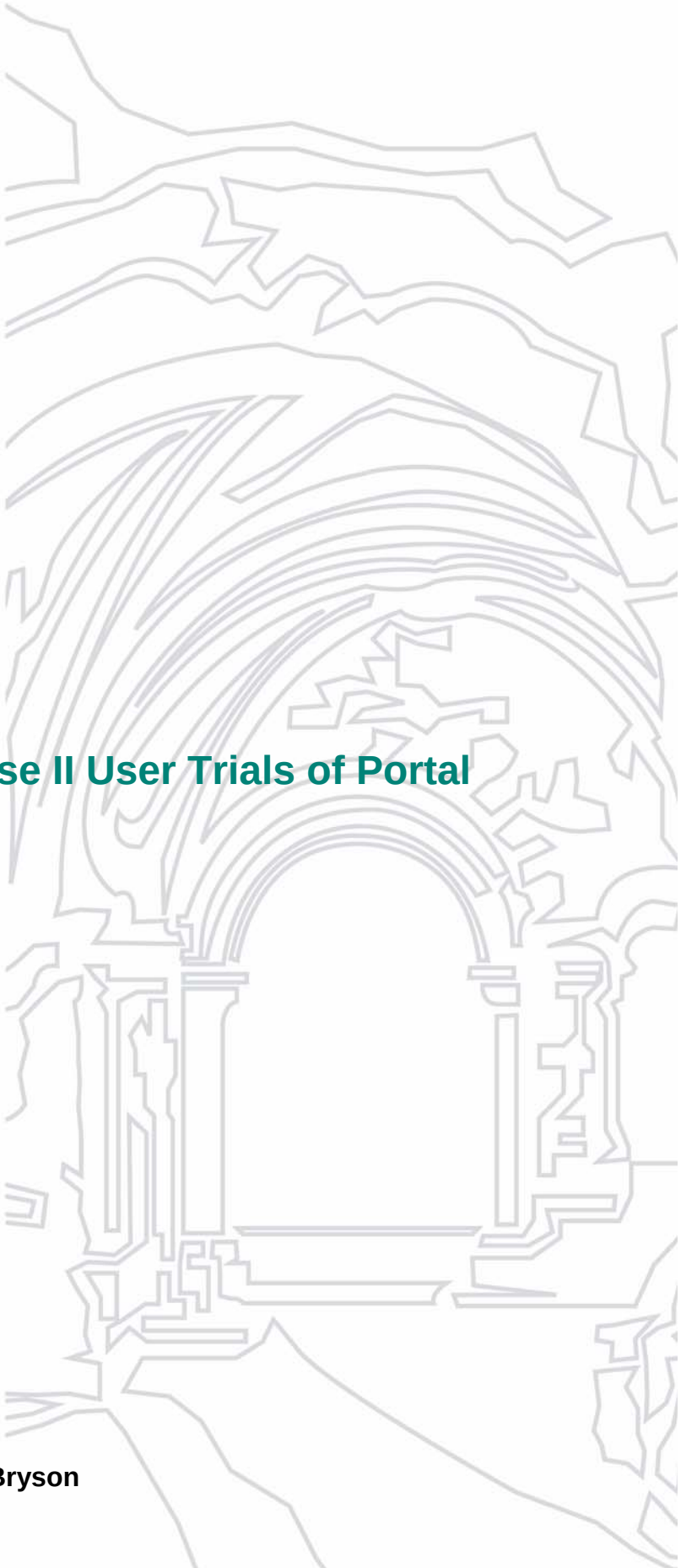
RePAH:
Reseach Portals in the Arts and Humanities
A user analysis project



Appendix A9:
Work-Package 6: Phase II User Trials of Portal Demonstrator

WP6 Report prepared by Jared Bryson

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Knowledge Media Design
De Montfort University
Portland 2.3a
The Gateway
Leicester LE1 9BH

&

The Humanities Research Institute
University of Sheffield
34 Gell St
Sheffield South Yorkshire S10 2TN

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The RePAH Project

In July 2005, the RePAH Project was commissioned to carry out a survey of user-needs for information portals in the Arts and Humanities by the AHRC ICT in Arts and Humanities Programme. It sought to understand how the arts and humanities research community finds and exploits the internet resources it needs.

In order to do this the RePAH project:

- Examined the existing literature on user needs with regard to web gateways and portals,
- Analysed the web-logs from the Arts and Humanities Data Service (AHDS) subject centres and the Resource Discovery Network's (RDN) humanities and arts web hubs (prior to July 2006 these were known as Humbul and Artifact, but now have been harmonised into Intute-Arts and Humanities)
- Conducted focus groups, interviews and a Delphi exercise with members of the arts and humanities community
- Developed and tested a paper-based demonstrator for a managed research environment to explore possible ways forward with regard to web-based research resources.

The project was carried out in 7 work packages:

- WP1 RePAH Online Questionnaire--this report examines an online survey of the Arts and Humanities Community's use of web resources.
- WP2 Web-Log Analysis--this report analyses web-logs from several of the Arts and Humanities Data Service subject centres as well as Humbul and Artifact of the Resource Discovery Network (now Intute).
- WP3 First Focus Group--this report studies the responses from a series of five focus groups conducted at the University of Sheffield and three interviews from DeMontfort University. Respondents discussed their use of web resources in general and portals in particular.
- WP4 Delphi Exercise--this report considers the results of a Delphi exercise conducted around the feasibility of various web-based tools.
- WP5 Demonstrator of a Managed Research Environment--this report is an exploration of a paper-based demonstrator of a variety of features that might be applied as portlets and used by the Arts and Humanities research community.
- WP6 Phase II User Trials of Portal Demonstrator--this report brought the paper-based demonstrator to scholars in eight subjects within the Arts and Humanities community and asked them to evaluate the features and functionality of possible portlet tools.
- WP7 Intute in Light of this Report--this report explores Intute-Arts and Humanities with reference to the features and functionality explored in the paper-based managed research environment demonstrator.

Additional appendices within the RePAH Project report include an overview of the Arts and Humanities research community [Appendix A2], and a review of the literature relevant to user requirements for digital resources and web-based research facilities [Appendix A3].

This appendix reports on Work Package 7 which examines Intute-Arts and Humanities with reference to the features and functionality explored in the paper-based managed research environment demonstrator, as well as some the data harvesting of the AHDS by Intute.

To see the full report and the other appendices see **http://repah.dmu.ac.uk/report**.

SUMMARY

- Focus Group respondents desired simple tools that required little or no input of time or personal information. Any tools introduced must not duplicate existing systems.

- **Workflow Management tools** that give the researcher greater personal control over digital project resources, especially more evolved **bookmarking features** were identified as the most valuable. While these tools are currently available in the form of GOOGLE desktop tools, the majority of researchers were unaware of their existence, despite the ubiquitous use of GOOGLE as a web search engine. Some form of automated **copyright management system** to facilitate the growing concern with usage permission and intellectual property rights was also highly valued.

- **Resource Discovery tools** that provided greater control over web-based resources were highly valued by researchers. The ability to **filte**r the quality of hit returns, **search** multiple databases was at the top of all responses. Journal articles and online bibliographical resources are consistently seen as the most important and regularly consulted online resource by most arts and humanities researchers. The option to have comprehensive access to these was consistently the top request of capabilities that were proposed. A **web-based news feed** feature appealed to most respondents. Respondents liked the idea of a Really Simple Syndication (RSS) style system which by-passed personal email accounts, but notified users of conferences, funding, jobs and new research publications.

- **Communication tools** were not valued highly. This reflects the individualistic culture of much Arts and Humanities research. There is apparent satisfaction with existing communication systems, particularly email. Real-time 'chat' and desktop video-conferencing ranked the lowest of all tools proposed. However, **collaborative research tools** for social bookmarking, annotations and shared document editing ranked towards the middle of most responses. This is particularly interesting since several of the focus groups highlighted the lack of collaborative culture among their own disciplines.

- **Automatic information-harvesting tools** were regarded as problematic. Two automatic-harvesting tools were suggested: a) an automated monitoring of electronic resource usage by research practitioners (to assist in shaping user-needs for the future), and b) an automated harvesting of CV details to provide the basis for a national register of research practitioners. There were issues concerning the infringement of personal privacy, the challenge to a predominantly individualistic scholarly culture, and a worry among early-career academics about its possible abuse for promotion purposes that overcame the potential benefits of such automated-harvesting tools.

A9.1 AIM

Building upon the first phase of the research project, this second phase of focus groups and interviews was designed to test the value of various web-based capabilities. We used the visual props of web-style screen shots and also presented verbal scenarios of the uses of

various tools. The idea was to prompt Arts and Humanities researchers to assign value to advanced portal tools, even for those that did not, in reality, currently exist. The screenshots were therefore not functioning specimens. They did not afford the actual ability to work with these tools in real time, to manipulate data, or to work in a collaborative environment. The exercise was a 'thought-experiment', and, faced with a functioning reality, our respondents may have behaved rather differently. The purpose here was to determine those features that would be most valuable in a virtual research environment for the arts and humanities research community. The following report presents the choices made by our second set of focus groups to some possible tools development, supposing it were to become available.

The Advanced Portal features that we chose to investigate further were based on the results from the first phase of the project. They are tools that might assist a researcher based in a UK HEI to perform their research-related tasks more effectively. The challenge for the Arts and Humanities research practitioner is (as Anderson, et al noted at the All Hands Meeting in 2005):

> *not […] a data deluge in the sense used within the sciences, but rather it is the existence of a multitude of data, widely distributed, created and made available using different technical and metadata standards.*

As noted in the **Demonstrator Description Report (A9)**, the tools proposed held two prerequisites for users:

- That their use of the Internet (and other resources) for research would be monitored and indexed.
- That their research output and career level / standing would be registered and documented in a standardised fashion.

As will be seen below, these prerequisites were highly problematic for respondents, and coloured many of the responses to tools which depended on their use.

The following table presents the results of eleven portal features or capabilities drawn from the Questionnaire and Delphi exercise. The order rates the first the most valuable and the eleventh the least. These features also break out into three broad categories:

- work-flow management
- resource-discovery and interoperability
- communication and collaboration.

Combined Results in aggregated order of Preference for Eleven Web-Portal Features

Resource Discovery Tools	
1.	Access to all journals
2.	Cross-database searching
3.	Pushed alerts
4.	Quality Control, Ranking and Filtering
5.	Aggregation of data
Workflow Management Tools	
6.	Personalisation and book marking
7.	Peer review
8.	Copyright management
Communication Tools	
9.	Online collaboration tools
10.	Grid Connections
11.	Desktop Video Conferencing

Figure 1

These eleven features do not map exactly onto the thirty-six features presented in the eight screen shots. The next table lists the top ten portal features from the web-page demonstrators. The discontinuity between the two sets of features is noteworthy. In this table, apart from the visible annotations as a collaboration tool, and the filtering as an aid to resource discovery, all the others would be categorised as workflow management tools. As will be discussed further below, a number of the tools appeared in slightly different forms on multiple pages. As a result the concept of an automated copyright management system ranked twice in the top ten.

Combined Preferences from Focus Groups

Top 10 Combined Tallies for Portal Features From 8 Web-Page Screen Shots	
Rank	**Feature**
1.	Keyword search of personal bookmarks
2.	All resources bookmarked
3.	Visible annotations
4.	Referencing system
5.	Frequently Used Resources
6.	Context sensitive searching for similar pages
7.	Desktop indexing & searching
8.	Filtering
9.	Copyright permissions
10.	Copyright details/ borrowing permissions

Figure 2

A9.2 METHODOLOGY

Since the focus groups and interviews were trialling 'mock-up' tools, the focus groups were given an explanatory visual presentation (MS PowerPoint) that was keyed to a paper-based evaluation form. The evaluation forms supplied to the focus groups and interviewees consisted of two exercises (**Appendix 11**).

1) The first asked the respondents to list in order of priority eleven capabilities that a digital tool might be able to provide. These were each illustrated with five hypothetical scenarios.
2) The second consisted of a series of eight wire-frame screen shots that incorporated as many as eight different web-pages. Some of these capabilities appeared on more than one web page, though they were meant to be used in different environments. For instance the presence of Really Simple Syndication (RSS) news feeds on both the researcher's home page where it might be used to receive job alerts and in the shared information of the project webpage where it might notify project teams about funding or conferences. Respondents were asked to identify the various tools' values on a five-point Lichert-scale, with five being the most valuable. Free text space accompanied each five-point scale that allowed for additional comments.

The anonymity of all participants was assured and the sessions were digitally recorded for transcription.

Timeframe. The focus groups were based around subject conferences from early April until the middle of July 2006. Interviews were held from May until July and respondents were given gift vouchers as incentives.

Demographics. This second phase of focus groups was intended to represent all eight of the AHRC's subject panels. Sessions were therefore organised at representative annual subject-specialist conferences. This strategy had strengths and weaknesses. While it was easy to locate researchers from a diverse array of UK institutions of higher education who might fit within the boundaries of the AHRC subject panels, fitting a technology-intensive focus group within the time-scale and mood of a conference was more problematic. Two sessions were cancelled, one the result of an unforeseen interruption (a fire alarm and evacuation). Participants were self-selecting. A target of six participants was achieved for five of the eight sessions, with one consisting of only four and two others with five. There was a mix of post graduate students and early and mid-career lecturers among the population.

