



## Project Document Cover Sheet

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## **JISC Final Report**

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## Acknowledgements

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Glasgow Caledonian University's project partners were the British Broadcasting Corporation (BBC) Information & Archives in the UK, and Northwestern University (Academic Technologies & OYEZ) and Michigan State University (MATRIX) in the USA; we remain on good terms and have made arrangements for our collaborations to continue beyond the scheduled end of the formal project. The project team leaders — Dr Richard Wright at the BBC, Professor Jerry Goldman at Northwestern and Professor Mark Kornbluh at Michigan State — deserve special mention. At the BBC Adam Lee continues to offer very positive support and David Jordan oversees the delivery of content. Bob Taylor, Bill Parod, Jonathan Smith and Chris Karr in Academic Technologies at Northwestern provided valuable support and taught us a great deal. At Michigan State Professor Dean Rehberger undertook overall project management, Dennis Boone established our server technologies and the late Mike Fegan made critical contributions to our software. Our continuing professional relationships with Riccardo Gianninoni and Maureen Lister at the University of Bologna and our collaborations with Chris Awre, Richard Green and others in the library at the University of Hull grew from the project and are important to us. In terms of meetings and conferences, we have benefitted from JISC / SURF and JISC / CNI events and are grateful to those who made these and similar events possible. The UK Higher Education Academy networks have been very supportive of our dissemination to teachers.

Spoken Word Services at GCU, created through the project, is now funded by the University within the department of Learner Support (directed by Tom Finnigan) and located in the Saltire learning centre. At the time of writing we have agreed a further 5 years collaboration with the BBC Information & Archives (in the Future Media & Technology division) and are re-negotiating our legal deposit agreement with them. Les Watson our Vice-Principal was, crucially, an early leader of the team and established institutional support. Professor Pamela Gillies, our new Principal, and the Executive Board of the University, and our colleagues in Learner Support services have fully supported both the letter and the spirit of the original JISC / NSF call — in circumstances of financial stringency.

Very special recognition is due to the students and teachers in GCU and in other universities in the USA and Europe who continue to use our tools and content, and give us enthusiastic support and feedback. We are very pleased to be on their 'reading lists' or — now more accurately — their 'resource lists'.

Spoken Word has gained some recognition for its efforts. This is due in no small part to the enthusiastic endeavour, professionalism and dedication of its team of full time and part time staff. Darren Mowat (who left us for New Zealand) and Anne Longmuir (now a professor of English literature at Kansas State and one of our content selectors) were important contributors to our developments. But without a range of collaborators and supporters, not all of whom can be mentioned, our achievements would have been much more limited. We hope to retain their trust and support in our continued efforts to enrich the learning experience of students and their teachers.

## **Executive Summary**

### **Objectives**

Spoken Word set out to induce students and their teachers to consider what it means to “write on and for the internet”, and to develop an environment which allowed them to do that. This meant: providing tools and technologies; coping with intellectual property rights; supplying engaging and valuable content; and encouraging self-conscious awareness of the learning and teaching process. A general ambition was to use emerging technologies to exploit traditions of the Scottish University — to assert the primacy of “formation” of the individual over the “information” and persuade students to “think for themselves, work on their own and contribute their work to the work of groups”. The UK / US project summarised our central objectives thus: (1) improving student learning and retention, (2) developing aural literacy in our students, (3) augmenting student competence to write on --and for -- the Internet, and, (4) enhancing digital libraries through a focus on learning. At GCU the last two of these objectives took priority as more central to our ‘constructivist’ pedagogy. We intended to embed and sustain the developments of the project and to disseminate in GCU and elsewhere.

### **Tools and Technologies**

A ‘separation of concerns’ model was implemented to manage change and aid sustainability: multimedia content at the backend; transactions layer with metadata repository in the middle; and a range of choices of presentation layer, user interface, tools. This enables plug-in / plug-out development. We needed a ‘digital library’ and REPOS, provided by MSU in 2003, is still in use as our ‘middle layer’ (Repos, 2008). Also in 2003, Fedora was identified as having the potential to fulfil more of our aspirations and, in parallel with our service delivery; we have increased our development effort on this solution and will migrate to it in 2008. At GCU we developed Padova — a browser based, front-end, hyper-linking environment — as the major finding-aid / catalogue / content selection tool for this library. Audio and video from the BBC (and other sources) are accessed through this system. Northwestern has gradually developed tools for segmenting and annotating these media. We have continued to collaborate with the testing of the delivery of the content and tools using a range of emerging technologies — Fedora, SAKAI, Shibboleth etc. In consultation with teachers we enable a set of Web 2.0 ‘browser based’ interaction facilities to meet their students needs. We are testing access to our digital library through our SIRSI library catalogue as part of a strategy to supply multiple finding aids.

### **Rights and Permissions: Overcoming legal obstacles**

In 2003 we cooperated with the BBC to establish a working relationship— formally reflected in a ‘Legal Deposit Agreement’ and a GCU User Licence. The User Licence is available as Appendix D to this report. These grant international rights to the use of its programmes deposited on, and served from GCU sites. The permissions restrict to ‘non-commercial educational use only’ and GCU accepts liabilities for third party rights. A ‘radical rights clearance strategy’ exercises diligence in relation to these liabilities. These forms of permissions enable the citation and use of the media for international scholarly communication. With the support of an additional grant from HEFC, Spoken Word contributed a case study to the Intrallect led rights study. We have presented on our rights strategy and intend to publish in this area. We have agreed a five-year continuation with the BBC (2008-13).

### **Engaging and Valuable Content**

Rather than ‘second guess’ teachers we sought from the outset to identify teachers who were reasonably ‘tech savvy’ as selectors of content for students. We called this tactic ‘getting our dissemination in first’. We included teachers in the USA and in Bologna in addition to GCU; we have used three HEA subject networks to expand our circle of teachers in the UK. Our range of disciplines has grown well beyond political science and history to: anthropology; economics; biology; law; hospitality management; English as a foreign language; women’s studies; social policy; and others.

### **Pedagogy**

We are social constructivists. But we recognise the historic rights of teachers in western universities to advance their own teaching styles and accommodate to their students learning styles. We acknowledge ‘pedagogical pluralism’ and supply content and tools in ways that enable the selection and choice of content and tools to students and their teachers. We believe that this aids sustainability and helps to ‘future proof’ the investment in the project.

### **General**

We believe we have fulfilled the letter and spirit of the JISC call. Our strategy has embedded the outcomes of the grant to ensure sustainability of the support for learners. As a 1992 university we have built associations with leading institutions and individuals and enabled knowledge transfer from them. Our unique partnership with the BBC to deliver material to learners across the world is greatly valued by us. We have received widespread recognition for others for the contributions of the project.

## Background

### Glasgow Caledonian University

At Glasgow Caledonian University (GCU) the *Spoken Word*, a project in the JISC/NSF Digital Libraries in the Classroom (DLiC) programme, was conceived in 2001-2002 in response to a set of pedagogical and institutional imperatives. A small group of social scientists had, since the 1990s, been promoting the idea of using 'an information technology-intensive learning environment' to recapture some of the traditional aspirations of Scottish Higher Education, in particular independent, critical and co-operative learning. (Donald, D., Hutton, A. and Byrne, J., 2000). David Donald had served from 1996-2000 on the executive of the Computers and Multimedia Section of the American Political Science Association which reflected long-term interests and collaborations in the USA.

The University had piloted a 'learning café' and was about to embark on the construction of the SALTIRE, a purpose-built learning centre, incorporating a full set of resources to support the contemporary learner, and advancing the notion that blended learning where the 'university was the learning environment' and technologies would be used to enhance the social interactions and supports which were one of the hallmarks of the institution's established reputation (The Saltire Centre, 2008).

### The Digital Libraries in the Classroom JISC/ NSF call

In 2002 the Joint Information Systems Committee (JISC) of the UK and the National Science Foundation (NSF) of the USA published the joint call for Digital Libraries in the Classroom (DLiC) (Circular 7/01: Digital Libraries in the Classroom, 2001). Successful submissions were required to be planned in such a way as to embed and sustain the outputs of the programme with both external and internal dissemination. British universities had to match funding and sustain the last two years of the projects in the programme (2003–08). US universities received funding for 5 years. The bid from Spoken Word was successful and, after some delay with the funding, work began formally in August 2003.

