

JISC VRE PROGRAMME

A VRE for the Study of Documents and Manuscripts PROJECT PLAN

Project

Project Acronym	VRE-SDM	Project ID	
Project Title	A Virtual Research Environment for the Study of Documents and Manuscripts		
Start Date	01/04/2007	End Date	31/03/2009
Lead Institution	University of Oxford		
Project Director	Prof. Alan K Bowman		
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Partner Institutions			
Project Web URL	http://bvreh.humanities.ox.ac.uk/		
Programme Name (and number)	Virtual Research Environments Programme (eResearch)		
Programme Manager	Frederique van Till		

Document

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Document History

Version	Date	Comments

See Project Management Guidelines for information about assigning version numbers.



JISC Project Plan

Overview of Project

1. Background

The VRE for the Study of Documents and Manuscripts addresses the user needs of documentary, textual and manuscript scholars. Focusing in the first instance on the requirements of ancient documentary specialists working in the fields of epigraphy and papyrology, the pilot will incorporate existing Open Source tools to enable annotation and sophisticated document viewing and will make use of existing VRE tools to facilitate communication and collaboration between scholars. The VRE will also provide efficient, integrated access to a disparate range of existing textual databases and related resources. Although the pilot will focus on ancient documents, it will be constructed so as to be usable by textual specialists working in other languages, periods and cultures. The context will be extended by treating documents not as disembodied texts but as artefacts which can and should be related to their original physical context, to the extent that this is possible. This will be of great benefit to the archaeological community and will enable them to feed the results of advances in interpretation of texts and to improve understanding of their sites and artefactual assemblages.

The work naturally follows from the outcomes of BVREH (Building a VRE for the Humanities), a series of e-Science User Requirements workshops undertaken for the AHRC (PI Prof. AK. Bowman) and the EPSRC Virtual Workspace (VWSAD) demonstrator project. In these we have established a broad-based understanding of user-driven needs, we have shown how tools and resources for studying texts and document might be implemented in a service-based environment and have tested some annotation and mark-up tools. We will now proceed to construct an integrated environment in which the data (documents), tools and scholarly instrumenta will be available to the scholar as a complete and coherent resource. The research resources on which the VRE pilot project will be based will be ancient documents on various media (stone, wooden tablets, papyri, lead etc.), but we emphasize that it will include two very important features of broader significance. First, that the tools and the structure of the environment will be entirely suitable for the study of a wide variety of types of documents and manuscripts (in two and in three dimensions) and will thus provide an exemplar for humanities researchers working on texts in all disciplines, languages, cultures and periods. The second is that we will extend the context by treating documents not as disembodied texts but as artefacts with an original archaeological or physical context which can, in a significant number of cases (in antiquity and later periods) be recovered or reconstructed.

The significance of this approach is that the construction of a VRE appropriate for texts as artefacts opens up the possibility for the archaeologist and the textual scholar to work both separately and together within a unified environment generated by the complementarity of their VRE implementations. This aspect of our proposal has been developed in close collaboration with the Silchester Roman Town VRE (PI Professor M.G.Fulford, Reading University). This VRE has developed a sophisticated system for registering, tracking and analysing data recorded in the field to allow efficient recovery of information on any given artefact or assemblage in its original environment. Future development of the Silchester VRE will focus on on-site information flow, development of a 3-dimensional imaging capability and creation of an environment in which sub-sets of archaeological small finds specialists can work in teams (in this perspective, documentary specialists may be regarded as one such sub-set). This collaboration will be further supported by currently developing links between the University of Reading and the Oxford e-Research Centre (Directors, Dr. Anne Trefethen and Prof. Paul Jeffrey).

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2. Aims and Objectives

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

The aim of the VRE-SDM project is to construct an integrated environment in which the data (documents), tools and scholarly instrumenta will be available to the scholar as a complete and coherent resource. In the first instance the project will validate the pilot VRE against the requirements of researchers drawn from the Papyrological and Epigraphical communities and then will extend the system to further humanities disciplines.