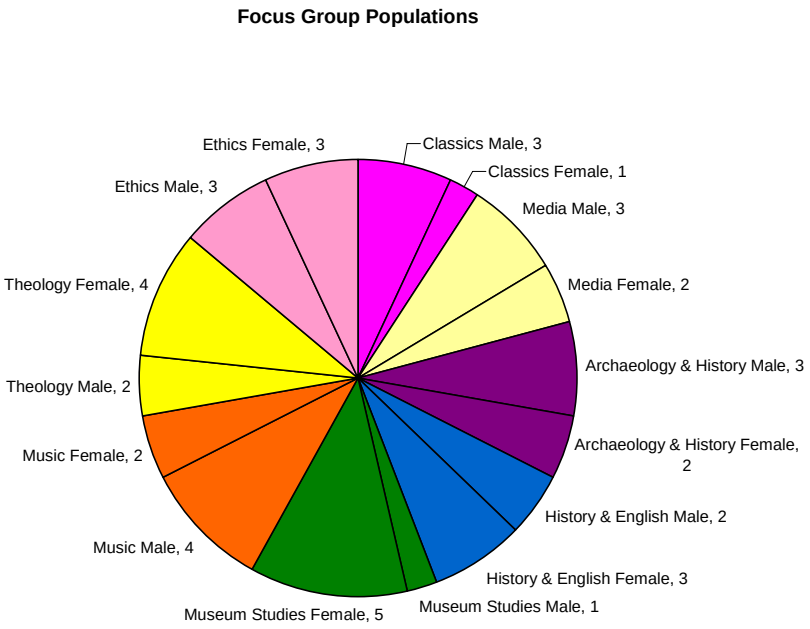


Figure 3

Interviews. Telephone Interviews were conducted with eleven individuals to supplement the findings from the focus groups and to fill subject gaps. They included interviews from these AHRC Subject panels:

- Panel One, an archaeologists
- Panel Two an architectural historian and an art historian
- Panel Three a researcher in English literature and a corpus linguist
- Panel Four a lecturer in Modern History
- Panel Five a lecturer in French and a lecturer in Spanish
- Panel Six a lecturer in Information studies
- Panel Seven a lecturer in Dance Studies
- Panel Eight two lecturers in Law

Attempts to interview representatives from the discipline of Fine Arts were, however, unsuccessful. All interviewees had the same screenshots and evaluation forms as those given out during the conference sessions. The one-to-one nature of the interview precluded, however, their being affected by the group-dynamics of the focus groups.

A9.3 RESPONSES

What follows is a cumulative description of the choices made on evaluation forms from these eight focus groups and eleven interviews. They combine both the first evaluation which ranks eleven features and the second evaluation which ranks thirty-six features, presented in eight screen shots. Where relevant, quotations which supplement the evaluation form results are included.

A9.3.1 Resource Discovery Tools.

One of the primary tasks for researchers is **locating** and **collecting** electronic information. Although the Web has been an enormous asset, Arts and Humanities researchers have consistently reported that the standard search engines are blunt instruments for searching and retrieving relevant information. Retrieval-ranking is opaquely determined. The quality and authority of the retrieved resources is problematic. Most of the important scholarly resources for Arts and Humanities scholarship are not searchable by means of standard internet search engines. So it is not surprising that the combined totals from the focus-group respondents ranked **greater searchable access** to electronic research materials as their most highly-valued feature. So **Search Control, Ranking and Filtering** featured high in the aggregate rankings. Among the respondents, Google was the search engine of choice for accessing the Web. However, the volume of worthless data returned to a general search string was often considered most problematic, if not overwhelming.

> *For example if you're doing a Google search, even if you're trying to search for something fairly specific, you're going to get a load of rubbish. And granted that they try to rank things in order of relevance and not be a lot of repetition. It's extremely time consuming and you really want to know it's searched from reliable sources rather than some wacky pressure group or something or someone's high school paper. So you want to know the results you got are worth looking at even if it turns out they're not all that you want in the end.* PHILOSOPHY 12:25

The 'authority' of what was found was uncertain.

> *I'm a bit distrustful of the Web as an information source because you don't know who the authority is*. MEDIA 18:47

Respondents wanted to filter the returns by selecting their own search algorithm, and have the ability to search for multiple elements, or at least have even greater flexibility to use search strings with Boolean limiters than is currently afforded.

> *That's quite key. The way Google ranks with interlinking and so on means that you actually get the older references. So the algorithms for ranking are quite key to how usable a tool it is. What would really be great is if you could choose the ranking algorithms yourself. So every time you do a Google search you say, rank by, newest site, not oldest site…rank the number of hits rather than the number of links*. ARCHAEOLOGY & HISTORY 29:41

Respondents did not want a search system that limited their control over or made choices for them. Many wanted to be allowed make their own choice as to what would or would not be worthwhile.

> *…any system of grading is going to be crude compared to my knowledge and long established academic ability to judge journals or judge work. The idea that it could be computerised or whatever seems improbable to me*. THEOLOGY 9:27

> *It's all very well having a ranking thing, but one of the reasons why you search for stuff is you want to find obscure bits and it's relying on somebody. I don't claim sublime wisdom about everything I'm going to find on the web but I'd rather have my own opinion and make it based on reading the article rather than having something else restrict what I actually see, and you might get a lot of dross but that's fine…* CLASSICS 25:57

> *I think this is somewhat problematic. I don't know if you had people saying this in focus groups, but to say within a discipline there are so many political stripes, so many different measures of value I wouldn't necessarily trust anyone's five-star review to tell me whether it was valuable or not for my research, and at the same time I wouldn't like my own work to be subject to that kind of scrutiny. It's already subject to the RAE and other kinds of judging mechanisms that are very complex in themselves. There's just something that makes me very uncomfortable about this ranking business*. MUSEUMS 38:57

Many respondents were worried about the potential for abuse from machine-determined ranking. They were concerned about the possibility of artificially inflating hit rates by having friends, colleagues or students visit a particular site in question.

Interoperability amongst **electronic bibliographic databases and journals** and the capability to **search across multiple databases** were the most highly-rated features highlighted by our investigation. Two issues were most clearly articulated. The first was the ability to know where reliable and up-to-date bibliographic data was to be found, including the ability to cross-search online bibliographic data in a more comprehensive fashion than that currently available through COPAC.

> *The standard database for Classics journals…there at least three or four years behind depending. So if there was something that had all the bibliographical information up to date…or fairly up to date, six months would be more useful*. CLASSICS 15:44

The second was the ability to move from a bibliographic reference to an online resource directly to that resource. **Interoperability**, in other words, was their most highly valued capability. While there was little discussion during the focus group sessions regarding this capability, the notion of searching across various databases appealed to respondents who ranked such features very highly.

Respondents did not want to see a portal system compete with existing applications. The more the systems worked together and limited the number that the researcher needed to encounter in their day-to-day activities the better.

> *I live in one house. Maybe I could live in two houses if I were very rich, but there's some similar issue. You have to…fix the holes in your roof and if these are going to be useful to you, you have to keep up your service. There's a limited number you can live in.* THEOLOGY 41:38

Web-based alerts. Where respondents were familiar with RSS-type individual information feeds, they valued them. It was a better alternative to an email feed, because it did not clutter the in-box of space-delimited university email accounts. Early-career and post-graduate students appreciated the possibility of receiving funding and job updates. An alerting system notifying researchers about new publication releases in their field of expertise was also mentioned as useful.

> *I just find it intrusive that my email is filled up and this would be so much better. It's also the conferences and job alerts that's particularly good.* PHILOSOPHY 18:20

> *This would be easier to ignore than emails, and in that respect it would be nicer…this has got a fixed form and presumably you can tell what it is they're trying to tell you…those emails can get quite annoying, yeah? Whereas this would be quite easy*. THEOLOGY 45:35

> *The idea of calls for papers updates is great! (it would also be good if all journals fed into a single database and you got updates on new publications relevant to you)* HISTORY & ENGLISH EVALUATION FORMS

Automated Data Aggregators came towards the middle of the range of our users' desiderata. Their response to tools such as shared bookmarks and referencing elements was moderately favourable. They wanted interoperability, but they did not want it to be pre-determined or too mechanical.

> *With journals you've got things like JSTOR would it be better to look at ways of linking systems like that together on at least some sort of pan-European level.. I don't know how that works on the Continent but there are probably a lot of obscure journals that they haven't got around to digitising, but if you are just replicating another system from a standpoint that people are going to see, you would be better served by trying to create a network of databases you can access as opposed to a separate one that replicates everything*. CLASSICS 17:38

> *A worry for me is security for my desktop/files. However, this sort of tool would be excellent for giving a sense of belonging to the group that sets it up (be that research project team, or even for undergraduates in a department), and for bringing a number of research functions together in one application (series of linked applications).* LAW INTERVIEWEE

Application of Automatic Data-Harvesting Methodologies. The examples that were explored with the user groups were the possibilities of automatically harvesting forthcoming conference information, and individual CV data to create registries of current research activity.

> *A big advantage of this is that you could get alerts about publications. The only way that I've been able to do that is just sign up with the different publishers. You go through the thing and say these are my interests, and they will say, this book has been published, or you sign up for tables of contents. Well you have to remember to do that, but there's no central place where that's made available to the entire philosophical community and that's a problem. It would be much nicer not to go to every publisher and sign up for alerts*. PHILOSOPHY 19:42

The reactions to conference information were more positive than to the harvesting of CV data. The latter feature was almost always listed among the least-favoured feature. It provoked a good deal of discussion in the focus groups. Many wondered how a synergy of participants could be built up unless everyone was required to participate in the system. Scholars from outside the UK may not want to provide professional details and could not be required to participate.

> *I see certain problems with it. For instance you'd need to have the CVs of all scholars who ever might have published a journal article or who have cooperated with the AHRC*. THEOLOGY 9:27

> *Not all researchers have a position to put up* [as a CV]. *Does this mean they are less 'worthy'?* MUSEUM EVALUATION FORM

> *This is the classic example. It's assuming that there is some time within the project to input this information. That's your early question, are you going to buy into it, are you going to put work into it initially. There is an issue there…There's a colleague of ours who did a very*

> *similar thing for European co-production funding. He built a database with the software…six months it was lying in the gutter not breathing, because the amount of initial input, the amount of critical input never happened. Not enough people bought into it. Me and my pals could have been emailing each other…there's a risk. What happened was the funding took him so far, he couldn't—it always cost more to roll out, to get it really up and running. On the face of it, some of this stuff looks fantastic, but it's the level of buy-in isn't it?!* MEDIA 1.09:20
>
> *I don't see the point of the CV*. PHILOSOPHY EVALUATION FORMS

One focus-group participant suggested, by way of alternative, embedding Library of Congress-style information within academic works in order to allow searching for those specific types of resources.

> *…the cross data base searching and aggregation of data…the ability to find something efficiently and narrow it down. And I would love to see something like the Library of Congress system for labelling the contents of web pages…some sort of system for standardising what's included on web pages. You'd never get everybody to use it, but you'd get serious sites, museums, educational institutes, to follow it, if it were simple enough and efficient enough. Something that would make searching more focussed*. MUSIC 21:03

A9.3.2 Workflow Management Tools.

This category of features was intended to demonstrate the possibility of gaining greater control over the resources and materials used on a day to day basis by researchers within the arts and humanities. This primarily meant that digital objects (documents, presentations, databases, spreadsheets, audio or video file) could be located and used with greater efficiency

Comprehensive book marking, desktop indexing and searching were features that appeared in various forms in several of the web page screen shots. Depending on the context of the page, each time the respondents gave the tool a different value rating. However, the ability to store and find all digital objects easily, whether created through one's own PC or web sites was recognised as a critical part of the researcher's routine. These features held immediate appeal for focus groups and interviewees alike and were understood to make life much easier for big projects handling large volumes of data or even singular projects with long time scales. Respondents were aware through the use of web bookmarking what this feature entailed. Some were also aware that Google's Desktop feature indexed personal resources in order to enable its search facility. Therefore there was little discussion during the focus groups and interviews about this capability, but a high degree of value assigned on the evaluation forms.

Annotating tools were also positively rated. Users warmed to the possibility of attaching notes to a digital resource in a wider range of formats than available at present. This was for private research purposes as well as collaborative research practice. There were some concerns expressed, however, over the degree of visibility of the annotation accorded to the viewer. Digital annotation was more positively ranked if the capacity to make the notes private or public was clearly a choice within the user's hands. Several participants across the subject-fields suggested a commentary or rating system similar to that for Amazon.com for material within shared bibliographical resources that would permit a research-community ranking of resources gradually to assemble. The form that this might take was unclear.

IT'S THE VALUE ADDED ANNOTATION THAT YOU FIND USEFUL?
Yeah I find that really useful. THEOLOGY 31:57

It's [annotations] *basically letting us use our own language to remind us*. THEOLOGY 58:57

Personalisation and book-marking. This family of features allows the researcher to become more directly their personal manager of online digital libraries, storing references to materials by means of bookmarking, then (eventually) being able to index or key-word search the bookmarks, and eventually the items themselves. The ability to customise and control this process was positively-rated among the future tools for development. Users particularly welcomed the possibility to annotate the bookmark links with abstracted information or additional material so that it might form an annotated link or 'note' to a resource.