The partners in the five-year (2003-08) project are: in the USA, the *MATRIX* unit at Michigan State University (MSU) (*Matrix @ MSU*, 2008) with the *OYEZ* project (*OYEZ*, 2008) and *Academic Technologies* at Northwestern University (NU) (*AT @ NU*, 2008); and, in the UK, *Learner Support* at GCU (Glasgow Caledonian University, 2008) with the British Broadcasting Corporation (BBC) *Information and Archives* (BBC Archive, 2008). Prior to the submission the project partners were linked through their interests, and cooperation, in developing the academic use of remote digital libraries of audio and video content.

GCU set out to collaborate with these partners to demonstrate how substantial resources of audio (and subsequently video) from the archives of the BBC might be made available to students and their teachers. A central notion was that the use of multimedia resources of sound and vision would leverage the further development of internet resources; the 'quoting' of authentic original sources – traditionally done by both teachers and students through transcripts – would now be done through internet interactions. The project was to be exemplary of contemporary approaches to learning and scholarship and the concomitant learner supports offered to the University community from the new SALTIRE learning centre. It was also intended to build capacities within the support services, and in particular, to embed resources for digital library development.

As a post-1992 university, Glasgow Caledonian is not resource rich. Much was to be gained from a well-funded project which offered partnerships and collaborations with high-prestige and well endowed US and European institutions. But these benefits would be transitory if the project influenced only a small group of developers, teachers and students for a limited time. How could sustained change be achieved? From the outset the team saw that successful project embedding required a set of factors widely recognised as necessary for institutional transformation:

- a pedagogical focus;
- authoritative support of at least some of the most senior members of the university;
- acquiescence (at minimum) of institutional service providers;
- wholehearted participation of some teachers and the growing interest of others;
- enthusiastic cooperation of — at least some — students.

As the original call stated (JISC Circular 7/01 (2001)):

Significant financial and intellectual 'buy-in' by the institutions and faculties chosen will therefore be vital to achieving success; the objectives cannot be met without considerable change and investment in new learning and teaching processes, support services and physical infrastructure.

## Aims and Objectives

The stated objective of the DLiC funding programme was to “transform learning” by “bringing emerging technologies and readily available digital content into mainstream educational use” (Digital Libraries in the Classroom, 2008). The UK digital library of “readily available content” negotiated by the project was the rich and extensive collection of archived audio and video preserved by the BBC; the Corporation were, and are, digitising this vast resource. A further requirement of the DLiC programme was partnership. Spoken Word established a formal partnership and legal agreement with the BBC and technical collaboration agreements with MATRIX at Michigan State University and Academic Technologies at Northwestern: these have been sustained. The Programme also required (and funded) national and international dissemination of outcomes and encouraged participation in a wider “community of practice”.

Central to our original proposal was the objective of adding value to remote digital libraries by making them more directly usable by students and their teachers. We described this as “enhancing digital libraries through a focus on learning”. At GCU we saw this as prerequisite for our other major objectives of: “improving student learning and retention”; “developing aural literacy in our students”; and “augmenting student competence to write on –and for — the Internet”. This meant addressing the obstacles: technologies; rights; and attitudes and information. We placed less emphasis on the two objectives favoured by our US partners, which were “improving student learning and retention” and “developing aural literacy in our students”; we felt that our task was to provide our teachers with facilities which would support these latter objectives.

We believed that a transformation of scholarship was already underway and was being made possible by technology. This revolution in ‘scholarly communication’ must be reflected in undergraduate study facilities by the creation of a new learning environment. We set out to demonstrate how technologies related to the Internet were changing the nature of scholarly activity and could be used to create new pedagogical opportunities. We did not seek to impose our particular pedagogical approach – although we hoped it would be influential. Rather we suggested that “pedagogical pluralism” was a feature - indeed a right - of the academic freedom of the western university tradition and that our intention was to provide a learning environment, which would allow teachers to adopt a range of different approaches as they induced their students to make use of the Internet in their studies. We thus set out to provide a remote digital library of authentic audio (with the stated intention of adding video) enhanced by metadata appropriate to academic applications and by tools for classroom use which would enable students and teachers to make scholarly use of resources by selecting content and tools required by their perceived needs. Indeed this invitation to evaluate, select and choose appropriate resources was part of our own ‘constructivist’ position and by offering it we hoped to make teachers and students aware of the advantages of our approach.

The BBC content is central. The Corporation has a unique role in Britain and the World. Its authority as “Britain’s intelligent conversation” is widely recognised by teachers. But the demographics of its listeners are not kind to GCU students; the young of working-class origin are not strongly represented in the figures. We intended to make students aware of this. And the BBC archive is unique in the English-speaking world. It is a remarkable record of almost a century of report, comment and culture. Largely for reasons of copyright the content sourced has been primarily ‘factual’ programming: talks, features, documentaries and news coverage. We have assembled many hundreds of hours of such materials and have augmented it with recordings of ‘witness seminars’ and lectures. This material—historic and contemporary—adds dimensions to students’ learning. The authentic voices of participants and commentators complement textual studies in papers and books. Spoken Word was an instrument to encourage their inclusion in conversations relevant to their life and work. The project sought to work with teachers to weave the use of this content into issues of interest to learners.

We had intended to enrich the metadata through the expertise of our teachers and to capture their pedagogical innovations within a ‘community of practice’. Our intention was to construct a ‘secondary repository’ that would provide a specifically academic shell for the BBC Archive. We assumed that, as the BBC exposed its archive to public use, their more general catalogue would be of less specifically academic use. In practice we have captured less academic metadata than we had

intended, our case studies of our teachers use of the materials are not as complete as we had hoped and the obstacles to the BBC exposing their archive for public access have proved greater than they had hoped they would be. But we retain our grander procedural ambitions for the not too distant future. We are confident that our Fedora Commons repository (Fedora Commons, 2008; longer in development than we had hoped) with its Muradora front-end (we are contributing to the development of that product) helps towards the realisation of our original vision — both in terms of providing semantically aware objects and in accumulating contextual metadata.

Spoken Word took seriously the need to embed and sustain the developments of the project, and planned early to establish a set of services which could be sustained beyond the lifespan of the project (Spoken Word Services, 2008). As we have said elsewhere (Wallace, Iain, Graeme West, and David Donald. (2007)):

Spoken Word Services has deliberately invested in capacity building ..... Personnel for the Spoken Word project were either seconded from University positions or were firstly appointed to the university and then seconded. As the project nears completion staff will either be appointed to the Spoken Word Services or will return to their previous positions. In either event the expertise and experience gained on the project will be retained by the University.

We sought to fulfil the aspirations identified in the original JISC/NSF call:

Significant financial and intellectual 'buy-in' by the institutions and faculties chosen will therefore be vital to achieving success; the objectives cannot be met without considerable change and investment in new learning and teaching processes, support services and physical infrastructure.

## **Methodology**

### **General Design Requirements**

Library and technical standards were important to GCU from the outset. A stated objective was to induce students to 'write on and for the Internet' using 'authoritative sources and legitimate rhetoric'. To secure the confidence of academic supervisors, procedures analogous to those used in traditional text were pursued. In particular, the citing and referencing of accessible sources of established provenance and persistence had to be possible. Tools to address digital libraries, evaluate and retrieve content and to support the creation of a variety of types of student project were needed.

A central aspiration was to develop resources to meet these standards and yet support flexible and adaptable delivery. The intention was to accommodate 'pedagogical pluralism' - allowing for different approaches to, and styles of, teaching by different personalities, within different disciplines to students with different learning styles. A range of teachers and disciplines, from GCU and from other universities in the EU and the USA, has been involved throughout. From 'privatisation and regulation' in economics and 'the ethics of biology' at GCU, through 'hospitality management' at University of Strathclyde and 'the impact of technology from 1945' in history at Northwestern, 'English as a foreign language' at Bologna to 'Gandhi' for anthropology and 'women in British politics' for women's studies at Kansas State — the range of disciplines and topics using the service has been considerable. A full list of teaching, research and other collaborations are available as Appendix A to this report. Over 3000 users have registered for the service. A second stated objective of the original project was to 'enhance digital libraries' (of, for example, BBC content) for academic use and that has been a major priority. High 'usability' was a prerequisite for successful use in the essentially (if symbiotically) linked activities of learning, teaching and research.