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*

Sub-headings to be added

The VRE-SDM project is intended as a pilot VRE designed to concentrate on the user needs of documentary, textual and manuscript scholars, who make up the target user community. Within this broader user group, the pilot project will focus in the first instance on the requirements of ancient documentary specialists working in the fields of epigraphy and papyrology. The local user community within Oxford is of significant size: up to 20 scholars working directly on original papyrus and epigraphical documents within the Classics Faculty; together with a wider circle of historians, numismatists and literary scholars who use inscriptions and papyri as primary sources for their research. The immediate user community is linked to a broader national and international community of documentary scholars through collaborative work on major projects (Inscriptiones Graecae; Oxyrhynchus Papyri; Romano-British Writing Tablets) and participation in electronic initiatives (Advanced Papyrological Information System (APIS); EpiDoc Collaborative; the EAGLE project of the Association Internationale d'Épigraphie Grecque et Latine; International Gazetteer of Papyrus Collections).

The project extends this collaborative activity to the recovery of documentary artefacts through archaeological excavation. Documentary specialists are rarely present during the excavation process. The potential for documentary specialists to work closely with archaeologists through real-time recording and communication of finds and contexts promises significant improvements in the working practices of both. Currently, IT-based research tools have been deployed in two main contexts in field archaeology: first, to aid in understanding the configuration, topography, and stratigraphy of complex sites and second, to record and catalogue significant numbers of 'small finds' and extensive assemblages of ceramic and zooarchaeological remains in their physical context, from which they are then removed by the nature of the excavation process. In the context of the present proposal 'small finds' naturally include documents (inscriptions, tablets, papyri, graffiti etc): the same object may be viewed in one context as a small find, in another as a documentary text, and the tools used to identify and define these separate aspects can be combined to provide a fuller picture for both the documentary historian and the archaeologist. The two VRE projects aim to explore this area of overlapping perspectives to demonstrate the way in which separate and self-standing VRE implementations may complement and build interfaces to one another.

Gathering user requirements will be a significant, continuous process throughout the duration of the project and will constantly inform development on an iterative basis. Ongoing, deployment of VRE components will be subject to full user testing. The responses will be evaluated and fed back immediately into the development cycle, which will be both responsive and iterative. The team will draw upon knowledge gained during the user requirements activities undertaken by the BVREH project. Initially this will involve interviewing users and where possible and appropriate shadowing them in their working environment. Following each new deployment of tools, use of the VRE will be evaluated to determine how the users' research is affected by the tools and to guide the next cycle of development. This process will include holding focus groups of representative users, held in conjunction with user training sessions.

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Portlets/tech development using JSR168, OSSWatch. Interoperability with VERA project

- *Scope and boundaries of the work, including any issues that will not be covered.*
- *Critical success factors.>*

The VRE for the Study of Documents and Manuscripts is designed to be a pilot system aimed at demonstrating the feasibility, scalability and sustainability of such a system both for work on ancient documents and for the wider documentary and manuscript community within the humanities. The VRE will also demonstrate the wider implications of the system, linking into the VERA archaeological VRE, providing an exemplar for humanities researchers working on texts in all disciplines, languages, cultures and periods. As such the critical success factors of the VRE-SDM project will be:

- Ease of use of the Virtual Research Environment for the target user group
- Quality of reproduction of documents within the VRE and richness of the research tools within
- The degree to which collaboration between documentary scholars is made more possible
- The extent to which the VRE can adapt and be useful for more intensive documentary problems such as palimpsests, different languages etc
- Scalability - the extent to which the VRE can be adaptable to other humanities disciplines with their own specific issues and needs

4. Project Outputs

The tangible deliverables of the VRE-SDM project will be:

- Four iterations of a pilot VRE for use and testing by documentary specialists
- Report on the effect of introducing VRE tools to the humanities community
- Report evaluating usability and extensibility of VRE tools
- Report/Analysis of usage and uptake of pilot iterations
- Design documentation
- Training materials and workshops for end users
- OSS code for tool versions
- Technical documentation of components developed
- Project website and mailing list
- Workshop to discuss the project and its results
- Reports to PI's and JISC
- Final project report

5. Project Outcomes

The VRE-SDM project has the potential to transform current research practice in the study of documentary and textual sources. The scholar interpreting an ancient documentary text currently has a broad range of relevant electronic tools available; but the interaction is largely in one direction and the experience is fragmented by the dispersal of the electronic resources. The potential of ICT to mediate collaborative activities has also yet to be fully exploited. Decipherment and transcription are activities that naturally benefit from shared visualisation and multiple perspectives. Developments in e-Science have opened new possibilities to make collaborative work on decipherment and analysis available on demand to researchers.