I always have difficulty finding specific books and if you computerised it that would be fantastic. If you bookmarked it and could get that straight away and you wouldn't have to remember the search you went through to get that MUSIC 16:57

Actually something I've always wanted to see is a sort of two-stage book mark where you have your most frequently used resources at the top but then everything else that ends up that you book mark ends up alphabetised or something like that. It seems now you can do one or the other but I can't have a section of the five that I use the most and then the next section be the forty-nine things that I don't want to loose track of that I use four times a year and some way of compartmentalising sections of those things. MUSIC 29:26

Keyword search of content of personal bookmarks would be good. INFORMATION STUDIES INTERVIEWEE

You have to have a personalisable interface so people can choose which one of your facilities that they want displayed…there's got to be some way that people have got control over their public face in a way, because we're all really, really busy, and we're all trying to look as professional as we can be. INFORMATION STUDIES INTERVIEWEE 28:41

Some sorting might be useful here, especially for a long list of bookmarks. Bookmarks could be grouped according to format (i.e. websites, books, articles etc.). FRENCH INTERVIEWEE

Automated Bibliographical Downloads. Most of our users were familiar with the Endnote bibliographical software, even if they had not used it themselves, or had not availed themselves of all its features. They responded positively to the broader application of selective bibliographical downloads, with investment in making the download filters simpler and easier to use regarded as a priority. Users were also positive towards the notion that automated bibliographic downloads might include references to other places where the work had been cited. **Citation history** was also regarded, in a positive light. Though available in several of the existing e-resources and even Google Scholar, embedding a similar system with all the other searched material was considered very valuable.

A 'Frequently-Used Resources' Tool. This was variously regarded. Some respondents wondered how such a feature differed from simply storing resources on the desktop.

What does 'Your Documents' do that Windows doesn't do already? MUSEUM EVALUATION FORM

'Your documents' is a common feature in Windows, would it be needed here? HISTORY & ENGLISH EVLAUTION FORM

The Frequently Used Resources, the problem with that, and again this is speaking from my own laziness, if it only gives you the top five then I'll never use anything else. MUSIC 28:45

However, others thought a customisable ranking feature was a positive tools development. They readily appreciated the advantages of web-based resources being accessed more conveniently and organised around common tasks. By contrast, a **'Resource Use Tracking and Usage-History Tool** was much less highly valued, in fact several thought it might be a problem.

> *Resource Usage History, unless it was monitored and controlled fairly carefully it really would be terribly open to abuse.* ARCHAEOLOGY & HISTORY EVALUATION FORM

> *It is useful to see resource usage history but I do find statistics can be somewhat arbitrary and I would be concerned if they were used e.g. in the RAE as evidence of esteem.* SPANISH INTERVIEWEE

> *I don't see why any of this is necessary at all actually. This particular feature seeing that we can use other software already why should we should we be part of this Big Brother publication of everything that is going on? Why should other people be able to check up on us?* MUSIC 43:29

> *Institutional and citation history information would be valuable for the interdisciplinary aspects of some of the topics I research. Different departments tend to work in isolation, although there are valuable points of overlap between our research areas (and methodological approaches). The facility to see who else accessed material could help highlight others working in relevant subjects.* DANCE STUDIES INTERVIEWEE

One respondent from the Philosophy focus group linked the resource usage history tool with the use of annotations in order to create a forum for debate:

> *If annotations function was more like an online discussion/debate then resource usage history would be more valuable.* PHILOSOPHY FROM EVALUATION FORMS

The common user experience was that they simply did not make much use of tracked actions currently. One interviewee considered it a better tool for institutional libraries to track downloads from central document stores.

> *Resource usage history useful for institutions but not necessarily for individual researchers.* VISUAL ARTS INTERVIEWEE

A 'Peer review' Tool. The notion here was a pre-print peer-review tool with a rating system that was more commonly understood and transparent within a process that could be conducted electronically. This was a tool that was positively viewed as contributing to a more readily understood, and more broadly shared sense of peer review.

> *How many people have reviewed it? Who are the people that are the peers? And then you're under the assumption that the really busy important people that know a lot about this stuff will be too busy to do any peer reviewing on your online system…So I'm always a bit sceptical about that kind of stuff.* INFORMATIONS STUDIES INTERVIEWEE 23:40

A 'Copyright management and permission information' Tool. This feature proposed an automated electronic means for seeking copyright and permission information, deriving copyright from the bibliographic electronic data already stored. Respondents consistently placed this in their 'top ten' wish-list. They interpreted its desirability in both research and teaching contexts.

A9.3.3 Communication Tools

This category of features polarised our users. On the one hand, the ability to share documents and annotate resources was considered highly valuable. However, real-time 'chat' and 'desktop-conferencing' scored at the bottom of the scale. The low value of these features correlated with the satisfaction expressed in the focus groups and interviews with current communication arrangements for research purposes in these domains.

'Document-sharing' Tools. This feature was consistently the most positively-weighted of the communication tools proposed. The possibility of being able jointly to edit a document and control the versions produced attracted our users, with the caveat that they were able to control how the sharing occurred:

> *For me sharing documents is one of the most useful things here*. THEOLOGY 47:50

However, a contrasting argument was also voiced:

> *A general worry that I have has to do with making certain aspects of the research process a public event. So things like…on the resource usage information page and it shows you everybody who has accessed an article, I just really don't like that. What does it matter if I've read the article or not. I don't want my colleagues necessarily to know if I've read the article or not, because there are obvious reasons why people would want to know that information potentially in some cases, not in all cases that it's unlikely. I just think there are certain aspects of this where we're edging into that territory where everything you do is scrutinised and it's worrying. And there's a lot of it that's very, very useful, but there's a lot of it that's edging along toward questionable…I think there will be resistance to it. People are already resistant to using the JISC's systems, and maybe that's just 'old-fogeyism' and maybe that will change as…I don't know, it's changing the nature of what research is, especially the humanities.* MUSEUMS 1.09.56

Online Collaboration tools. Social bookmarking, live chat, and group working environment tools were not positively regarded among our respondents. Their negative responses were governed by questions of time-management and utility.

> *Social bookmarking—only if you can moderate who can take your bookmarks*. HISTORY AND ENGLISH EVALUATION FORMS
>
> *The value of social bookmarking depends on how 'generous' researchers want to be. They may only want fellow research collaborators to see their work. They may not want the risk of others 'pillaging' their work for their own ends.* ARCHAEOLOGY INTERVIEWEE
>
> *Although I don't do much collaborative work, particularly outside my own institution, access to resource bookmarks of colleagues would be beneficial*. DANCE STUDIES INTERVIEWEE

Many of the respondents claimed that they did not work collaboratively and that the concept was not 'normal' in their discipline.

> *The problem is there's not so much collaboration for the most of us*. THEOLOGY 47:35
>
> *Theology isn't famous for being a collaborative subject*. THEOLOGY 47:54
>
> IF YOU HAD THE TOOLS THAT ENABLED YOU TO COLLABORATE WOULD YOU COLLABORATE MORE? *It would take time to learn a culture of collaboration if I'm honest*. THEOLOGY 48:03

> *The sciences, if you see a paper with scientists you see a paper with twenty names to the top of the paper. If you see two at the top of a humanities paper it's a sign of an unnatural relationship. It just doesn't happen.* CLASSICS 49:20

> *Collaboration is 'made up' because that's where the government funding seems to be going, but it isn't real, you know. People do their own thing as much as possible.* IF THE TOOLS WERE AVAILABLE WOULD THAT ASSIST IT IN ANY WAY? *The nature of the work isn't collaborative. It's not like science based things where you have ongoing--you have your idea and you have to find it there yourself, you don't want to give it to somebody else.* CLASSICS 44:39

> *I would be worried if the AHRC made it a condition, a compulsory condition to engage in this. Obviously they'll pilot it…You work for them for research and have to engage with partners…it seems you're forced into a condition of sharing and that there is this idealised view that people do want to share.* MUSEUMS 1.04: 17

Desktop Video Conferencing consistently ranked at the bottom of choices. **Real-time 'chat'** was already available to researchers who wanted it in applications such as Microsoft Network (MSN). Our users told us that they did not currently use it, however, for pursuing their research and teaching. **Archiving.** This feature was consistently ranked in the lower third of responses. The low rating may have been a consequence of where the feature was positioned in the screenshots. Listed among the Project Information Page tools, there was no discussion when this feature was presented, and although it may have been received better than the worst received tools on the page, chat and video-conferencing it remained lower than bookmarking and document sharing which had been identified on previous pages as being valuable.

'Institutional Repository' Tool. This was one of the 'automatic harvesting' features that we proposed, in this instance providing a tool for user-controlled ingestion of electronic material to an 'institutional repository'. Users were not very well-informed about the 'institutional repository' movement. Their responses were governed by their belief that this form of publication was simply not a priority for them.

'Grid Connectivity Tool'. Accessing the Grid was presented as an 'infrastructure-enabling' tool to our respondents. None of them had used the Grid for their research. Their awareness of the E-Science and E-Research agenda was varied. The low ranking of this feature is no doubt a reflection of the fact that the Grid is not yet regarded as an important arena for Arts and Humanities research.

A9.4 ADDITIONAL COMMENTS AND DISCIPLNIARY DISTINCTIVES

Many respondents echoed concerns from the first phase of focus groups. There was a great desire for **simplicity** such as that found in Google's single line search field. Tools should not be laden with jargon and should not require a great deal of time in training and familiarisation.

> *They want their black box. They don't want to know what's in the black box, they just want it to work.* INFORMATION STUDIES INTERVIEWEE 8:07

> *Some people don't even read their emails, so they haven't even got past that yet!* MUSEUMS 1.04:04

> *This is becoming way too complicated…I just want it to do the job I want it to do.* THEOLOGY 34:48

> *I keep thinking is this necessary? I've got so much I've got to do. Theoretically I can see that this could be good that it can help me organise and could even make my life easier, quicker but I just want to run screaming from this room and say, 'Oh my God, no!', because it just seems to me to be just more things on top of what I'm doing. More things I'm going to have to learn how to negotiate, which actually normally I don't mind.* THEOLOGY 39:30

> *I am very good at technology but don't give me this jargon. I don't understand it and I don't have the energy…I just want to do my research not this. If it furthers what I have, give it to me. If it's just going to replicate, or confuse me, or take my time up then no, I'm busy.* THEOLOGY 1.07:03

> *My basic comment is that I'm overwhelmed by this ability, possibility, on the other hand there's always a certain time limitation which prevents you, would prevent me from using something like this.* MEDIA 1.00:14

The **training implications** for complex tools are an important issue.

> *There are certain colleagues who have tremendous energy and enthusiasm for the new web technology and then there are others like myself feel themselves sufficiently busy and are bothered by the start up cost and may not be visionary enough to see what the grid could be. So I can imagine that you'd want to work, if you could, work with that select group which will be a real minority, maybe ten percent or less who have a real enthusiasm for cutting edge technology, who then might share the success with the rest of us that there might be some good to be done. Whereas people like myself are saying, this is really complicated and I'm ok as I am. Which I can imagine in ten years time I'll be thinking how useful this is, but I'm not one of those who can get enthused about it in advance, and until I've actually seen someone operating it.* THEOLOGY 15:15

> *It's a question of how much time do you envision people spending on this. There's a danger that you can spend time constructing an elaborate system that will actually take over. We have this at uni where we have this way of keeping track…you've got all your activities, all the things you've learned from, all the things you hope to learn from them and any issues you have, any thing and everything has to be logged, and all data that's stored and supposedly you can go back and modify it. The question is whether time is best spent in a library with a book or looking at data online say, rather than actually ploughing through this sort of thing. Alright it can make your life a lot easier in some cases but you always have to ask does it help you do research in the most fundamental sense of the word…I mean people have always managed to get their PhDs and stuff without the help of such things. And the trouble is that if it's introduced by a funding body you have the idea that this is what you have to do. In a lot of departments people get stressed just by the fact that they have to do such things, and it annoys them because they want to go and play with pots or whatever. So it has to be quite reflexive. You say you minimise the things you don't want, but it has to take up as little time as possible because it's always an ancillary to research. Collaborative stuff might happen at the post-doctorate level but you wouldn't want* [to], *I've had friends whose bits of work have been nicked and published and things and people are very protective of what they do, understandably, and it's tailoring that for subject specific* [work]… CLASSICS 47:01

Many respondents did not want to see **duplication** of applications.

> *Is this doing anything other than what I already do? And it seems to me we're replicating rather than helping…I am getting a bit concerned about the amount of money that is*

> *potentially going in to doing this when all I'm going to do at the end of the day is minimise, minimise, minimise. As someone trying to apply for funding off the AHRC, give it to me instead!* THEOLOGY 1.04.:07

Some respondents touched on questions of **data protection and personal privacy** with regard to data sharing and the machine logging that was needed to use some of the collaboration, cross-database searching, and aggregation tools.

> *Issues of research confidentiality and issues of intellectual property rights which could arise out of sharing details* HISTORY & ENGLISH EVALUATION FORMS

> *Why is this necessary?! I don't want people to see what I do without my permission—I am a person and a scholar not a web-page.* MUSIC EVALUATION FORMS

Customisation and control of the search, storage and retrieval process was also a key concern.

> *As long as I could minimise it so it's not in the way and I can edit things and take out what isn't, because I can't stand having junk on my computer screen I don't need. So as long as I could take out news feeds because I didn't want it for the next two months and then stick it on when I do. So as long as I have control—this I understand. This I like.* THEOLOGY 24:15

No one wanted to see a new system imposed on the arts and humanities research community.