The requirement to serve diversity, and a consciousness of relatively rapid and continuous technological change, were the major influences on the design of the service.

### **Design of the Services**

#### **Major Features**

As a general principle, an approach analogous to 'separation of concerns' programming was adopted. Partitioning of the functions and components of the service provided flexibility and better facilitated the management of change. This approach allowed a 'division of labour' but the associated 'specialisation of function' has been harder to maintain in a small team. The general principle of maintaining some separation of: front-end applications / presentation layer; a business logic layer; and a backend storage and delivery layer, has not been fully realised but remains a goal. Thus ideally the tools for searching, collecting items, marking and annotating clips and creating final presentations would be portable and might address a range of content-providing repositories through

appropriate middleware. In the current set-up they are either completely integrated or relatively separate. The goal is 'plug-in / plug-out' integration where users select tools of their choice to address content for evaluation, selection and use. Our SAKAI tests (SAKAI, 2008) have taken us closest to our objective but are not yet sufficiently mature for use: our institution uses Blackboard which is more mature but less hospitable to the use of our other technologies.

At present our service offers a store of sound and vision resources accessed through a PHP repository (REPOS) with a hyper linking environment (PADOVA) as the front-end user finding aid. Padova is built in a Word Press environment and we can supply blogs, podcasts, wikis and advice on other Web 2.0 facilities as required by our teachers for their students.

The team is organised to provide a range of "learner supports". We offer clients — mainly teachers but also research students — a range of services: our library staff assist in searches to identify useful content and clear copyright; our "teacher support" staff deal with all aspects of teacher relations from initial contacts, through negotiation of useful tools, to support in use; our development staff provide the tools (catalogue, blogs, wikis, annotation tools, transcripts, bookmarking, repository, etc and provide the content); and our writer suggests and delivers publicity materials.

### **Acquiring BBC Content**

Fundamental to the provision of the service was access to a satisfactorily large and appropriate subset of BBC content (programmes and metadata). 'Satisfactorily large' would mean sufficient content to allow users choices and alternatives. Students would be obliged to choose carefully what was best for their stated purposes. We increase the range of choice by acquiring content from other sources; "witness seminars" created by our University Research Collections unit and local public lectures (especially but not exclusively from the Glasgow Centre for Population Health).

The negotiation of rights represented one of the largest obstacles. GCU and the BBC entered into a legal deposit agreement in which the Corporation gave the University non-exclusive permissions to hold content deposited from the archives and to serve them internationally 'for educational use only' as both streams for access from GCU URLs and as downloads 'for individual study use only'. The University were required to accept liability for securing third-party rights and thus for undertaking the clearance of such rights. This necessitated the establishment of a rights clearance team and, in the first instance, the use of a FileMaker database to keep an audit of the processes of clearance and to record data and calculate the basic statistics. All participants in programmes broadcast from 1988 onwards are searched for and, if found, contacted and asked to give permission for educational use, worldwide through the Web. Of those successfully contacted, the vast majority has granted permissions. Full clearance statistics will be published in a journal article in 2008.

The next element in the process was the identification of programmes of potential interest to teachers. Disciplinary experts (teachers) are assisted by the project librarians to select programmes from the BBC's proprietary catalogue (INFAX). Initially this process relied on a private Greenstone representation of the BBC catalogue (Greenstone, 2008). Recently, as an aspect of a set of general initiatives to provide wider access to the archives, the BBC made its catalogue publicly available online and this was been used for selection. This has been withdrawn for a set of rights reasons and we are currently negotiating alternative arrangements. Selected programmes are requested in batches from the BBC, which digitises as necessary. Digitised programmes are delivered to GCU and transcoded from the original .wav files for streaming and downloading.

## **Implementation**

### **Initial Repository Solutions**

At an early stage (2004), the project successfully ingested the data from the BBC (INFAX) catalogue into a *Fedora* Repository - but at that time the development effort required to use the *Fedora* application to create a working service, with acceptable user interfaces, in an acceptable time frame, was deemed too heavy. Nevertheless the use of *Fedora* remains a key part of our ongoing vision. Our download from the proprietary catalogue to an XML representation was acknowledged by the BBC as a highly instructive demonstration of a process, which they have now used for their own purposes.

*Repos* is still our working repository solution (PHP/MySQL) and was a custom creation by MSU. Although it has shortcomings in relation to the project vision, it enabled the rapid development of a

working digital library. It has supported a working service for the last five years. However in the original implementation teachers and students had not developed the front end for use. *MATRIX* at MSU provided a rudimentary version of a user-friendlier interface and GCU developed and elaborated this into *Padova*, which we describe in more detail below.

Each of the records created is a super-set of the original BBC catalogue entry and has a link to the digitised BBC programme. The additional information provided includes the name of the teacher (selector) who is the collector and his or her discipline. The original intention of collecting additional rich information from the expert collectors and for investigating the capture of 'user-generated metadata' has not yet been fully pursued: in the service version we do not, as yet, have the capacity to enable users to write back to the repository.

### **Finding Aids and Associated Facilities**

The initial requirement of users of a library of multimedia items is to find programmes or items and then to assess their appropriateness. The goal of the service is to provide a range of ways to locate resources. Ideally, searches could be initiated from within tools, which collect items for later use and/or enable text or voice annotations of programmes or clips. Searching from the catalogues (OPACS etc.) to locate books and articles would also be convenient. Both *Sentient Discover* and *Sarsi Rooms* were investigated; however, it was felt their implementation could not be justified within the scope of the project. On a demonstration and development server we have entries and live links to our Repository running in an instance of our University *Sirsi Unicorn* library catalogue; this work will be progressed alongside new Fedora developments.

But *Padova* was developed as our main finding aid.

### **Padova**

*Padova* is the name given to the public-facing, Web-delivered, front end to the Repos Repository. It provides search, browse, citation, notification and external service integration systems to users, along with delivery of the media itself.

A central concern was maintaining the integrity of its BBC deposit agreement with GCU. An authentication layer was developed, enabling metadata to be openly searchable - but with the BBC media protected behind a registration process which obliged users to accept the terms of a 'student-friendly' End User License Agreement.

In pursuit of the vision of enhancing the capacities of learners to write 'on and for the Internet', several features were developed to encourage the use of established scholarly practices in the new Repository environment. Of particular significance is the inclusion of a citation system, enabling consistent references to content to be downloaded for import into standard reference management software. Citations contain a URL link to the media item, allowing learners to build their own libraries of Spoken Word content.

*Padova* incorporates notification systems, providing RSS and Atom feeds for searches. Though now relatively commonplace, *Padova* was one of the first systems to allow users to generate their own personalised RSS feeds based on any search query with links to media items attached. This can create, for any feed reading application, a 'live linked' listing of content akin to a bibliography. When a new item conforming to the search is added, it appears in the list. Registered users can also access the functionality to create RSS feeds with the media items attached as MP3 files, thus supporting the creation of instant and customised subject-specific podcasts.

External services are integrated throughout and can be further developed. Currently, automatic links to Wikipedia pages and to Google Scholar provide searches based on names of programme participants parsed out of record metadata, as well as internal links to other Spoken Word resources featuring those individuals. For example a search for "Bedouin" will find a programme, which lists P.J.

O'Rourke as a participant, and that entry will be hyper-linked to occurrences in both external services and in the internal catalogue.

Delivery of audio and video material is of course the main purpose of Padova. The Project has obligations to restrict the use of BBC media on third-party educational Web sites Web to streaming media only. On teaching sites, including Vales, a GCU URL must link to the GCU servers. This led to the integration of Apple's Darwin Streaming Server within the Repository infrastructure as a cost-effective solution to the delivery of audio and video in a relatively standards-compliant fashion. Investigation of Adobe Flash as a media delivery format is underway, and provision is planned as an alternative delivery mechanism. However, the MPEG family of standards looks set to remain the project's mainstay for the foreseeable future.

### **The Future: Fedora**

The imperatives for the library world of the widely acknowledged and ongoing "Revolution in Scholarly Communication" are dependent upon and supported by trusted digital repositories. As Spoken Word considered the transition from a project to a set of core digital library services, the need for a long-term robust repository solution became clear. General inquiries as to who was doing what, and existing expertise from our project partners in Academic Technologies at NU, led to early investigations into the open source repository software Fedora.