This project also extends this collaborative activity to the recovery of documentary artefacts through archaeological excavation. Documentary specialists are rarely present during the excavation process. The potential for documentary specialists to work closely with archaeologists through real-time recording and communication of finds and contexts promises significant improvements in the working practices of both.

As such, the outcomes of the VRE-SDM project will:

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- Transform current research practice in the study of documentary and textual sources
- Mediate collaborative activities in ways not yet exploited
- Allow new possibilities for collaborative work including decipherment and analysis available on demand
- Allow documentary specialists to work with archaeologists through real-time recording and communication of finds

6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
Oxford University Humanities Division	The project aims to build on the experience and needs of a user community in the Humanities Division intensively engaged in research involving or potentially benefiting from ICT components.	High
Oxford eResearch Centre (OeRC) and Oxford University Computing Services (OUCS)	The project is based in the OeRC and is expected to benefit from and contribute to the drive for interdisciplinary eResearch across the university and further a field. The project has close links to a number of projects based at the OeRC and OUCS.	Medium
Humanities User Communities	It is important that the project outcomes and experience reflect current activities and initiatives in the wider humanities research community.	High
JISC	The JISC is the project's funding body; the project is expected to benefit from and contribute to the ongoing development of the VRE programme.	High
VERA VRE		

7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Failure to recruit staff	1	3	3	Risk affects the recruitment of an additional technical officer. However, appropriate expertise also exists in OUCS and the Oxford e-Research Centre. The project will carefully manage the recruitment process.

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Key staff resign during project	1	4	4	Depending on the stage of the project, second staff from other projects within OeRC. In worst case scenario, new recruitment.
Lack of engagement with and of the user community	1	3	3	Preceding and continuing user needs analysis indicates a positive reception for the proposed pilot.
Failure to identify appropriate technologies for deployment within the pilot project	1	3	3	A rigorous user needs analysis and systems analysis and design cycle will mitigate this possibility.

8. Standards

Name of standard or specification	Version	Notes
XML	1.1	XML is a document format standard which forms the basis for many of the other standards mentioned (xhtml, WSRP, XMPP, RDF,...)
HTML/XHTML	4.01 / 1.0	Specification of format for webpages
ECMAScript / DOM	3	"Javascript" language and DOM to add interactivity to webpages. Due to non-standard nature of implementations propriety workarounds are necessary.
JSR 168/JSR 286 portlets	-	Standard for integration of portlets with a portal framework
WSRP	1.0, 2.0?	Standard for remote embedding of portlet by portal framework
XMPP	RFC 3920, RFC 3921	The "Jabber" communications protocol for real time chat, and message passing between instances of software client.
RDF	1.0	A key base model and format for metadata
OWL	1.0	Ontology specification language built on RDF to describe structure of metadata models
Z39.50/SRW		A key search and retrieval standard

9. Technical Development

<Indicate how the project will follow best practice for technical development, and any specific technologies or development approaches the project will adopt and why.>

The project will follow an iterative development process, aiming to deliver working versions to the user community regularly. This allows technical development to mesh with the user engagement and evaluation elements of the project, and ensures that requirements are kept in line with actual user needs by frequent feedback from end users.

Full advantage will be taken of the subversion version control system, and the Trac bug/feature tracking tools to manage all software components developed for the project, and allow progress and provenance of code to be tracked. These will be made available under an Open Source Software license to allow re-use and further development by other interested parties.

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10. Intellectual Property Rights

Any IPR resulting from this project will remain the property of the organisation(s) generating it. Under the University of Oxford's policy on intellectual property (which covers all University employees and students), the University claims ownership of a range of intellectual property rights with commercial potential. The University does not assert any claim to the ownership of copyright in artistic works, books, articles or lectures, apart from those specifically commissioned by the University. Results arising from projects funded by the JISC at Oxford would therefore usually be owned in the first instance by the University as the employing institution. The University seeks to maximise the commercial potential of its intellectual property through its wholly-owned technology transfer company, ISIS Innovation Ltd. In accordance with the desires of the JISC Virtual Research Environments Programme it is proposed to release any software applications developed by this project under an Open Source Software license to maximise the benefit for the wider community.