> *I wonder if there's an underlying technological issue which is people who work in the AHRC think of this as our natural home, so that we would want to work in an environment that was determined by the AHRC and get into the way the AHRC looks at things, whereas actually the AHRC is a wonderful body who gives us money sometimes and who we deal with when there is there's any chance of getting it, but otherwise there are lots of other homes.* THEOLOGY 1.06:20

The disciplinary distinctiveness emerged, albeit within the common framework of responses already outlined. Those within **Classics** (excluding classical archaeologists) claimed that their discipline did not routinely collaborate, but instead rewarded the solitary scholar working within a small network of colleagues. Their other concerns centred on ease with which the technology could be used and not be a distraction from their primary work with ancient texts. There was a lack of awareness of the potential of ICT to enhance their research. The **Archaeology and History** focus group consisted of researchers already familiar with humanities computing and its application to the discipline. They placed most value on greater development of data aggregation and cross-database searching. The referencing system and document sharing features also ranked highly. As might be expected the **Media and Film** respondents were interested in the ability to incorporate video materials as a resource. This could include searching and storing video resources with the same ease as that of text-based resources. They also mentioned increasing the ability to network for both teaching and funding purposes. For the **History and English** focus group one of the interesting features discussed was an alerting system dedicated to bibliographical information. An RSS feed for new books within the field of the researcher's interest. The **Museum Studies** focus group highlighted their unique position straddling both higher education institutions and those outside. It was noted that many museums do not even have web access and would not be able to take advantage of the proposed tools. The CV-based quality control system would not suit the career paths and research tasks of many museum professionals. Both museum professionals and archaeologists have large populations who conduct their research outside HEIs and their ability to take advantage of the portal might be limited. **Music** respondents placed an automated copyright management system at the top of their valued features. In addition, theirs was the only focus group to highly value a system

that linked researcher's published material to an institutional repository. The **Ethicists** suggested that web-page features that brought together the collaborative annotations and a blog-style chat would be very valuable to create tools for debate and a forum for sharing ideas. **Theology** respondents placed the notes and annotations twice within the top ten of the total thirty-six.

A9.5 CONCLUSIONS

Overall the focus groups were positive about the potential that the proposed tools offered; however that general enthusiasm was tempered with the caveats already mentioned in the additional comments section. The overall picture of priorities that emerges is:

- Focus Group respondents desired simple tools that required little or no input of time or personal information. Any tools introduced must not duplicate existing systems.

- **Workflow Management tools** that give the researcher greater personal control over digital project resources, especially more evolved **bookmarking features** were identified as the most valuable. While these tools are currently available in existing forms such as GOOGLE desktop tools, FLIKR or Delicious, the majority of researchers were unaware of their existence, despite the ubiquitous use of GOOGLE as a web search engine. Some form of automated **copyright management system** to facilitate the growing concern with usage permission and intellectual property rights was also highly valued.

- **Resource Discovery tools** that provided greater control over web-based resources were highly valued by researchers. The ability to **filte**r the quality of hit returns, **search** multiple databases was at the top of all responses. Journal articles and online bibliographical resources are consistently seen as the most important and regularly consulted online resource by most arts and humanities researchers. The option to have comprehensive access to these was consistently the top request of capabilities that were proposed. However, respondents also consistently wanted these features on their terms, gaining greater control over the searching process and reticent to contribute personal time and information to learning a new system. The two requirements set for many of the features of contributing professional credentialing information and time learning and setting up the system (**see Demonstrator Description Report A9**) appeared to be insurmountable barriers. A **web-based news feed** feature appealed to most respondents. Respondents liked the idea of a Really Simple Syndication (RSS) style system which by-passed personal email accounts, but notified users of conferences, funding, jobs and new research publications.

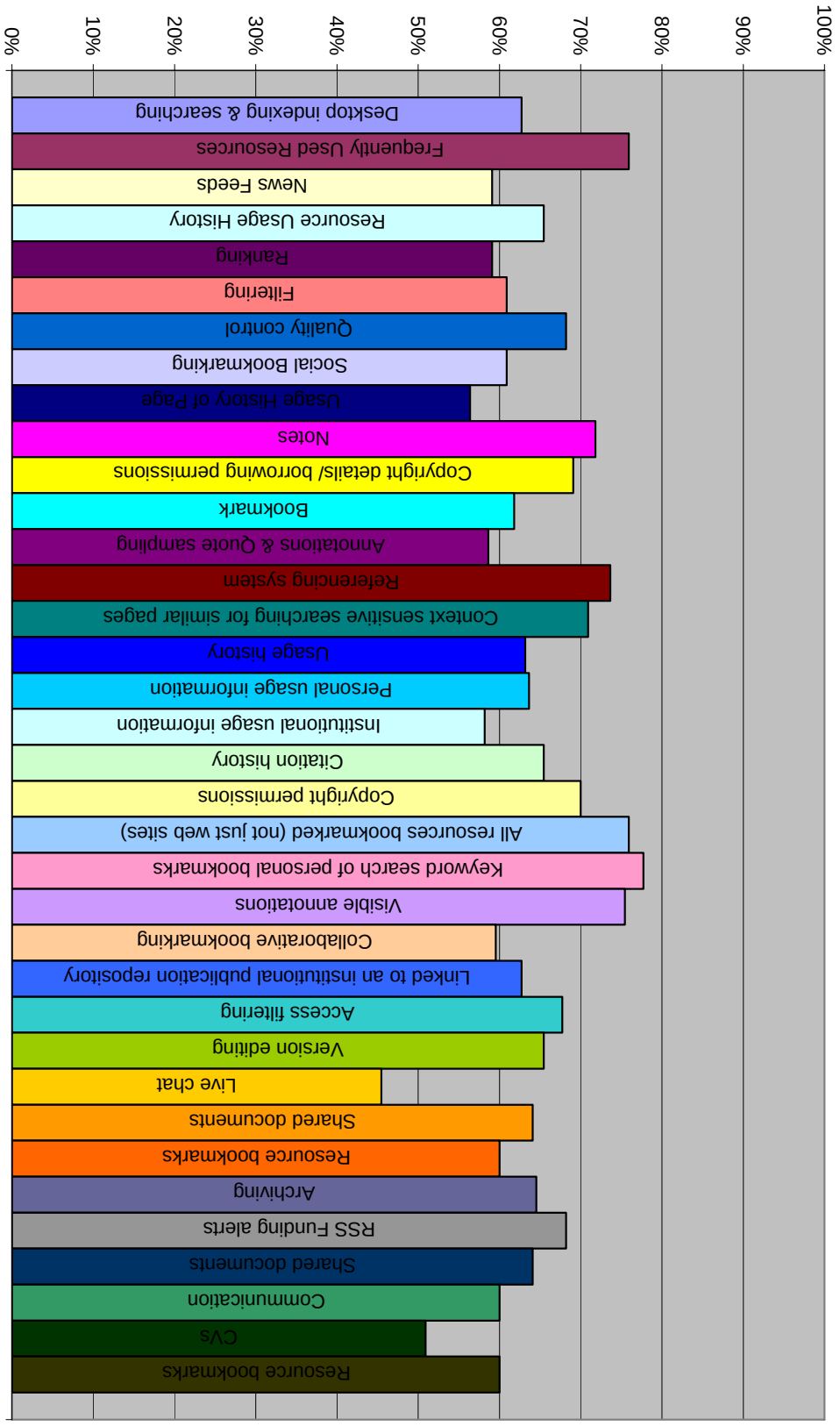
- **Communication tools** were not valued highly. This reflects the individualistic culture of much Arts and Humanities research. There is apparent satisfaction with existing communication systems, particularly email. Real-time ‘chat’ and desktop video-conferencing ranked the lowest of all tools proposed. However, **collaborative research tools** for social bookmarking, annotations and shared document editing ranked towards the middle of most responses. This is particularly interesting since several of the focus groups highlighted the lack of collaborative culture among their own disciplines. Following from the last quote above, the reticence to contribute personal data as well as time seem to mitigate against not only the ability to harvest data from across the research community, but also to work in strongly collaborative environments. Despite such reactions University’s are already monitoring and collecting data from scholars within their institutions. The information obtained about Professor Mark Greengrass in the dummy demonstrator data was gleaned from freely

available information already available on the Web. Researchers in the arts and humanities routinely participate in 'weak' collaboration by sharing citations and interacting through their informal networks to exchange ideas and comment on each other's works.

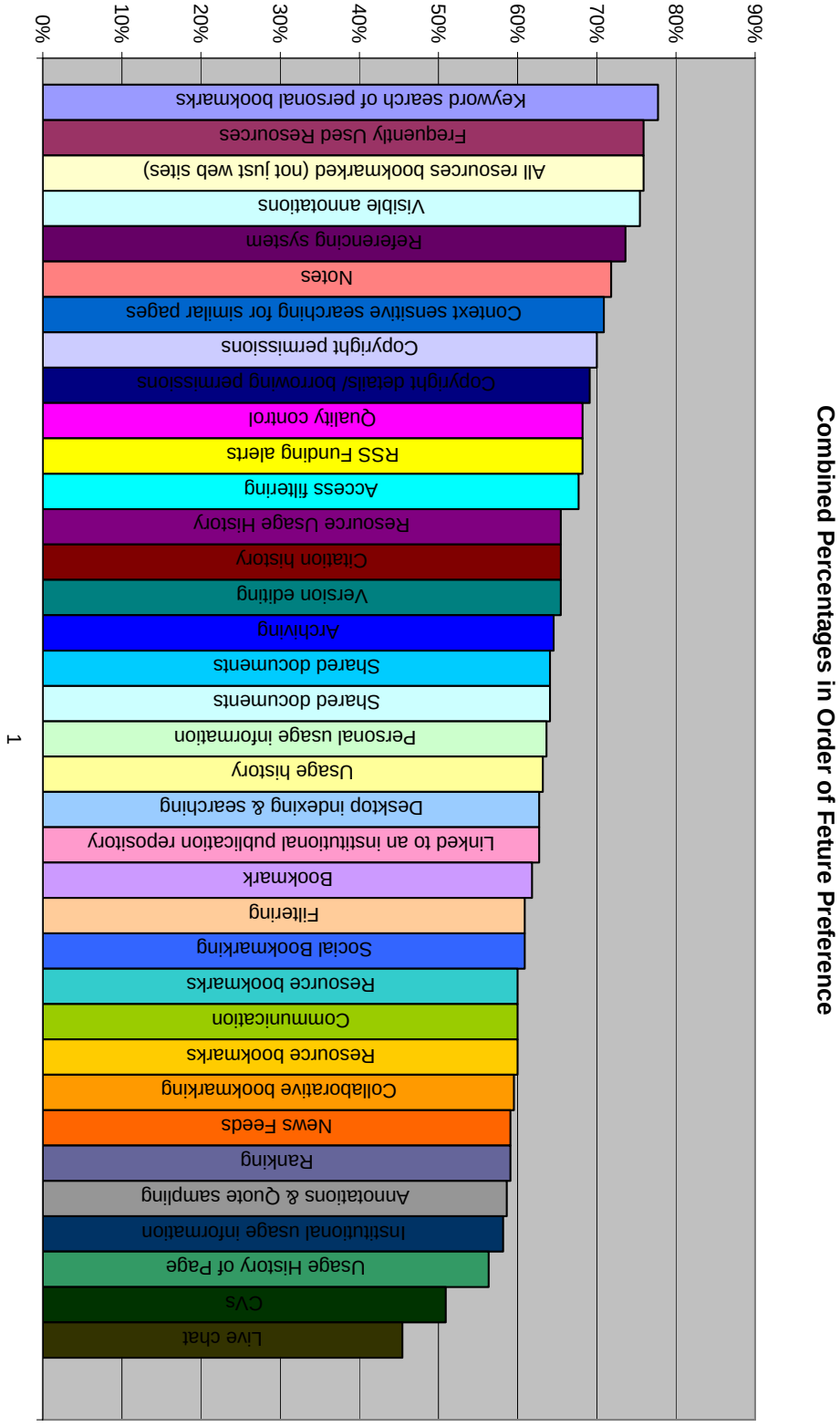
- **Automatic information-harvesting tools** were regarded as problematic. Two automatic-harvesting tools were suggested: a) an automated monitoring of electronic resource usage by research practitioners (to assist in shaping user-needs for the future), and b) an automated harvesting of CV details to provide the basis for a national register of research practitioners. There were issues concerning the infringement of personal privacy, the challenge to a predominantly individualistic scholarly culture, and a worry among early-career academics about its possible abuse for promotion purposes that overcame the potential benefits of such automated-harvesting tools.

Within this overall picture clearly there are important differences in priorities between the groups, reflecting their particular domain research concerns and practices. Thus although 'access to all journals' ranked either first or second in value for the focus groups, apart from media and film studies, the interviewees created a much murkier picture. The dance studies respondent and the corporate linguist listed this capability last. Therefore any new virtual research environment-style portal would have to be modularised in some way such that individuals could select the features they most valued to create a personalised toolset.