Although complex, FEDORA repository software offers a flexible service-oriented architecture for managing and delivering digital content. In late 2005 meetings in Denmark and in Wales led to the formation of a UK and Ireland Fedora Users Group. Spoken Word Services attended the first meeting of this group, held in the University of Hull in May 2006. Subsequent meetings at GCU, Oxford, Birkbeck and Bath have seen the numbers of participants grow. A full list of current users, meetings and other activities is available from the Fedora UK&I wiki (Fedora UK and Ireland User Group, 2008). This domestic interest and our experience of group discussions and activities further reinforced our decision to investigate actively the migration to Fedora.

Furthermore, membership of the Users Group has led to a number of important developments and collaborations for Spoken Word Services. Colleagues at the E-Services Integration Group, University of Hull (Eservices @ Hull, 2008) have been particularly supportive and have shared considerable expertise in digital preservation, demonstrated in existing projects such as RepoMMan, the Repository Metadata and Management project (RepoMMan, 2008). The ongoing REMAP Project, funded under the JISC 'Repositories and Preservation' Programme, created a formal partnership between the Hull group and Spoken Word Services (The REMAP Project, 2008). It builds on the work of RepoMMan to investigate the use of a digital repository to support the embedding of records management and digital preservation in the context of a UK Higher Education institution.

Our colleagues in Hull were also instrumental in leading us to consider Muradora as a new front end to our Fedora repository. Muradora is a web-based GUI for Fedora, built using enterprise Java Spring and Struts 2 frameworks. Among common features found in a typical repository such as search, browse, self-submission and versioning supports, Muradora enables flexible access control for end users (based on the XACML standard), inter-domain authentication and federated identity (using Shibboleth implementation of the SAML standard), and multiple metadata schema management (via W3C XForms standard). Chi Nguyen and his DRAMA team at Macquarie University in Australia developed Muradora. Spoken Word were met and collaborated with Chi at Open Repositories 2008 and again in Hull, and have recently committed to being active members of a new international users community.

## Outputs and Results

A working digital library architecture as described above is in place and underpins the user web experience ; development work with Fedora and new server architectures is ongoing, and many aspects of media processing and workflow will be handled better and automated with this new system. Browser based tools for working with audiovisual media was also developed as part of the project and these are detailed next.

### Collection and Presentation Tools

*MATRIX* at MSU has developed a tool set called *MediaMatrix* which allows users to visit Web pages and collect resources for subsequent use (MediaMatrix, 2008). This software supports:

- the easy assembly of a collection of multimedia resources
- the referencing of key sections or points ('clippings')
- and their transfer back to a project or presentation.

Users log onto the server service at MSU. They then load a 'bookmarklet' (a JavaScript function embedded into a Web browser bookmark) into their browser and navigate to a Web page which can be searched for the presence of any audio, image or video files (or a text extract). An item of interest, or a part or point (clipping) of it, can then be selected, marked for collection and annotated. The located files are not downloaded, but are merely referenced (linked) thus reducing copyright issues (such 'deep linking' may still raise problems in various legal jurisdictions). A simple presentation facility allows users to present a report containing the references; or they can be pasted into word processing or other software.

The items collected are stored on the user's personal portal page in *MATRIX* servers. This page keeps all their annotations and maintains direct links to the marked portions of the original pages.

Users can organise their thoughts on the portal page using folders. Teachers can create a group for each of their classes and invite students to join that group, allowing the teacher and students to preview the work of, and collaborate with, other members of the class. Members of a group have complete control over permissions for access allowing a folder to be shared with the group or kept private.

### Annotation Tools

Attaching text (or voice) annotations to marked sections of audio, video or images is an attractive goal. Being able to do that in a shared real-time environment offers a host of teaching, research and development possibilities. *Project Pad* from Academic Technologies at Northwestern University delivers that functionality in a particularly attractive and customisable user environment (Project Pad, 2008). It is programmed in Java and Flash (ActiveScript). Its major functions are:

- Both transcription and audio annotation: this allows fine-grained annotation of a transcript with word-level synchronisation to an audio stream. It includes the ability to gather research data using structured annotations.
- Timeline-based audio annotation: this supports informal audio annotation and sharing between users. It supports transcript synchronisation but only at sentence or paragraph level and, unlike the transcript annotation tool, it also allows annotation of audio streams which do not have transcripts.
- Timeline-based video annotation tool: this is similar to the audio annotation tool. It supports Adobe Flash video streams.
- Repository search tool: this supports both Fedora and Google searches (other Repositories can be added through a plug-in). It imports digital media objects (actually references to those objects) for annotation.
- Metadata editor: a flexible template-based metadata editor that can be used to attach form-based metadata to digital objects. Templates are included for editing Dublin Core and UK LOM Core metadata for the creation of user-defined collections that serve as learning objects.

- Report tools for listing annotations in various ways: these include extracting data sets for statistical processing and the listing of student-generated annotations for a range of teaching purposes including grading.

The project has developed versions running in a Sakai environment and with a Plone back end. A version addressing a Fedora Repository is being investigated by Northwestern.

Central features ProjectPad are also offered for use in the OYEZ project's archive of US Supreme Court cases. See e.g. [http://www.oyez.org/cases/2000-2009/2007/2007\\_06\\_1195/argument/](http://www.oyez.org/cases/2000-2009/2007/2007_06_1195/argument/). We are currently working on the integration of a version of this into our Spoken Word services environment using JavaScript to enable a choice of media standards.

## **Dissemination**

Our dissemination goals throughout the project have been to sustain continuous dissemination of the projects' findings, resources and tools for education and scholarship on a global scale. We deliberately started our dissemination early and continued it often, even when the technology was at an early stage of development. Our most central tactic has been to identify teachers from a range of universities to use as scholarly collectors, to use them to create disciplinary metadata and to try to induce them to use our tools with their students. We have used a range of strategies to implement this tactic. This has created a base network of committed users in different disciplines and in locations in the UK, Italy, the Netherlands and the USA. A variety of web sites and resources have been developed for the project, providing differential access for students, scholars and the general public.

Project findings and results were presented at appropriate conferences and published in a range of scholarly journals across multiple disciplines. Dissemination was continuous throughout the project's funded life. The Spoken Word team view dissemination as an excellent strategy for enabling collaboration and in some cases for finding further funding opportunities. A full list of dissemination activities covering the lifetime of the project is available as Appendix B. A summary of publicity relating to the project is available as Appendix C.

## **Transformation**

The major outputs of the project were intended (by both the grant recipients and the funders) to be, largely, attitudinal, behavioural and institutional - "transformational". Communicating and embedding conceptual frameworks, attitudes to technological change, etc. - "educational outlooks and attitudes" - is difficult and problematic. An aspect of the academic freedom of the western university has always included rights to pedagogical pluralism. We have sought to open the debate and invite more reflection on approaches to learning and teaching by demonstrating the potential of the application of emerging technologies.

In practice a set of the technologies were less developed than we had anticipated and emerging technologies - with which the programme asked us to engage - developed more rapidly than we had judged. At GCU we thus engaged in more Repository development than we had envisaged and we accommodated more fully to what we describe as the "socio-technological world of the contemporary student" (Web 2.0 technologies). This is reflected in our Padova meta-linking RSS aware catalogue tool which we developed from a front-end supplied by MSU for their Repos legacy Repository. We have become engaged in the Fedora user community (additional funding) and this is very valuable for GCU.

## **Outcomes**

At GCU, as we moved from a project status to Spoken Word Services, we began to offer a wider range of services than perhaps originally conceived. It has been important to respond to both changes within the project and changes within the institution. The revolution in scholarly communication has gathered pace and we feel vindicated that repositories have proven to be central to these endeavours. We are well placed now to inform and participate in strategic debates both within and outwith our university.

Employing an open, flexible, modular architecture for Spoken Word has enabled us to respond quickly and appropriately to changes in new technologies. Project Pad, MediaMatrix and Padova have all undergone revisions and updates based on user evaluation and feedback. The development of

blogging and podcasting services have also become important at GCU, as we respond to changes in the way students are interacting on the web. Web 2.0, Library 2.0 and the social software revolution have influenced the re-design of our user interfaces and delivery mechanisms.