Project Resources

11. Project Partners

The project has no direct project partners and as such will not be entering into a formal consortia agreement. However the project will work closely with the VERA VRE project <http://vera.rdg.ac.uk/> to ensure complementarity between the two pilot implementations.

12. Project Management

The organisation of the VRE-SDM Project will be as follows:

- **Project Director:** Professor Alan Bowman
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- **Principal Investigators:**
Professor Alan Bowman. Contact: Brasenose College, Oxford, OX1 4AJ. Email: alan.bowman@classics.ox.ac.uk. Tel. 01865 277874

Dr Charles Crowther. Contact: Ioannou Centre for Classical and Byzantine Studies, 66 St Giles' Oxford OX1 3LU. Email: charles.crowther@classics.ox.ac.uk. Tel. 01865 288180

Dr Michael Fraser. Contact: Oxford University Computing Services, 13 Banbury Road, Oxford OX2 6NN. Email: mike.fraser@oucs.ox.ac.uk. Tel. 01865 283343
- **Co-Investigator:** Dr Marina Jirotko. Contact: Oxford eResearch Centre, 7 Keble Road, Oxford OX1 3QG. Email: marina.jirotka@oerc.ox.ac.uk. Tel. 01865 610613
- **Project Manager:** Ruth Kirkham
Contact: Oxford eResearch Centre, 7 Keble Road, Oxford OX1 3QG. Email: ruth.kirkham@humanities.ox.ac.uk. Tel. 01865 610617
- **Technical Support Officer:** John Pybus
Contact: Oxford eResearch Centre, 7 Keble Road, Oxford OX1 3QG. Email: john.pybus@humanities.ox.ac.uk. Tel. 01865 610619
- **Technical Developer:** To be appointed.

Two of the Principal Investigators are active members of the target user community (Bowman: papyrology; Crowther: epigraphy) and a corresponding input of time is required and budgeted for them (2 hours per week each). The third PI (Fraser) is responsible for co-coordinating the

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development of the project within the Oxford and wider VRE community (1 hour per week). The Co-Investigator, Dr. Jirotko has a vital consultancy role in supervising user needs analysis (1 hour per week).

The project involves intensive user needs analysis and an iterative series of development cycles. 100% FTE Project Manager, Ms Ruth Kirkham, the BVREH Project Manager, will be principally responsible for user needs analysis, documentation and project management. Development activity is covered by two posts: the role of Technical Manager will be taken by Mr John Pybus, previously Technical Officer for the BVREH project. Mr Pybus works as 20% FTE IT Research Officer in Phonetics and is accordingly budgeted at 80% FTE. An additional 50% FTE technical developer will be recruited to work specifically on system design and building and integration of tools.

The Technical Manager will have responsibility for the 0.5 FTE Technical Officer, and will report on behalf of both to the Project Manager. The Project Manager will report, in turn, to the principal investigators and the project as a whole will be guided by them and the pre-existing BVREH Steering Committee.

A steering committee, consisting of representatives of Oxford Humanities faculties, stakeholder representatives in the wider national and international humanities research community and contacts in the eScience community has been established and will meet formally at least three times during the course of the project.

Formal meetings of the principal members of the project team will take place at regular intervals and will be minuted. Training needs will be met locally; a block of the project budget has been allocated for staff development.

13. Programme Support

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

14. Budget

See Appendix A

Detailed Project Planning

15. Workpackages

See Appendix B

16. Evaluation Plan

<Indicate how you will evaluate the quality of the project outputs and the success of the project. List the factors you plan to evaluate, questions the evaluation will answer, methods you will use, and how success will be measured. Expand as appropriate on how you will conduct the evaluation.>

It is expected that the evaluation of the project as whole will be undertaken in conjunction with the JISC VRE Programme. Internal evaluation will be carried out through the project management board in consultation with an evaluation panel of one internal (Oxford) and one external evaluator.