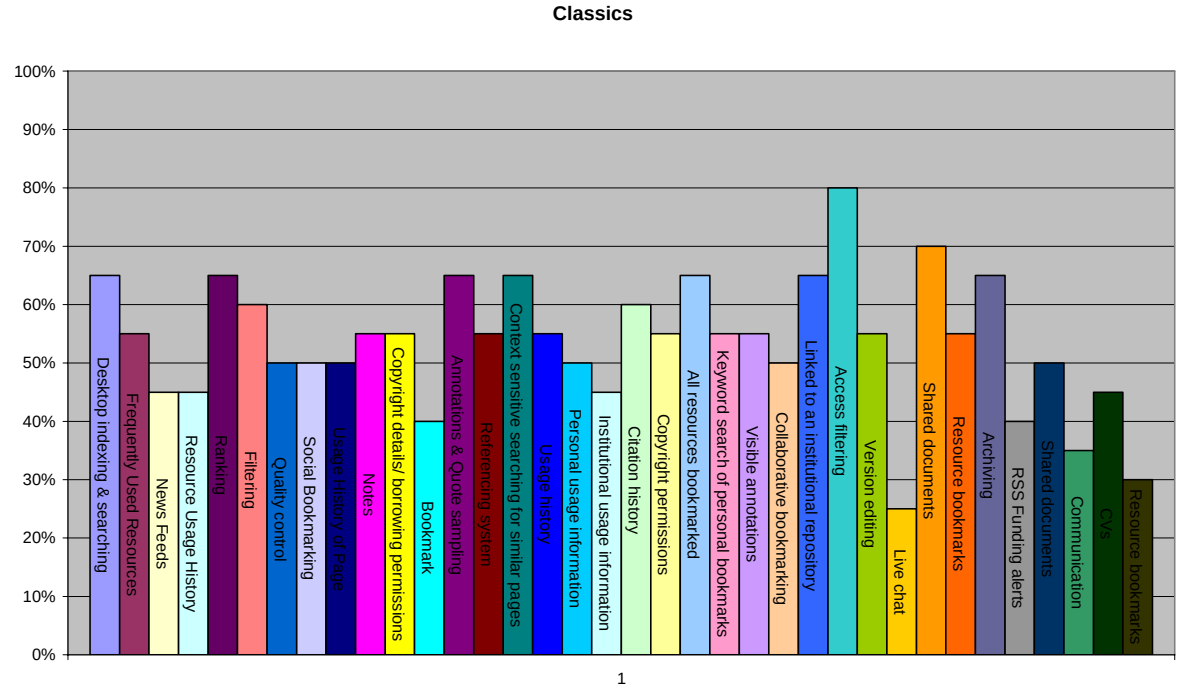
APPENDIX 1 (Figure 4) Combined Percentages of Features



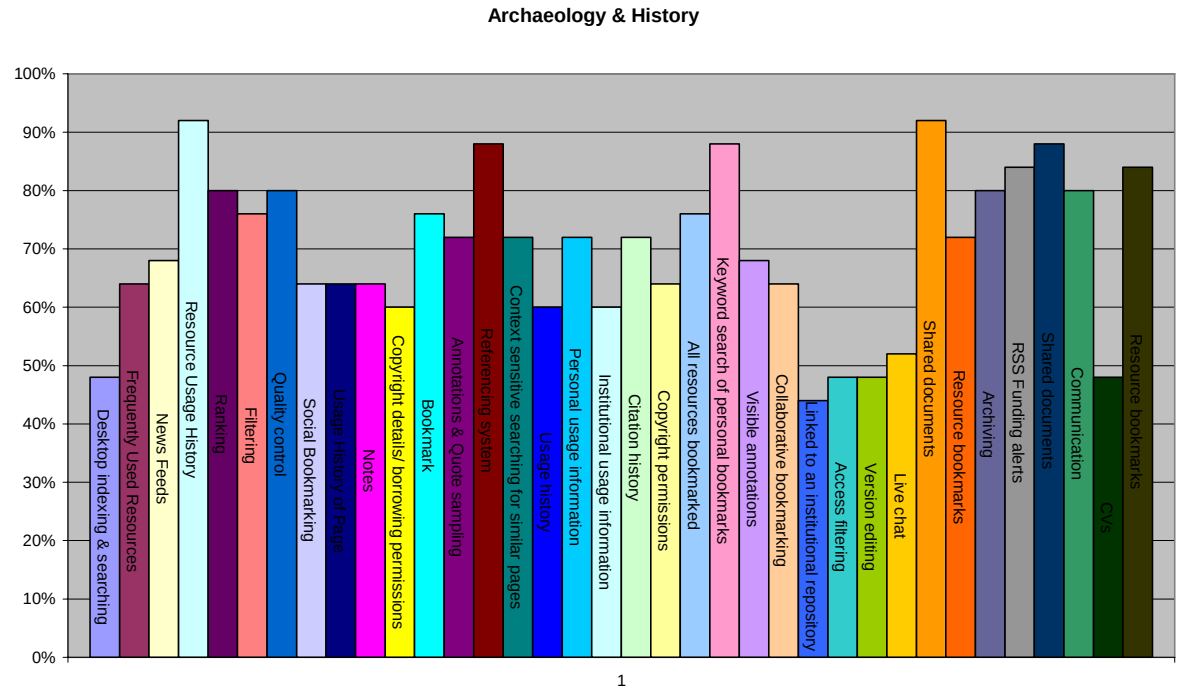
APPENDIX 2 (FIGURE 5)



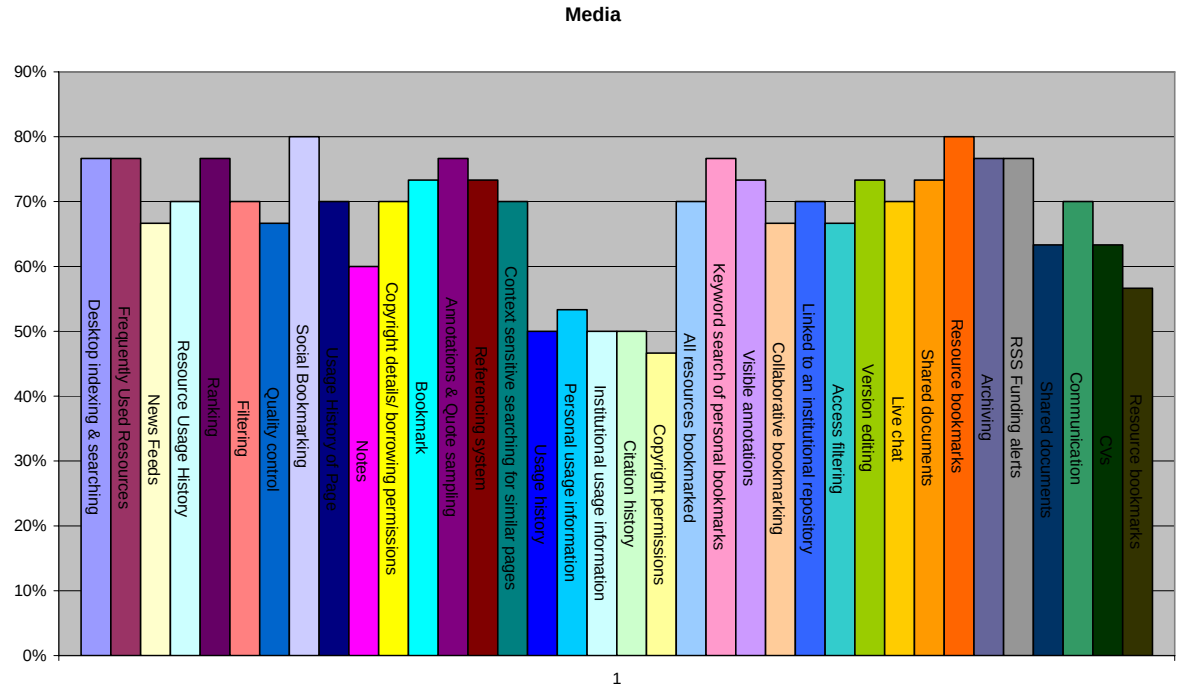
APPENDIX 3 (FIGURE 6)



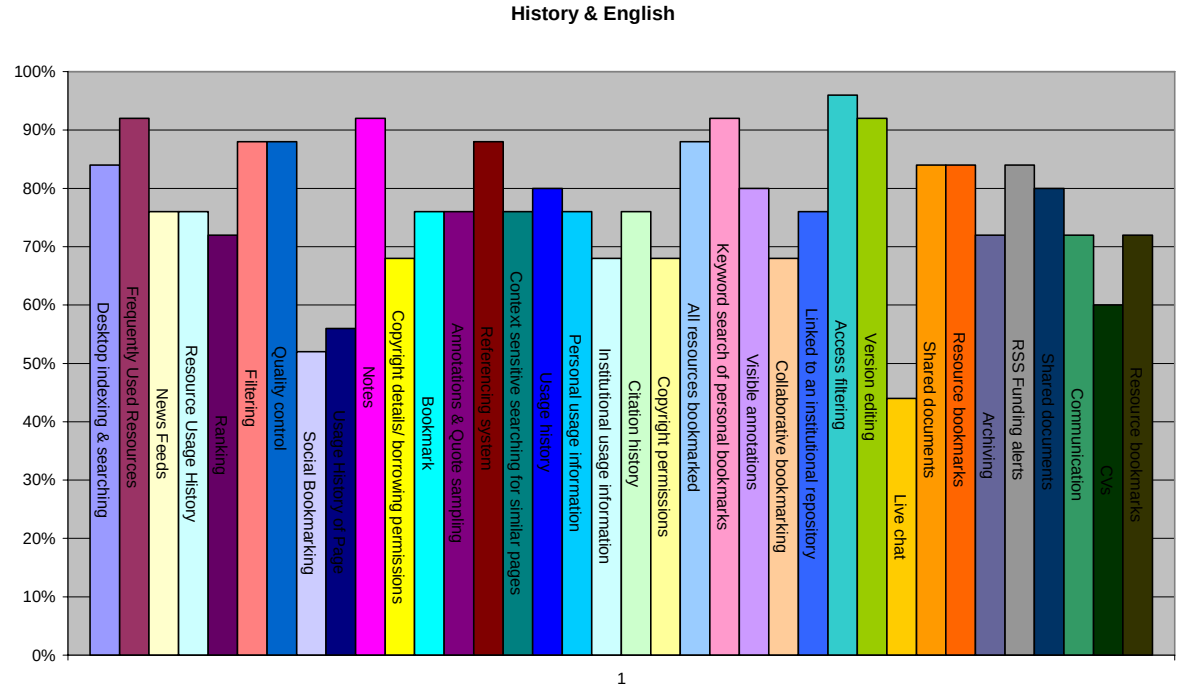
APPENDIX 4 (FIGURE 7)



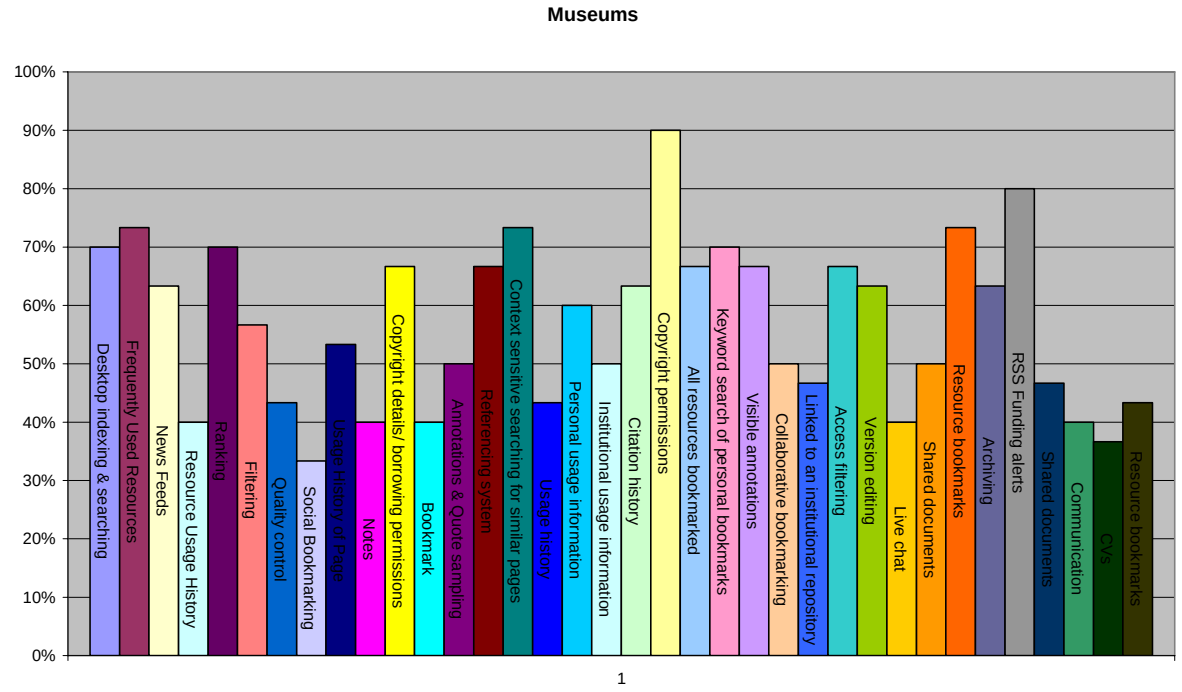
APPENDIX 5 (FIGURE 8)