The central beneficiaries are the partners: most central of these is GCU. Some impacts are rather general but very significant. The project has raised, continues to raise, awareness of the impacts of new and emerging technologies in the area of learning and teaching. This includes aspects of the policy climate and the reactions of the higher educational community to these changes - JISC's strategic themes and frameworks. The USA is a major player in all this and our associations with our US partners and other collaborators are an important factor. The project has led to the representation of the University at a range of events in which it was not previously visible. The more specific benefits relate to this. The establishment of Spoken Word Services in the SALTIRE Centre brings tangible benefits by providing digital library services of a range of types.

In 2007 - 2008 we supported teachers using digital audio and video formally in teaching on several modules in Economics, Political Science, Health and Social Care, Journalism, and Cultural Business. A set of case studies both at GCU and at other Universities are described below. A full list of collaborators and projects is included as Appendix A to this report.

### **Glasgow Caledonian University**

- At GCU Alan Hutton, Senior Lecturer in Economics and Janice West, Senior Lecturer in Social Work both benefited from ongoing grants obtained from their respective Higher Education Academy (HEA) subject centres (Higher Education Academy, 2008). These grants were used to build Spoken Word collections in these subject areas, including support for our collection, cataloguing, rights clearance and curation. The collections are in use across several different modules at different levels of learning.
- Ken Garner, Senior Lecturer in Journalism used Spoken Word resources in several modules relating to the history of radio production and broadcasting. Spoken Word Services have recently been approached to provide more resources and to provide the web infrastructure to support a new Postgraduate Course in Multimedia Journalism. Students will use Spoken Word resources and blog technologies directly as part of this course.
- New teaching collaborations at GCU were established with colleagues in Globalisation and Public Policy, Cultural Business, Hospitality and Tourism Management, Film and Media Studies, Political Science, Occupational Therapy, Sociology (Social Theory), Nursing, Physiotherapy, BioEthics and English Language Teaching.
- A range of support collaborations is also underway at GCU to enhance access to teaching and research materials. We continue to work with Research Collections in Learner Support to enhance access to important audiovisual archival materials for teaching use. Blog services have been developed and tailored for colleagues in Library Services, and for our E-Learning service for their support of students and staff engaged in reflective learning and continuous professional development.
- Consultancy services for recording, hosting and delivering digital media are also available to the wider University in the support of learning and teaching. This can include podcasting advice, recording of lectures, and advice on digitization and cataloguing services for a range of materials. These are part of broader strategies to induce change across campus.
- Case studies have proved invaluable for engaging with new teachers and showing the different practical ways in which media content from the BBC and other sources could be used for learning. Our collection policy for requesting new audiovisual materials from the BBC has at all times been driven by the professional subject interests and pedagogical aspirations of our group of teaching collaborators. It became clear that what was important was developing a learning context for students rather than focussing solely on our content in abstraction.
- Seeking funding and collaborations from the Higher Education Academy Subject Networks has proved to be an excellent strategy for expanding into new subject areas for teaching and research. A proposal is under way to use our extensive rights clearance work as a case study for a collaborative project with the Law faculty at Edinburgh University, hopefully funded by The UK Centre for Legal Education (UKCLE), part of the HEA network (MacPhee, Ewan, and Paterson, Susan, 2008).

### **Other Institutions**

An extremely significant outcome of the project has been the creation of links and relationships with other institutions. In its formal decision to endorse funding the final two years of the project (2007-8) the University Executive recognised the importance of this aspect. An important preparation for sustainability was the establishment of both formal and informal linkages. We have related on-going funded projects with Bologna, Hull, Edinburgh and Strathclyde.

### **MSU and NU**

Both MSU and NU are - in different ways - universities of high prestige. They have both welcomed supporting GCU: MSU with an overlapping "access" mission and NU as a highly competitive entry elite institution. NU has partnered us beyond the level of the project (we are identified as partners in the annual NU Information Technology report). Discussions of pedagogical approaches have been fruitful. Jerry Goldman from NU is a visiting professor at GCU and David Donald has contributed to the NU graduate programme on New Media Journalism. Both universities have been able to further develop a range of tools and to have them tested and disseminated in a wider US and European arena. At Northwestern Ken Alder collected a wide range of interesting resources from the BBC for his teaching on the History of Science and Technology in the 20<sup>th</sup> Century.

### **Bologna**

Our main collaborator at Bologna, Maureen Lister is engaged in teaching English to Italian law students. She contacted us via Professor Jerry Goldman at Northwestern University; she had already been using the OYEZ repository with her students in language teaching. Maureen wanted to provide students with materials which were challenging and original and find a way of making them accessible and useable for teaching. The BBC offered the possibility of using rich, authentic materials quite different from traditional language learning resources. Content relating to the Lockerbie bombing incident was identified as being of special interest: a wide range of accents was used in the trial proceedings and students responded to the emotional content of the recordings. The use of these materials in class has been a huge success with students.

With Maureen and her team we have recently applied to a European Union FP7 call with a view to investigate using media annotation tools within legal education across different European environments.

### **Strathclyde University**

- At Strathclyde University Kevin O’Gorman also obtained an HEA grant in collaboration with Spoken Word, from the Hospitality, Leisure, Sport and Tourism subject centre. These funds were again used to build collection strengths and also to produce a series of 10 re-usable learning resources in the shape of video podcasts. These podcasts combined materials from the BBC Archives with other multimedia sources, images, PowerPoint slides, and audio narration from a series of academic subject experts.
- Also at Strathclyde University Hospitality Department, Karen Thompson secured funding for 6 additional Spoken Word podcasts to support her module ‘Introduction to Tourism’. The module is particularly interesting since it involves a number of additions to traditional teaching and delivery methods, and is a case study for the Re-Engineering Assessment Practices (REAP) project. REAP supplied some of the funding for the podcast collaborations. This work is ongoing and results will be fully evaluated and disseminated in due course.

We also have further ongoing teaching and learning collaborations with the following University institutions: Stirling, Amsterdam, Glasgow, Kansas State, Columbia, and Edinburgh. Details are provided in Appendix A.

### **Students and Teachers**

The "at the browser" access to the huge richness from the BBC Archive and other sources of audio and video can hardly be over-estimated. It has many dimensions. BBC 'spoken word' exchanges are extremely influential in the UK (and the world) but have a particular demographic. Inducing our students to enter this world is part of the pedagogical intent - over and above the richness of the resources. In the world of YouTube accessing multi-media becomes more natural to students. We then take this further. More submissions of student work are made on-line. More are web aware. To "quote" audio and or video students must use technology. This is what we meant in our submission by "'writing' on and for the internet". We think that providing a set of widely available tools and content to enable all the processes involved - from search to citation and delivery of a project - benefits students and teachers.

## **The Relationship with the BBC**

A major (though not the sole) source of digital audio and video sources is the BBC. The need for continuous negotiation with this national institution is an aspect of the continuity of the project and involves risk: they, or the Government, might decide to withdraw co-operation or to charge for resources. However at present the relationships established are being maintained, and discussions of the future use of the BBC digital archive by public education is on the agenda for discussion. In a 'worst case' scenario the BBC would withdraw all access to its digital materials; in the 'best case' it would expose these assets to educational institutions by the use of appropriate software, which would allow controlled access through federation using web services or similar standard technologies. We are currently in discussion with the BBC with a view to continued unique collaborations beyond the lifespan of the JISC project: we have agreed "in principle" a further five years (August 2008 to July 2013) and are currently negotiating the details of a new legal deposit agreement.

## **BBC Impact**

The Spoken Word has had a wide impact on various areas of the BBC. The Spoken Word has presented its' technology to senior BBC personnel from the Archive Management, Information and Archives and New Media departments on a number of occasions. David Donald was invited to the AHRC / BBC New Media Knowledge Transfer "summit" for HE as a BBC nominee; and in January 2008 the Spoken Word team attended and gave demonstrations at the BBC Research and Development Festival of Technology,

The Spoken Word project has served as a pilot, allowing the BBC to begin developing a process for efficient electronic distribution of audio from their archive. The issue of public access is another area where the Spoken Word has been of invaluable help to the BBC. We have successfully illustrated what technologies they might use in making their archive available on a public scale. The quid pro quo for Spoken Word, the JISC and the educational community is that the BBC has searched, retrieved, digitised our requested materials "on demand" and has accepted all costs including collection from London and regional archives and transport and delivery to BBC Glasgow of the physical media.

