Breakdown	Unit Costs (£)
Steve Bennett JSmirk Development and Technical Coordination	0.85 fte ¹	22800
David Kraithman SmirkBoard development and specification and System Evaluation Coordinator	0.75 fte ²	22800
Consultancy from "Software Development Services" of the University of Hertfordshire Department of Computer Science – Implementation of SmirkBoard ³	70 Days @ £300 day	21000
Administration and Secretarial Support		1000
Meetings and Liaison with other JISC projects, e.g. reload (transport and hospitality costs).		1000
Formative evaluation and testing as well as quantitative and qualitative evaluation of deliverables including focus groups and survey.		1500
Books: ⁴ <i>Java and xslt; Java and XML; Processing XML and Java; XML in IE5; XML elements of style.</i>		170
Hardware Principal Development Machine ⁵		3000
Software	Java/XML Development Tools ⁶	1210
Consumables (CD-ROMs and materials for test participants)		500
Total (£)		74980

¹ Duration of project; represents 0.5 fte over full year.

² Duration of project; represents 0.43 fte over full year

³ Workflow programme below

⁴ Books not otherwise available to project team.

⁵ Workstation that would not otherwise be available in University. It needs to have specification that allows multiple boot areas for Linux and Windows operating systems. Also, it needs to have capacity and power to allow server testing of SmirkBoard.

⁶ Development software that is essential to project but is otherwise not available at UH: JBuilder 2005 (2 copies), Altnova Stylevision (2 copies), ZeroG Install Anywhere (1 copy)

TABLE OF WORK SCHEDULE ACCORDING TO MAJOR PARTICIPANTS							
	September	October	November	December	January	February	March
Bennett <i>JSMIRK</i>	Writing proof of concepts java apps (regarding audio recording, audio compression, http uploading of media, xslt transformations)		Implement gui for single slides	Implement serialization of slides	Implement upload to smirk board and Scorm Packaging of outputs		Test and debug the software
Kraithman <i>JSMIRK/Smirkboard</i>	Establish xml pseudo schema for serialization of presentations Write full architecture specification of app, spec up level of ACCLIP implementation			Validation of client Add Documentation Test uploading With Smirkboard	Spec up level of metadata description to be used in Scorm packaging Documentation Test Smirkboard permissioning	Organize testing group documentation Test smirkboard admin features	Package software and complete documentation
SDS <i>Smirkboard Devt</i>	Content Receiving and Commentary functionality unauthenticated version of major functionality			Permissioning Functionality and security model	Administration functionality	Scorm packaging functionality and full release of system with documentation	