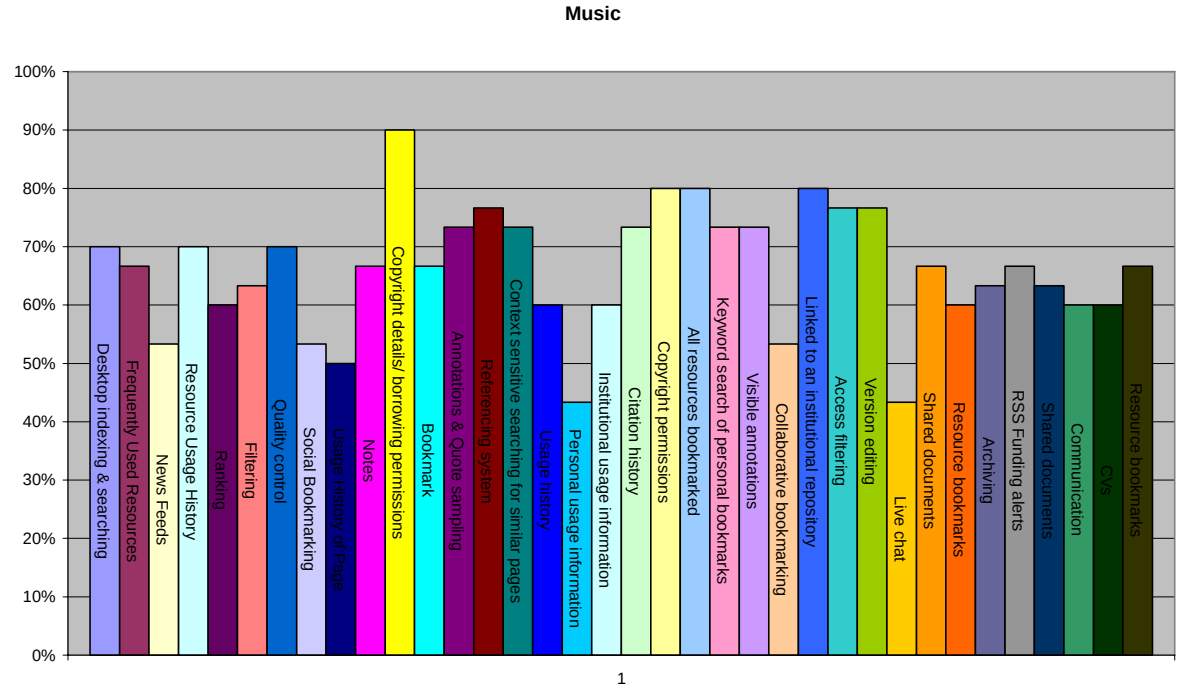
APPENDIX 6 (FIGURE 9)



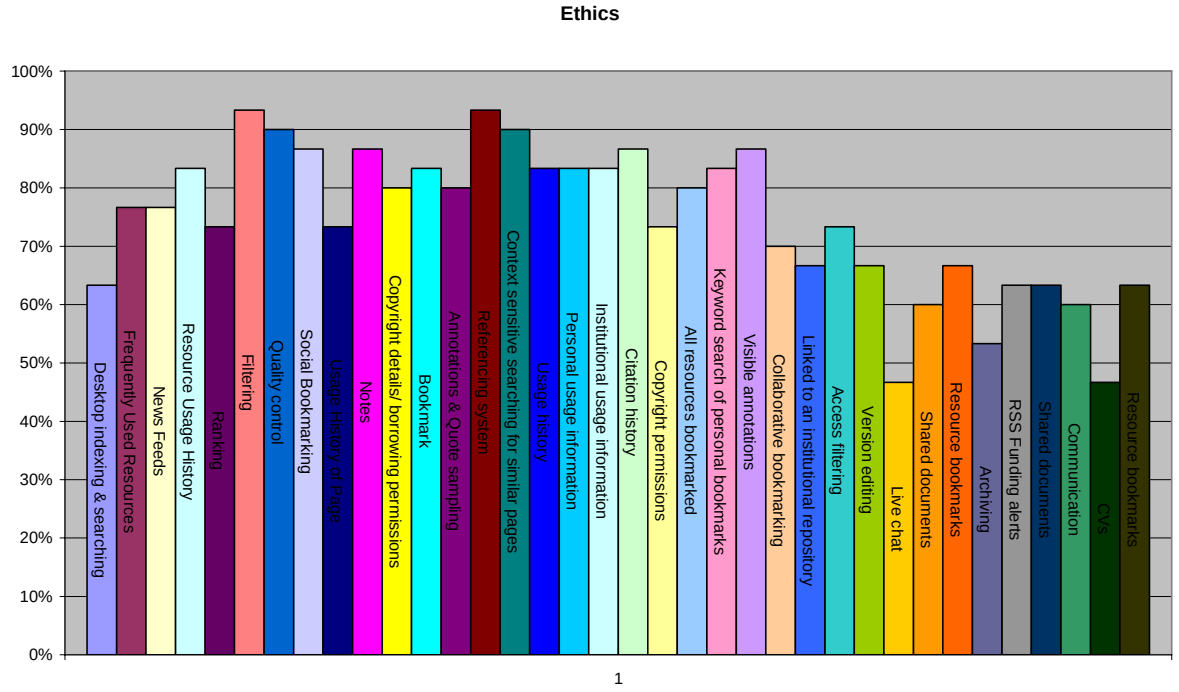
APPENDIX 7 (FIGURE 10)



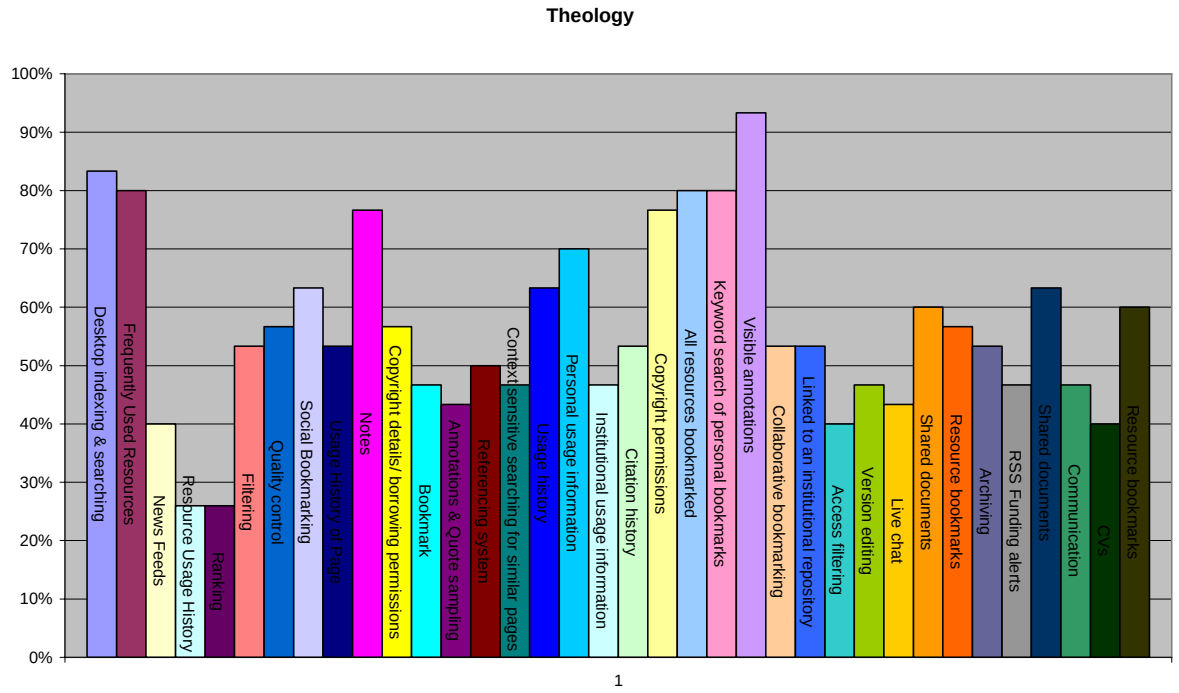
APPENDIX 8 (FIGURE 11)



APPENDIX 9 (FIGURE 12)



APPENDIX 10 (FIGURE 13)



APPENDIX 11 (FIGURE 14)

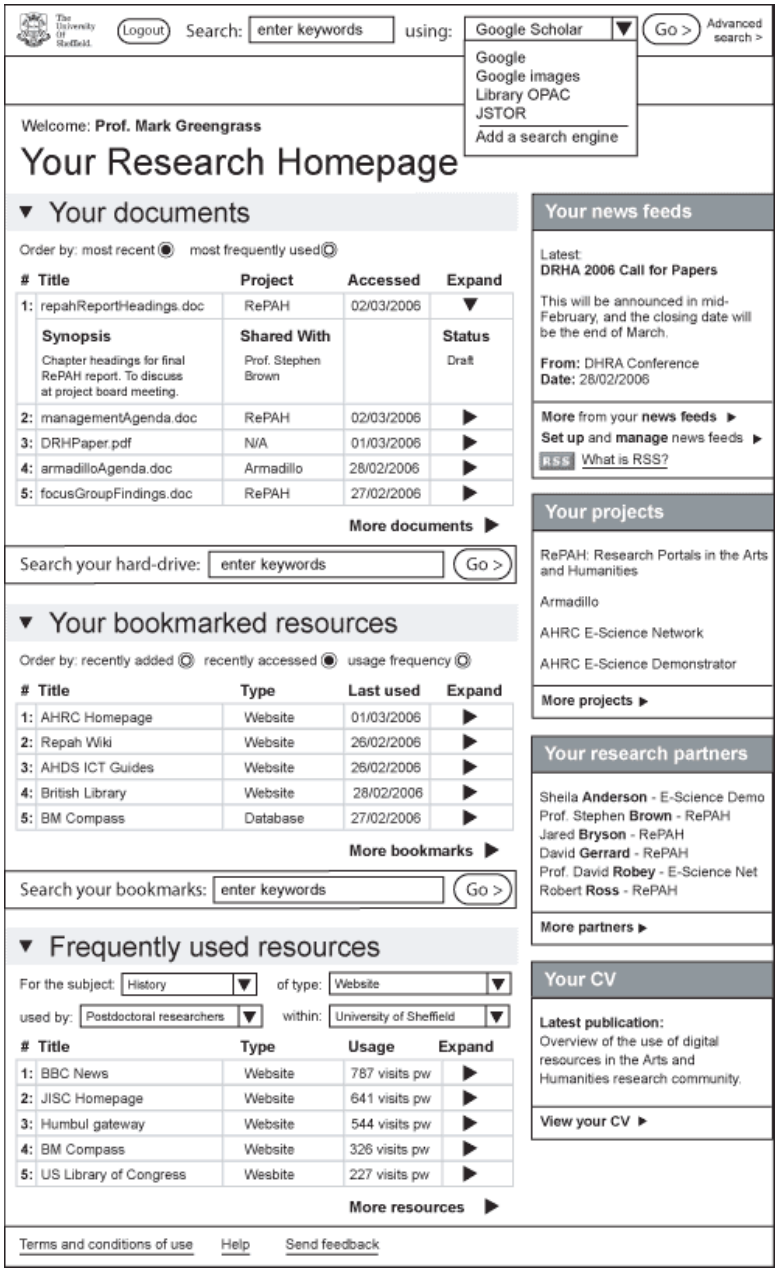
Portal Demonstrator Evaluation Forms for Conference Focus Groups

Conference_____
Location_____
Date_____
Subject Panel_____
Group Numbers_____

Value rank out of 11	Portal Features		Value rank out of 11
	Cross database search	Quality control and ranking system	
	Online collaboration tools	Access to all journals	
	Desktop video conferencing	Copyright management	
	Aggregation of data	Pushed alerts for funding/conferences/papers	
	Grid connection/services	Personalisation & Bookmarking	
	Peer review facility		

Terms for Portal Features

1. Cross database search: *Accessing multiple databases simultaneously. These can be of different types of data and stored at multiple locations*
2. Online collaboration tools: *Enabling work to be done on the same set of data (or even multiple sets of data) by more than one researcher, even if they are in different locations*
3. Desktop video conferencing: *Using one's personal computer to conduct high-speed, high quality conversations over the WWW, rather than needing to access specialised facilities*
4. Aggregation of data: *Bringing different types of data, from different locations, together into one place for analysis and presentation. Data in this instance can be composed of digitised text, images, audio or video*
5. Grid connection/services: *This concept has several different names, such as e-science or virtual research environments (VREs), however, the overall concept is the ability to conduct multiple computational tasks very rapidly and in a collaborative environment. Computer networks are often directly linked together, thus enabling increased speed and security.*
6. Peer review facility: *The feature enables the data user to participate in the peer review process with anonymity and within the administrative criteria established for each particular subject specialty.*
7. Quality Control and ranking system: *Searches would yield web sites and journal articles with grades of reliability based on a universal standard of validation, setting the search against a list of all potential hits with reasons for not including them in the validated list*
8. Access to all journals: *Access to an array of primary and secondary literature, some of which may not be taken by a university library, but are nevertheless necessary and specific to a researcher's subject specialty. The portal provides access to journals including those discovered serendipitously and held by commercial, subscription services*
9. Copyright management: *Automatic advisement concerning copyright access and use of specific audio and video downloads, offering permissions or royalty information/transactions*
10. Pushed alerts for funding/conferences/papers: *This feature picks up funding alerts from various sources, including research councils, government agencies, private foundations and international organisations. The same alerting service provides regular notification of conferences, calls for papers and new publications in the researcher's field of interest*
11. Personalisation & Bookmarking: *The ability to customise features, layout and data to suit personal needs. Easy access to large, personal bookmark library through keyword searches*