In 2006 Richard Wright from the BBC circulated an Internal Memo entitled 'Impact Statement: The Significance of the Spoken Word Project for the BBC Archive'. The summary of this statement reads:

'The Spoken Word project has extended the capabilities of the BBC Archive in the following areas:

- Electronic supply of Sound Archive material and associated workflow
- Electronic access to audio material
- Rights clearance policy and process for educational access
- Management of digital assets: Repositories, metadata and associated technology
- Conversion of BBC legacy metadata for web access and public access

- Involvement of end-users: mechanisms and technology for capturing the information held by and created by users of archive material
- Effective use of electronic networks and web technology for all the above

BBC participation in the Spoken Word project continues to provide a practical and extremely cost-effective framework for gaining knowledge and skills that are essential to the required transformation of the BBC archive from 'items on shelves' to a modern, digital repository.'

## **Higher Education and the BBC**

The project has broken important ground in relation to the BBC - who tells us that we are the only project, which has established this type of service and service agreement. They have been especially interested in our rights strategy and tactics but also in the ways in which we have brought academic library perspectives to the use of their archives. We have done more than demonstrate this: we have over 3000 registered academic users and a set of defined teachers in a range of locations that contribute to the project. Sustaining and increasing the benefits to the academic community of access to BBC resources calls for careful handling.

## **The HEA Networks**

We have pursued the tactic of disseminating through the HEA network and have received mini-grants from Economics (2), Social Policy (2 and 1 pending) and Hospitality, Tourism and Leisure (1 and 1 pending). Teachers lead these projects: we get income for what we call our Teacher Support Account. We have highly positive feedback from the HEA and from our teachers. To date there are at GCU (2) and Strathclyde (2) but we have a proposal to extend to Edinburgh (1 in Law). All these teachers were users of our services prior to the HEA applications. The HEA's then help us to distribute to others in their networks.

## **Disciplinary Communities**

In our original planning we cited Political Science, History and Sociology as the disciplinary major areas to which we would contribute. We mentioned "cognate disciplines" without being explicit. Early in the project we managed to excite interest well beyond these areas, and given our strategy of teacher collectors, we began to build a greater range than we had envisaged. We have active collector/users in Anthropology, Biology, Economics, English Language, English Literature, History, History of Science, Journalism, Law, Social Policy and Social Work.

## **Rights Community**

The educational impact of the Internet raises serious rights issues for all institutions. Our project obliged us to face rights issues from the outset - in a rather practical way. This has proved of interest - and apparently of value - to a range of people. We have given rights presentations in a number of places - including the BBC. We see this as something that will continue and intend to collaborate with colleagues in a law department to publish a paper in this area.

## **The Wider Community**

From an early stage we sought to make our outputs useful to the wider local community. This is central to the GCU mission. Rights were the major issue in relation to our BBC resources: they limit us to "education". We have however been collecting additional "rights free" audio - e.g. the regular and frequent high profile lecture run by the Glasgow Centre for Population Health and the Witness

Seminars of GCU Research Collections. We have been willing to make all our technologies available but so far simple "listen again" through our Padova catalogue seems to be the primary use. We have other contacts with the West of Scotland health and welfare communities and intend to further develop this aspect of our work. Recently we worked with Lee Knifton of the Scottish Mental Health Partnership to offer web development support and curation of digital resources for the Scottish Mental Health Arts and Film Festival. This has led to further collaborations in the area of Mental Health and stigma research. We have contacts with the National Library of Scotland and are discussing collaboration with them. We have limited contact with local schools: we know that we can excite great interest from them but have serious issues of handling the demand.

## **JISC & NSF**

We think our project has been interesting and valuable to a wide range of people and that this benefits the funders and justifies the JISC / NSF initiative. NSF representatives have suggested to us that some continuation of our collaborations with NU would be of special interest: we have no indication yet whether this might also be interesting to UK funders.

## **Conclusions**

### **Capacity Building**

Spoken Word Services has deliberately invested in capacity building at GCU and now hopes that transfer of knowledge and technology will enable complementary local institutional repository development. Personnel for the Spoken Word project were either seconded from University positions or was firstly appointed to the University and then seconded. As the project nears completion, staff will either be appointed to the Spoken Word Services or will return to their previous positions. In either event, the University will retain the expertise and experience gained on the project. Knowledge transfer has also occurred. Spoken Word has worked formally with a number of units in the University and informally with others. The Library, Learning Resources and Learner Support are all examples of such co-operation. Teaching and learning has been an important area of collaboration and knowledge transfer.

### **Impact on Teaching and Learning**

The selection of the materials to be acquired from the BBC was largely undertaken by teachers. Most of these teachers, but not all, were at GCU. This has led to interactions amongst the GCU teachers and between them and teachers elsewhere. A formal discussion of pedagogical approaches and notions for learning improvement related to multimedia is underway. Teachers who have used our content and tools will be asked to reflect on their experience and a new group of teachers will be invited to speculate on their expectations and how these might be realised.

A set of Higher Education Academy projects has been undertaken as part of the project dissemination study. The disciplines involved have been Social Policy, Political Economy and Hospitality Management. The resources have been used in a variety of ways including podcasting.

The establishment of a set of digital library services at Glasgow Caledonian University was planned to allow for development beyond 2008. The building expertise and capacity in relation to repositories and linking them to teaching and learning has been a particularly important aspect of that strategy. But we are also intending to capitalise further on the links we have created with other institutions and development communities. New projects are currently under discussion with the potential for worldwide scholarly communication using a range of broadcast archives. The drive for interoperability pushed by the Open Data movement makes 'open access multi-media resources' enormously attractive for scholarly exploitation (both the 'treasures' in 20th century collections and the huge daily outputs from new media sources which are increasingly challenging the dominance of traditional mass media). Users should be able to access content across media types (e.g. images, texts, video and audio) and across language boundaries both easily and intuitively.

Demonstrating and asserting the rather special requirements of academics, and promoting the potential of their contributions, is a very valuable project. It is necessarily international: a lack of this dimension is a major weakness of some current and recent digitisation projects. Rights are a central issue in this regard. It is hard to contemplate a satisfactory network of scholarly communications which is limited to a single rights regime. International, educational rights and their protection would have to be an element for investigation. We hope that Spoken Word has made a worthwhile contribution to the development of such an international network, and will continue to do so.

## Implications

The business plan proposed the use of the project to establish a university group which would contribute to the improvement of learning in the University, through the creative use of digital library resources. SWS is the outcome. In 2008 - 2009 the members of the group will be University, as opposed to project, staff. We are currently negotiating the relationship of this group to other support teams but it seems likely that we will continue as part of Learner Support, delivering a range of multimedia digital library services to learners from our Saltire Centre.

Continued access to BBC (and other European) Archives should be a priority for the higher educational community. This is potentially a significant resource and Spoken Word has piloted many issues of access to a huge remote digital library sustained by public funding. Some activists in the BBC are actively seeking to take this forward. The 'content' which is currently mainly discussed in the wider debates is: "open access" scholarly communications in electronically accessible journals, institutional and disciplinary Repositories, etc. ("articles", research papers and comments, and so on); and "open data" in similar sources (quantitative data and digitised documents). Less discussed - or so it seems to us - is "open access multi-media resources" (both the "treasures" in 20th century collections and the huge daily outputs from new media sources which are gradually supplanting the dominance of traditional mass media). These last have huge potential for scholarly exploitation. Where they are being digitised some of the issues related to "Open Access for Scholarship" have not yet been fully explored.

Demonstrating the rather special requirements of academics (and the potential of their contributions) in this area would be a very valuable project. It is necessarily international: a lack of this dimension is a major weakness of some current and recent digitisation projects. Rights are the central issue in relation to this - satisfactory scholarly communications which are limited to a single rights regime are hard to contemplate. So international, educational rights and their protection would have to be an element for investigation. Would some continuing collaboration with NSF be feasible? And European partners would be valuable: SURF is obvious (we have some connections already), as are the BBC contacts with European broadcasters.