Continuing internal evaluation procedures will include consultation with representative members of the research community through the steering committee. In addition we expect to identify a user group through the project's steering group and associated organisations.

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Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
	on effect of VRE tools on community	Does the report present a clear picture of the effect of VRE tools on the community	Review of results by management board, steering committee and user community	Coherence of results and identification of issues to be addressed.

17. Quality Plan

<Explain the quality assurance procedures you will put in place to ensure that project deliverables meet quality expectations and acceptance criteria. Complete the table below for each of the major deliverables providing as much detail as possible. Repeat the table as many times as necessary to accommodate all deliverables.>

Output					
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)

18. Dissemination Plan

<Explain how the project will share outcomes and learning with stakeholders and the community. List important dissemination activities planned throughout the project, indicating purpose, target audience, timing, and key message.>

Timing	Dissemination Activity	Audience	Purpose	Key Message
	Update of previous (BVREH) project web site	All	Raise initial awareness of new VRE project	About the project
	Project Mailing List	Humanities community	Raise awareness of new VRE project amongst a community already established by the BVREH project	About the project
As arranged	Programme Meetings	JISC VRE programme projects	Raise awareness about the project and identify commonalities with other projects	
As arranged	Project Steering Committee Meetings	Stakeholders	Updating and soliciting feedback/advice	Are we on the right track?

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19. Exit and Sustainability Plans

Project Outputs	Action for Take-up & Embedding	Action for Exit
Reports	Publication of initial series of reports both to targeted audiences and to general user community through project web site. Publication, as appropriate, of project findings in peer-reviewed journals.	Reports will be delivered to JISC for dissemination via jisc.ac.uk. The project web site will continue to exist for at least three years beyond the end of the project.
Pilot VRE	The pilot developed during the project will be made available, as appropriate, for integration into local and national or inter-institutional VRE's.	The pilot will be maintained locally beyond the end of the project so long as it continues to meet needs of the user community.
Knowledge	The project's deliverables include a number of reports. The project team will participate in appropriate meetings and events. Internal and wider dissemination of knowledge will be mediated through the steering committee. Project results will be published, if appropriate, in peer-reviewed journals.	The Humanities Division is in the process of considering commitment of resources to the long-term development of VRE technologies; staff retention will be an important element of maintaining continuity of project knowledge.
OSS code	The open source code developed as by the project will be made available through the BVREH website for integration into local and national or inter-institutional VRE's.	The code will be available on the BVREH website which will exist for at least three years beyond the end of the project.

<List any project outputs that may have potential to live on after the project ends, why, how they might be taken forward, and any issues involved in making them sustainable in the long term.>

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
Pilot VRE	Standards compliant VRE pilot with potential to be integrated into a wider institutional VRE, will already provide links with the VERA VRE and show the potential for expansion into other humanities disciplines.	Integration into a local institutional framework	Commitment of local resources
OSS code			

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Appendixes

Appendix A. Project Budget

Directly Incurred Staff	March 07	April 07– March 08	April 08– March 09	TOTAL £
Total Directly Incurred Staff (A)	£0	£95,142	£101,884	£197,026
Non-Staff	March 07	April 07 – March 08	April 08 – March 09	TOTAL £
Travel and expenses	£0	£2,575	£2,652	£5,227
Hardware/software	£0	£5,768	£	£5,768
Other	£0	£2,575	£2,652	£5,227
Total Directly Incurred Non-Staff (B)	£0	£10,918	£5,304	£16,222
Directly Incurred Total (A+B=C)	£0	£106,060	£107,188	£213,248
Directly Allocated	March 07	April 07 – March 08	April 08 – March 09	TOTAL £
Staff	£0	£11,295	£11,736	£23,031
Estates	£0	£23,670	£24,381	£48,051
Directly Allocated Total (D)	£0	£34,965	£36,117	£71,082
Indirect Costs (E)	£0	£110,485	£113,800	£224,285
Total Project Cost (C+D+E)	£0	£251,510	£257,105	£508,615
Amount Requested from JISC	£0	£150,905	£154,264	£305,169
Institutional Contributions	£0	£100,605	£102,841	£203,446
Percentage Contributions over the life of the project		JISC 60%	Partners 40%	Total 100%

Appendix B. Workpackages