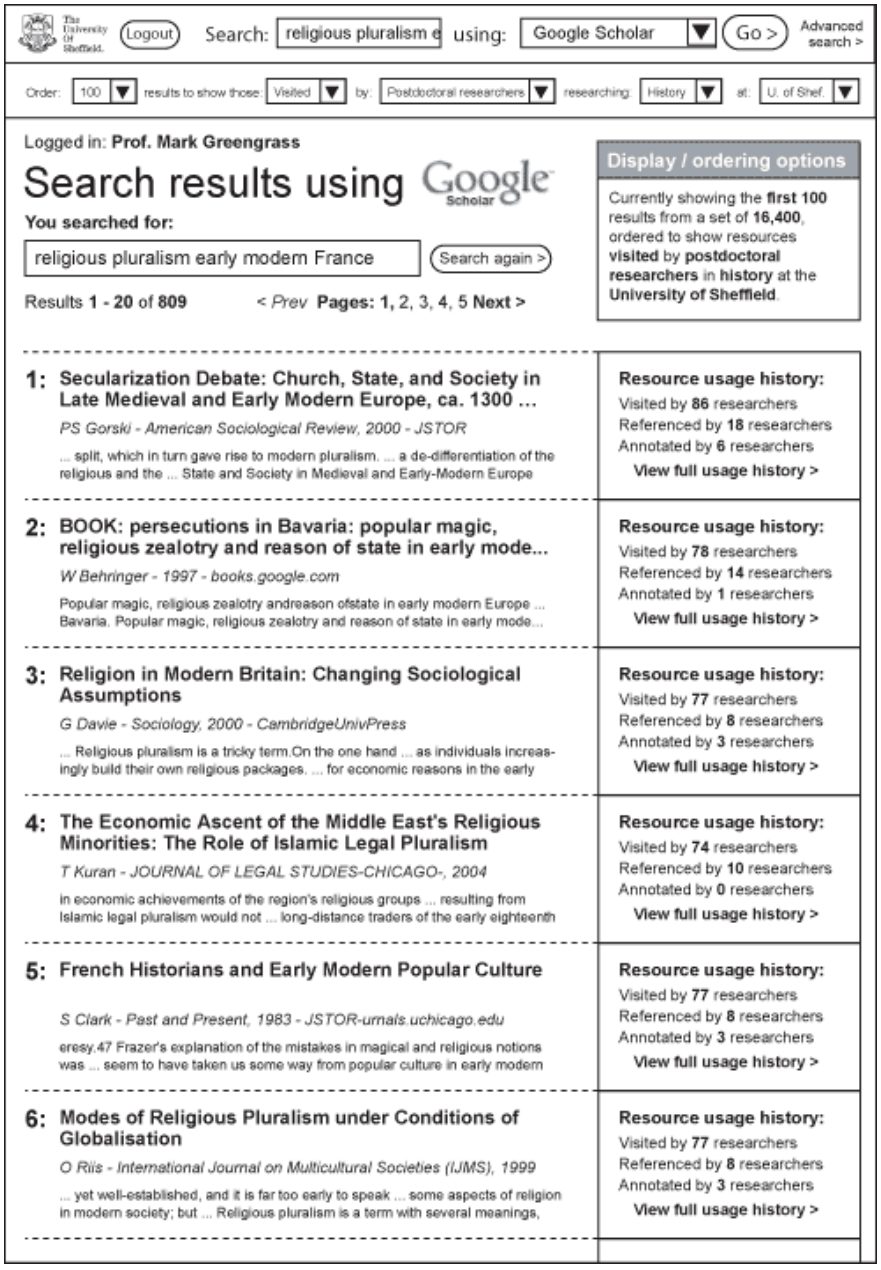


Researcher's Homepage

CIRCLE NUMBER FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
Your Documents desktop indexing & searching	1	2	3	4	5
Frequently Used Resources	1	2	3	4	5
News Feeds	1	2	3	4	5
	1	2	3	4	5

Any other comments



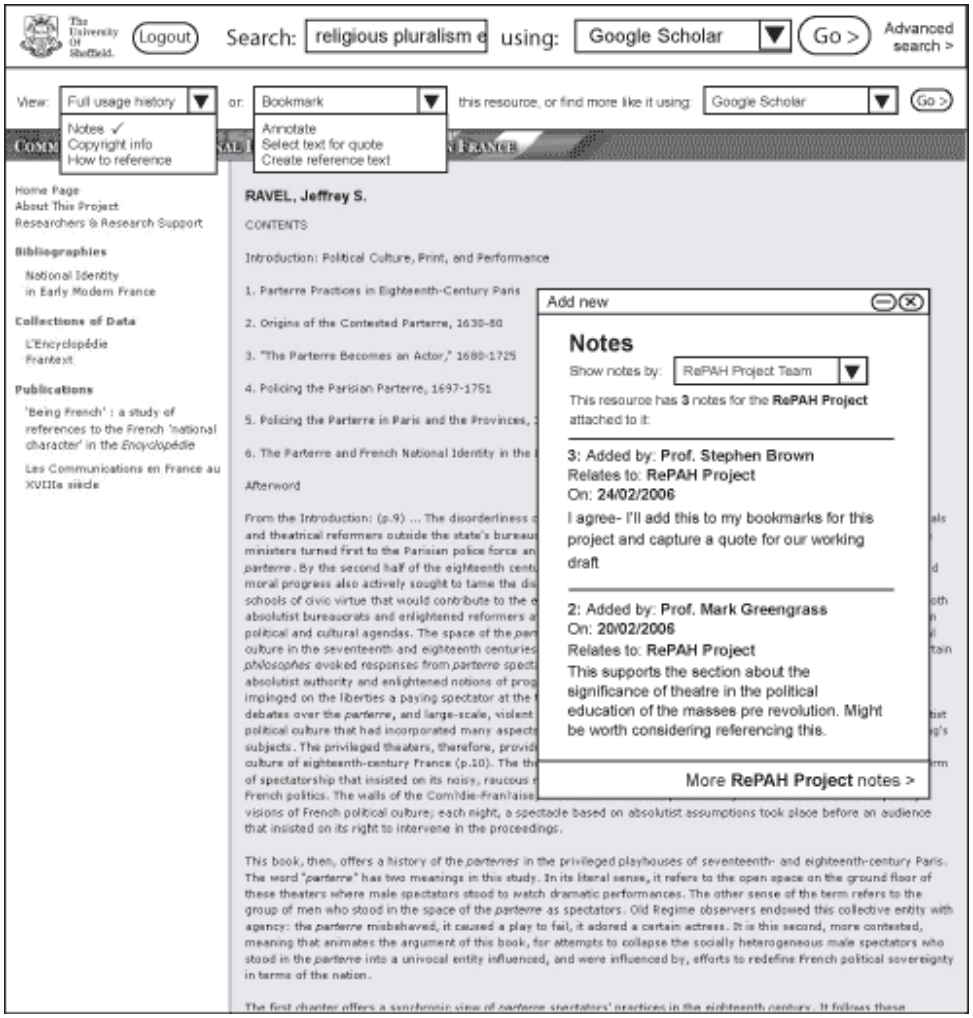
Search Results Page

CIRCLE NUMBER

FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
Resource Usage History	1	2	3	4	5
Ranking	1	2	3	4	5
Filtering	1	2	3	4	5
Quality control	1	2	3	4	5

Any other comments

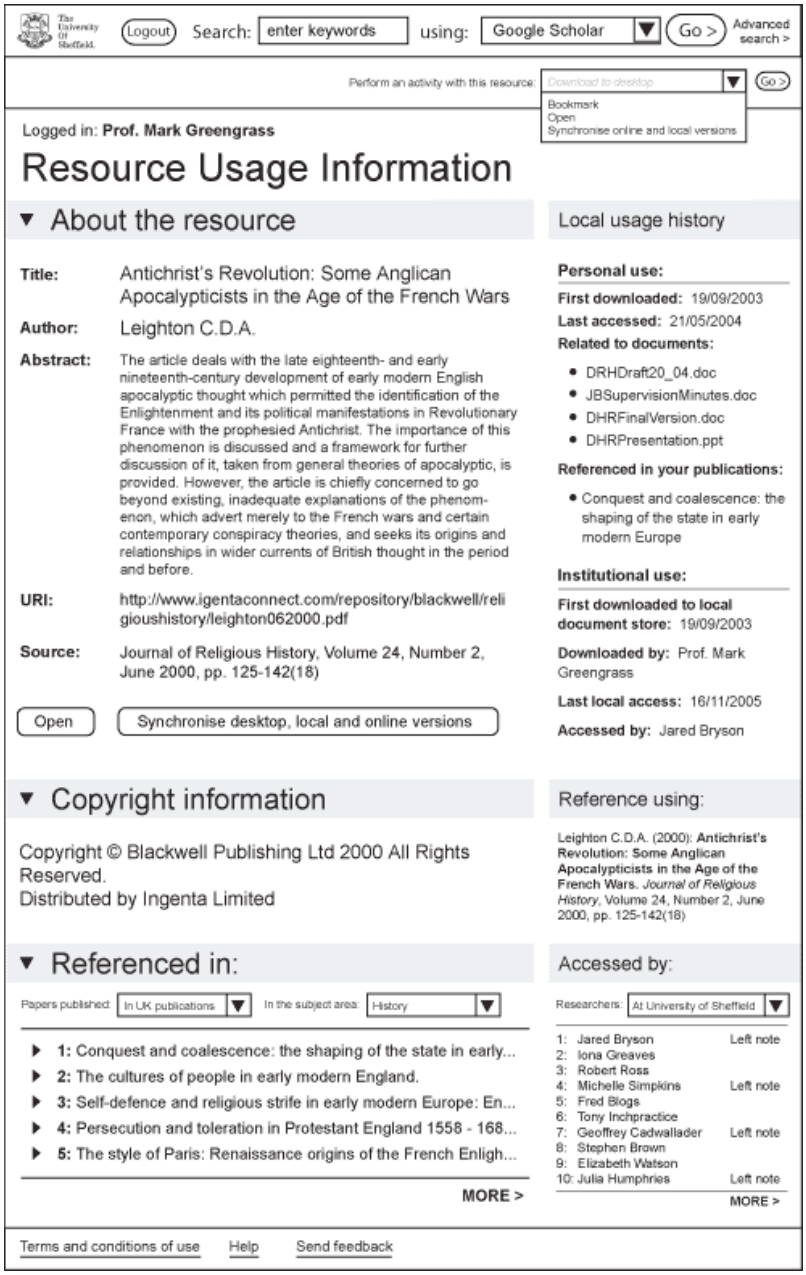


Web Page Annotation

CIRCLE NUMBER FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
Social Bookmarking	1	2	3	4	5
Usage History of Page	1	2	3	4	5
Notes (able to be switched on/off for viewing & degree of privacy)	1	2	3	4	5
Copyright details/borrowing permissions	1	2	3	4	5
Bookmark	1	2	3	4	5
Annotations & Quote sampling	1	2	3	4	5
Referencing system	1	2	3	4	5
Context sensitive searching for similar pages	1	2	3	4	5

Any other comments

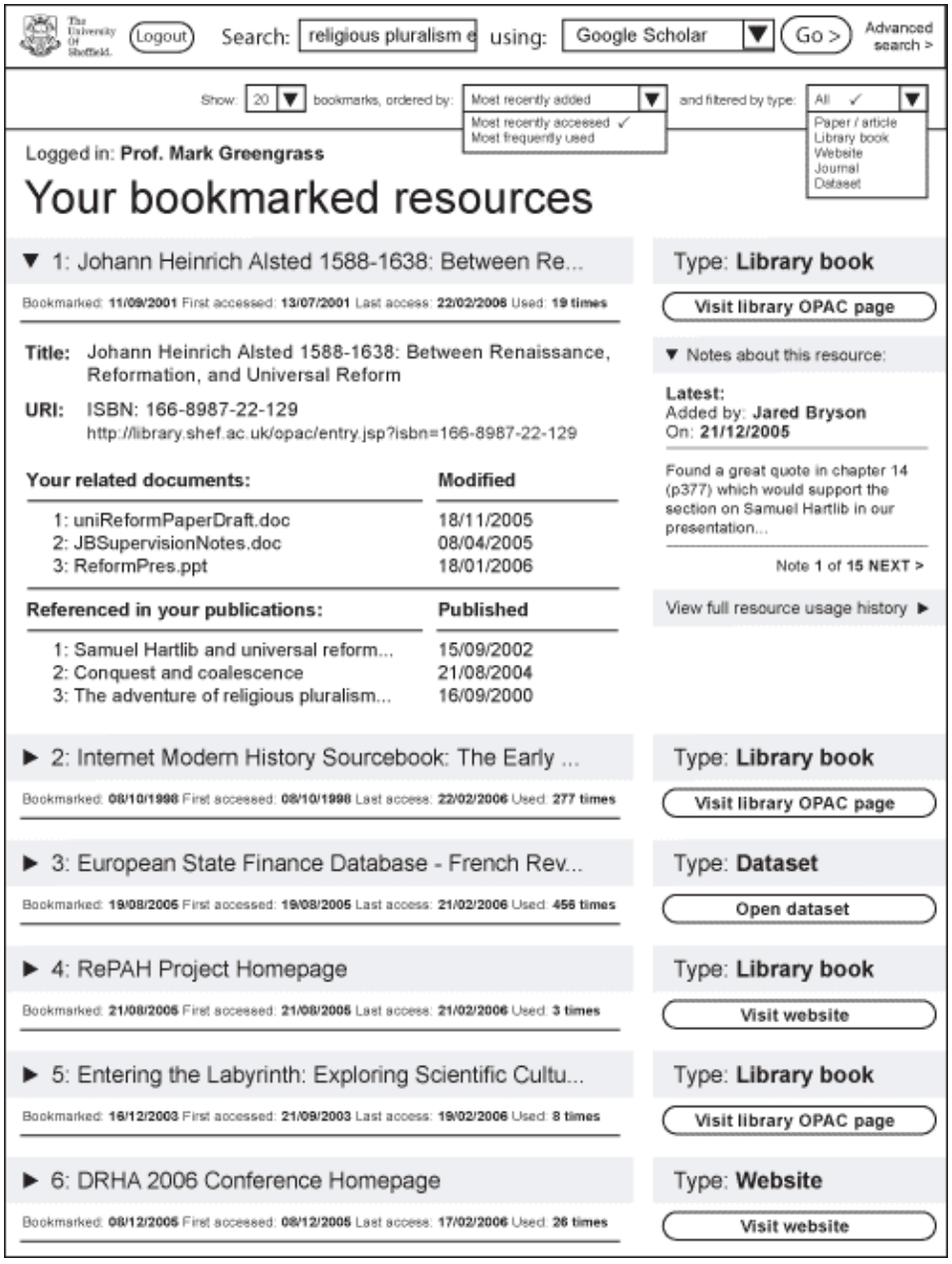


Resource Usage Information Page

CIRCLE NUMBER FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
Usage history of CV	1	2	3	4	5
Personal usage information	1	2	3	4	5
Institutional usage information with filters for subject, academic level, etc	1	2	3	4	5
Citation history	1	2	3	4	5