Central to this would be standards, technologies, methodologies and rights. The focus would be on the necessary and desirable technologies and procedures to support authoritative international scholarly communications with special reference to libraries of audio and video. This fits with the EU 7th Framework initiative e-SciDR: "Towards a European e-Infrastructure for e-Science Digital Repositories" (where they are clear that eScience includes social science and humanities resources).

The technologies and approaches alluded to above could be approached more generally. They are: federated access to data at all stages of scholarly life cycles; Shibboleth / Identity 2.0 etc; and Library 2.0. Resources permitting we are now in a good position to investigate these issues using Fedora as our repository architecture at the centre of a wider system of storage and long term preservation, metadata management and web services.

Our close links with the HEFCE funded Higher Education Academy subject networks for teaching and learning can be further developed. This strategy has been very successful and we advocate that other JISC funded projects (and indeed JISC itself) should forge closer, better links with the HEA subject centres. Our collaborations have provided us with access to a wide range of teachers and researchers in each subject discipline, not just those self-selectors who had already expressed an enthusiasm for learning technology.

## **Recommendations (optional)**

### **Building of Communities of Practice**

We have established close links with the HEFCE funded Higher Education Academy subject networks for teaching and learning. We feel that this strategy has been very successful and would encourage other JISC funded projects (and indeed JISC itself) to forge closer, better links with the HEA subject centres. Our collaborations have provided us with access to a wide range of teachers and researchers in each subject discipline, not just those self-selectors who had already expressed an enthusiasm for learning technology. We have encouraged our GCU teachers in their involvement in these networks.

### **Standards, standards and more standards**

All our library and technical developments have been undertaken in line with interoperability standards so that our tools and content would not be tied to any one particular development environment. A modular, flexible approach has allowed us to cope with rapid and constant change over the 5-year life cycle of the project. By employing standards and a Service Oriented Architecture we are confident that our services will continue to be available to the JISC Integrated Information Environment and other web services worldwide.

### **Employment: Secondments**

'Secondment' seems to us a good strategy. The 5-year funding cycle of the DLiC programme allowed Spoken Word to more directly address the problems of institutional and wider change experienced by some previous JISC projects. The project had various early strategies to try and ensure sustainability beyond the project funding cycle. One of these strategies was to recruit project staff from within existing University services, and to appoint new project staff to University services rather than to the project. All staff was then seconded to work on the Spoken Word project. This both offered project staff greater job security and offered a much better chance of post-project continuity for the University. This minimised the risk of key individuals leaving, and ensured appropriate transfer of knowledge and skills in the transition from a project to a set of fully established University Services in years 4 and 5. The secondments also led to close relationships with other staff in IT, Library and other learner support services and helped to ensure lessons in project development could be incorporated into institutional service planning and strategy. In general we think that this was a well-advised strategy.

### **Employment: Undergraduates**

Spoken Word employs young, technically aware, undergraduate students, at Glasgow Caledonian and at Northwestern University. Our US collaborations had made us aware of this practice. It offers a rich learning environment for the students in question and the opportunity of membership of the academic community in the dual role both staff and student. It has also given us unique insights into the socio-technological world of the modern learner and led to direct student input into the shaping of our Spoken Word end-user services. More of this type of institutional campus employment would help students in an ever-changing world of financial stringency and competition for part-time jobs high. We commend this practice.

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## Appendix A - Teachers, Collaborators and Users

### Glasgow Caledonian University teaching, research and support staff involved in the project

		Institution	Specialism
Ian	Baxter	Glasgow Caledonian University	Hospitality and Tourism Management
Liz	Banks	Glasgow Caledonian University	Subject Librarian
Michael	Bromby	Glasgow Caledonian University	Law
Morag	Campbell	Glasgow Caledonian University	Nursing
Douglas	Chalmers	Glasgow Caledonian University	Cultural Business
Linda	Creanor	Glasgow Caledonian University	Elearning
David	Donald	Glasgow Caledonian University	Political Science

Elaine	Duncan	Glasgow Caledonian University	Psychology
Joe	Fodey	Glasgow Caledonian University	Spanish Civil War
Ken	Garner	Glasgow Caledonian University	Journalism
Helen	Gough	Glasgow Caledonian University	Nursing
Nancy	Graham	Glasgow Caledonian University	Nursing
Alan	Hutton	Glasgow Caledonian University	Economics
Albert	Jaszewski	Glasgow Caledonian University	Scottish Centre for Work Based Learning
Larissa	Kempenaar	Glasgow Caledonian University	Physiotherapy
Morna	Lawson	Glasgow Caledonian University	English Language Teaching
Andy	Lowndes	Glasgow Caledonian University	Nursing
Frances	MacInnes	Glasgow Caledonian University	Biology
Louise	Morgan	Glasgow Caledonian University	Fashion and Marketing

Ian	Mowat	Glasgow Caledonian University	Cultural Business
Ole	Pahl	Glasgow Caledonian University	Environmental Management and Planning
Hartwig	Pautz	Glasgow Caledonian University	Political Science
Adrian	Pierotti	Glasgow Caledonian University	Biology/Medical Ethics
Bernadette	Scott	Glasgow Caledonian University	Hospitality and Tourism Management
Andy	Sharp	Glasgow Caledonian University	Cultural Business
John	Smith	Glasgow Caledonian University	Nursing
Janice	West	Glasgow Caledonian University	Social Work/Social Policy

**External teaching and research staff involved in the project**

		<b>Institution</b>	<b>Specialism</b>
Ken	Alder	Northwestern University	History
Neil	Ballantyne	University of Strathclyde	Social Work
Richard	Haynes	University of Stirling	Film and Media Studies
Laura	Johnstone	University of Glasgow	Drug Policy

Lee	Knifton	Scottish Mental Health Partnership	Mental Health
Erik	Lint	University of Amsterdam	Theatre Studies
Maureen	Lister	University of Bologna	Teaching English as a Foreign Language
Ann	Longmuir	Kansas State University	English Literature
Paul	Maloney	University of Glasgow	Theatre Studies
Kevin	O'Gorman	University of Strathclyde	Hospitality and Tourism Management
Rashmi	Sadana	Columbia University	Anthropology
Carol	Tannahill	Glasgow Centre for Population Health	Health
Karen	Thompson	University of Strathclyde	Hospitality and Tourism Management
Charlotte	Waelde	University of Edinburgh	Law
Irene	Ward	Kansas State University	English Literature/Women's Studies

**Collaborators**

GCU has a growing list of important collaborations in the world of international scholarly communication.

- The collaborations with the UK Higher Education Academy Subject Networks ([Higher Education Academy](#), 2008) have been fruitful for all parties. We began with Economics and collaborated with Senior Lecturer Alan Hutton at GCU to create 'Talking Economics' to build a Digital Audio Collection (largely sourced from the BBC) for use, alongside other resources in the context of a web-based learning environment, to help along promote 'conversations' on economic issues; and, to test out the approach in application to two 4th year honours political economy modules. The success of this approach led to 2 further HEA funded collaboration projects in Hospitality, Leisure, Sport & Tourism, and in Social Work & Social Policy. A sub-project to investigate accessibility issues in using audio and video materials was also commissioned by SWAP – the HEA subject centre for Social Work & Social Policy.
- GCU is an associate partner with Hull in the 'REMAP' project funded under the 4/06 JISC Capital Circular, Strand Hc: Preservation tools development, based around Fedora developments ([The REMAP project](#), 2008). The project is investigating the use of a digital repository to support the embedding of records management and digital preservation within the context of a UK Higher Education institution. Colleagues from Hull have been very supportive and important in our repository infrastructure developments.
- Through the UK and Ireland Fedora Users Group ([Fedora UK and Ireland Users Group](#), 2008) we have also established good connections with the Bodleian Library, Oxford; National Library of Scotland; National Library of Wales; LSE; AHDS; and University College Dublin. We had existing Fedora connections with Hull, Edinburgh, Northwestern, and Bologna. In October 2006 GCU hosted the 2<sup>nd</sup> meeting of the UK & I Users group, meeting in association with the Open Scholarship conference at Glasgow University.
- As a result of contact made through Spoken Word, colleagues from the National Library of Scotland and University of Edinburgh met with GCU to discuss collaboration in the IRIScotland project (IRIScotland, 2008). The project aims to provide the organisational and technological framework for a Scotland-wide institutional repository infrastructure for research, and the architecture is based on Fedora.
- Our colleagues in Hull were also instrumental in leading us to consider Muradora as a new front end to our Fedora repository (Muradora, 2008). Muradora enables flexible access control for end users (based on the XACML standard), inter-domain authentication and federated identity (using Shibboleth implementation of the SAML standard), and multiple metadata schema management (via W3C XForms standard). Chi Nguyen and his DRAMA team at Macquarie University in Australia developed Muradora. Spoken Word have recently committed to being active members of a new international users community.
- GCU are on the Expert Advisory Group of the EASAIER project (EASAIER, 2008). EASAIER stands for 'Enabling Access to Sound Archives through Integration, Enrichment and Retrieval' - a European wide collaboration funded under FP6.
- We collaborated with Janice West, Senior Lecturer in Social Work at GCU on the development of Clydetown, a problem based virtual learning environment funded by the School of Health and Social Care to serve the learning needs of the 5 divisions within the School. Clydetown offers a rich multi-media resource which provides staff and students with a simulated context in which to explore aspects of the academic curriculum. Spoken Word Services has securely provided audio and video material from BBC Archives for inclusion in Clydetown.
- GCU has an ongoing cross sectoral collaboration to deliver digital audio resources with the Glasgow Centre for Population Health (GCPH, 2008). This includes the development of a podcasting channel for the Centre.