Any other comments



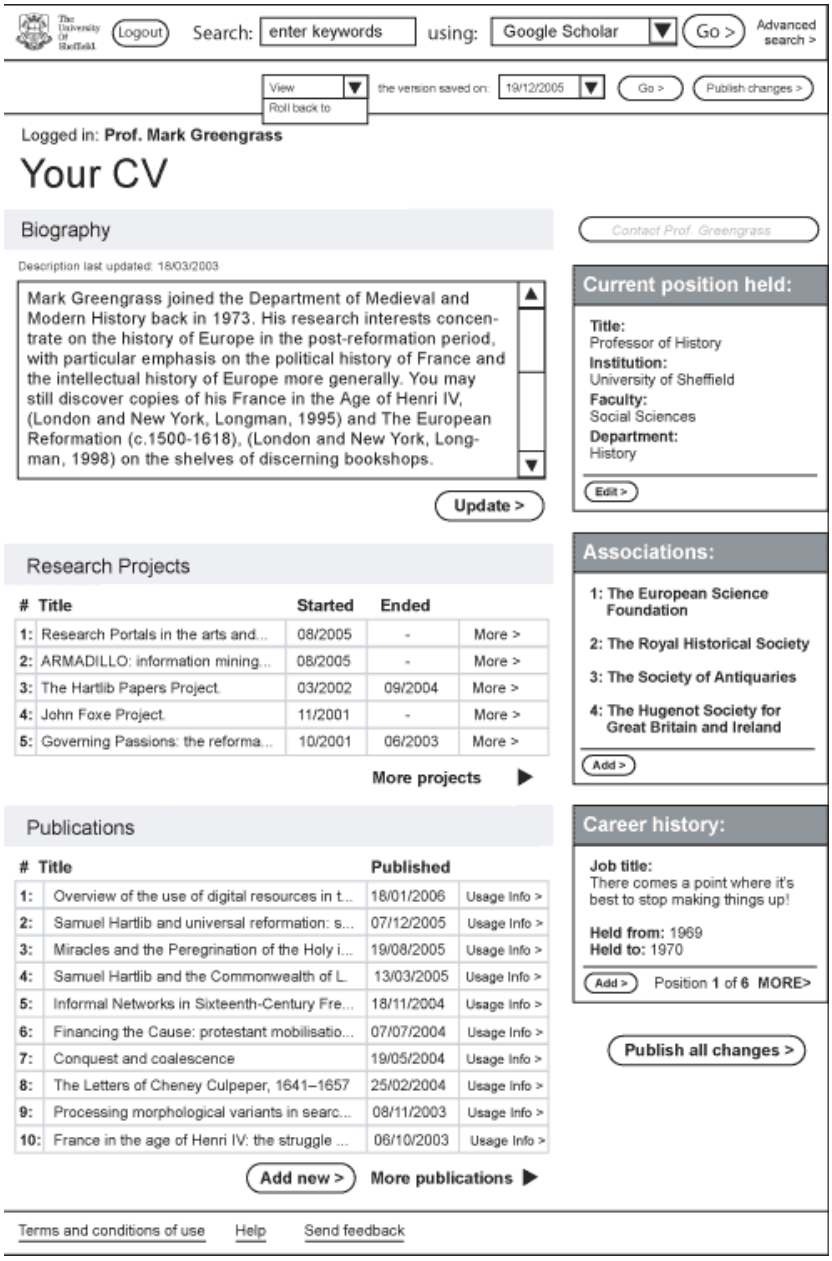
Bookmark Management Page

CIRCLE NUMBER FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
All resources bookmarked (not just web sites)	1	2	3	4	5
Keyword search of personal bookmarks	1	2	3	4	5
Visible annotations	1	2	3	4	5
Collaborative bookmarking	1	2	3	4	5

Any other comments

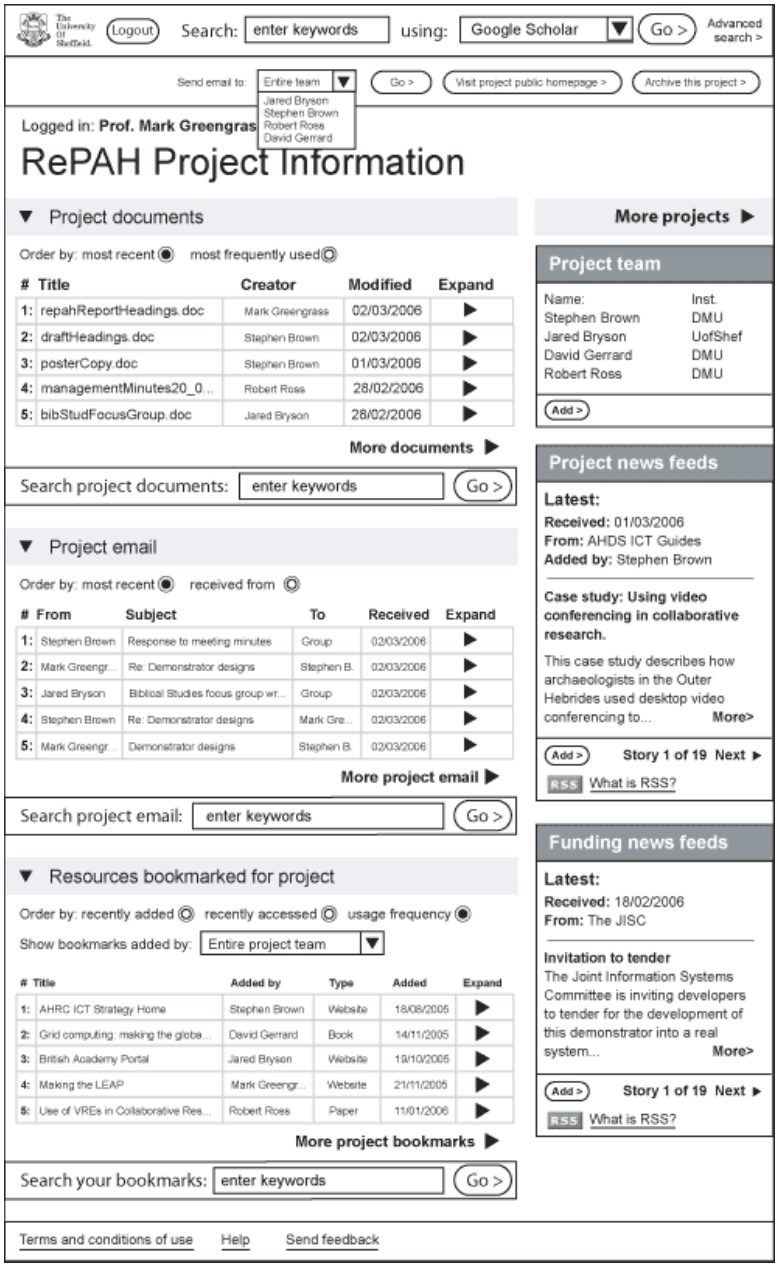
Your CV



CIRCLE NUMBER FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
Linked to an institutional publication repository	1	2	3	4	5
Access filtering	1	2	3	4	5
Version editing	1	2	3	4	5

Any other comments

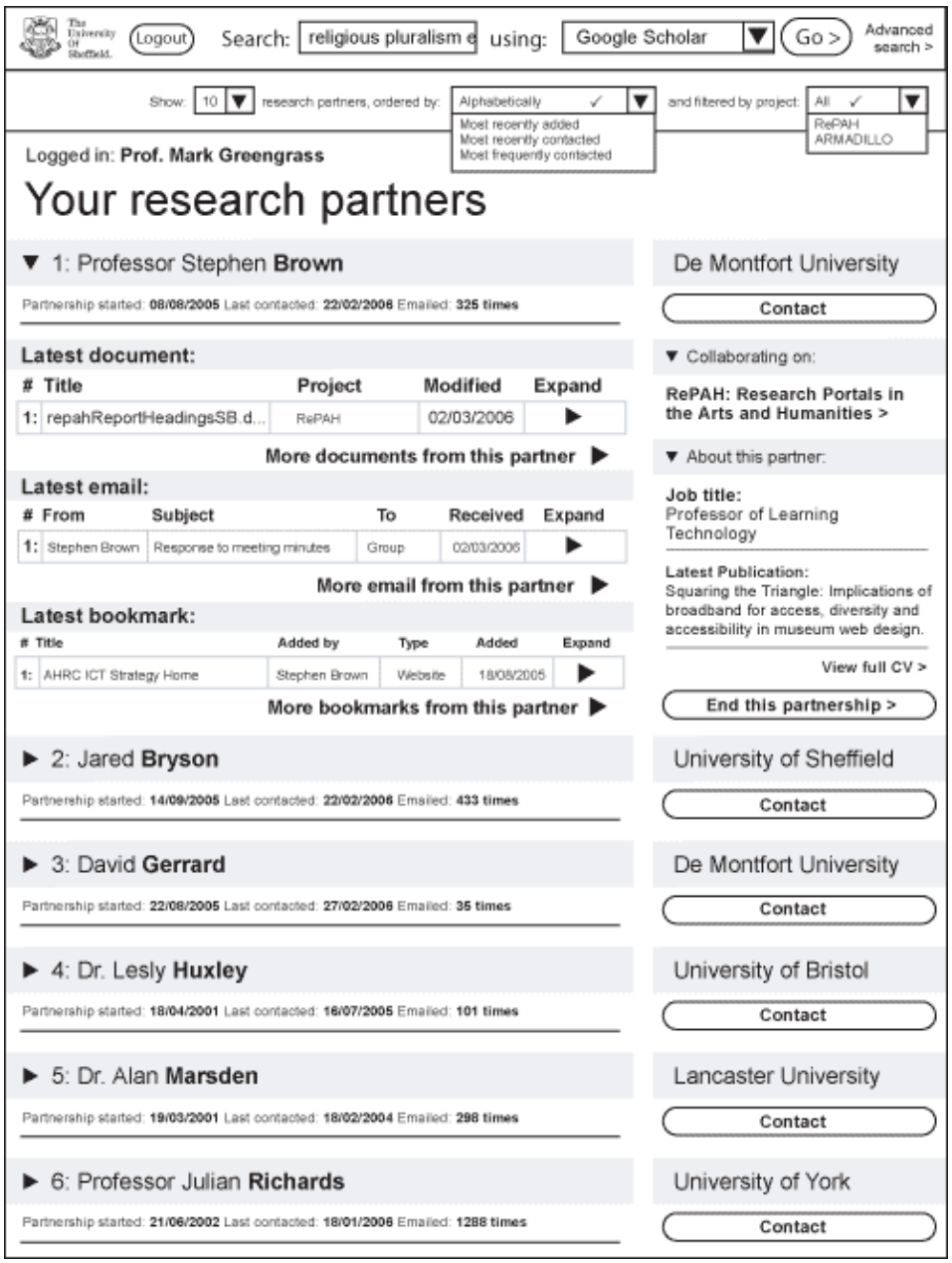


Project Information Page

CIRCLE NUMBER FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
Communication live chat	1	2	3	4	5
Shared documents	1	2	3	4	5
Resource bookmarks	1	2	3	4	5
Archiving	1	2	3	4	5
RSS Funding alerts	1	2	3	4	5

Any other comments



Research Partners Page

CIRCLE

NUMBER FOR VALUE OF FEATURE
(1-LOW VALUE 5-HIGHEST VALUE)

Page Features					
Shared documents	1	2	3	4	5
Communication	1	2	3	4	5
CVs	1	2	3	4	5
Resource bookmarks	1	2	3	4	5
	1	2	3	4	5

Any other comments