- Spoken Word are partners in the JISC funded EDINA led Visual and Sound Materials Portal: Scoping Study and Demonstrator Project (VSM Portal, 2008).
- In November 2006 David Donald attended the AHRC / BBC New Media Knowledge Transfer "summit" for HE as a BBC nominee.
- Spoken Word at GCU was an associate partner in the JISC funded "Community Dimensions of Learning Object Repositories" project and have contributed several use cases in the use of repositories to the project (CD-LOR, 2008).
- GCU hope to find resources to develop collaborations to investigate authentication and authorisation using Shibboleth: main contacts are: London School of Economics and Political Science (ANGEL) and Columbia University.

## Users

As of early July 2008 Spoken Word Services has 3190 registered users from a wide range of countries worldwide. A range of admin tools are available to enable us to monitor usage and contact groups of users as required.

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## Appendix B - List of Dissemination Activities - presentations and publications listed by year

### 2007/2008

Iain Wallace, presentation to EASAIER Expert User Advisory Board, London, 3<sup>rd</sup> September 2007

Iain Wallace, presentation to ALT-C Conference, Nottingham, 6<sup>th</sup> September 2007

Iain Wallace, presentation to DIDET international project team members, Glasgow, 7<sup>th</sup> September 2007

Iain Wallace attended the European Conference on Digital Libraries, Budapest, 16<sup>th</sup> -21<sup>st</sup> September 2007 and presented to the ECDL workshop on The Future of Digital Libraries, 21<sup>st</sup> September 2007.

Aidan Johnston attended and gave demonstrations to the 'Unlocking Audio' conference at the British Library, London, 25- 26<sup>th</sup> October 2007

Caroline Noakes attended the JISC Repositories SUMS workshop, Birmingham, 31<sup>st</sup> October 2007

Iain Wallace, David Donald, Aidan Johnston, Caroline Noakes and Graeme West presented to BBC staff in Information and Archives and other areas of Future Media and Technology, London, 21<sup>st</sup> November 2007.

Iain Wallace, David Donald, Aidan Johnston, Caroline Noakes and Graeme West attended a meeting of the Fedora UK and Ireland Users group, London, 22<sup>nd</sup> November 2007

David Donald presented to the Scottish Police College, Dunfermline, 3<sup>rd</sup> December 2007

Iain Wallace, David Donald and Tom Finnigan presented to the International Conference on Information and Learning Commons, Hong Kong, 10 – 11<sup>th</sup> December 2007

David Donald, Aidan Johnston and Caroline Noakes attended and gave demonstrations at the BBC

Project Acronym: The Spoken Word  
Version: 1.0  
Contact: Iain Wallace iain.wallace@gcal.ac.uk  
Date: 14 July 2008

Research and Development Festival of Technology, London, 21<sup>st</sup> – 22<sup>nd</sup> January 2008

Iain Wallace presented to the JISC conference 'Using learning resources: transforming the educational experience', Birmingham, 22<sup>nd</sup> January 2008

Iain Wallace presented on IPR to the JISC Programme 'Repurposing & reuse of digital University-level content and evaluation (RePRODUCE)', Birmingham, 20<sup>th</sup> February 2008

Iain Wallace and Susan Paterson attended the Cataloguing and Indexing Group Scotland, Edinburgh, 21<sup>st</sup> February 2008

Iain Wallace and David Donald presented to colleagues from Edinburgh University Law School, Glasgow, 26<sup>th</sup> February 2008

Iain Wallace and Aidan Johnston presented to colleagues from Bologna University, Glasgow, 3<sup>rd</sup> March 2008

Iain Wallace and David Donald presented to the BILETA (British and Irish Law, Education and Technology Association) conference, Glasgow, 27<sup>th</sup> March 2008

Iain Wallace, David Donald, Caroline Noakes and Graeme West attended Open Repositories 08, Southampton, 1<sup>st</sup> – 4<sup>th</sup> April 2008

Iain Wallace presented by videoconference to the Higher Education Academy Social Work and Social Policy Elearning workshop event, Birmingham, 2<sup>nd</sup> April 2008

Iain Wallace, and David Donald presented to colleagues from Northwestern University, Glasgow, 30<sup>th</sup> April – 1<sup>st</sup> May 2008

Iain Wallace was invited to a Semedia (Search Environments for Media) workshop organised by BBC London, London, 15<sup>th</sup> May 2008

Iain Wallace and Aidan Johnston presented to a meeting of the Scottish Libraries Customer Services Practitioners group, Glasgow, 4<sup>th</sup> July 2008

Iain Wallace and David Donald presented to a delegation from Hong Kong City University, Glasgow, 4<sup>th</sup> July 2008

Iain Wallace and Caroline Noakes attended a meeting of the Fedora UK and Ireland Users group, Bath, 8<sup>th</sup> July 2008

Iain Wallace attended the JISC/CNI conference, Belfast, 10<sup>th</sup> – 11<sup>th</sup> July 2008

## **2006/2007**

Iain Wallace and Janice West attended and presented at ALT-C 06, Edinburgh, 5<sup>th</sup> – 8<sup>th</sup> September 2006

David Donald attended the BUFVC Learning on Screen conference, Birmingham, 18<sup>th</sup> – 20<sup>th</sup> September 2006

Iain Wallace attended the European Conference on Digital Libraries, Alicante, 17<sup>th</sup> – 22<sup>nd</sup> September 2006

David Donald attended the British Library Sound Archive 'Archival Sound Recordings' launch, London, 26<sup>th</sup> September 2006

Iain Wallace, David Donald, Darren Mowat and Aidan Johnston organised and attended a meeting of the Fedora UK and Ireland Users group, Glasgow, 18<sup>th</sup> October 2006

Iain Wallace and David Donald attended the 'Open Scholarship' conference, Glasgow, 18<sup>th</sup> – 20<sup>th</sup> October 2006

David Donald attended the AHRC – BBC summit meeting, London, 21<sup>st</sup> – 23<sup>rd</sup> November 2006

Iain Wallace attended an IRIScotland event, Edinburgh, 4<sup>th</sup> December 2006

David Donald gave a presentation to the Nursing School, Glasgow Caledonian University, 15<sup>th</sup> December 2006

Iain Wallace delivered staff training in Library 2.0 technologies to Blackpool and The Fylde College, 8<sup>th</sup> – 9<sup>th</sup> January 2007

David Donald contributed to an ESRC Technology Enhanced Learning event, Edinburgh, 16<sup>th</sup> January 2007

Iain Wallace, David Donald, Jerry Goldman, Andrew Gruen and Maureen Lister attended the DELOS conference, Pisa, 12<sup>th</sup> – 14<sup>th</sup> February 2007

David Donald, Graeme West, Jerry Goldman and Jeff Parsons attended O'Reilly ETech conference, San Diego, 26<sup>th</sup> – 28<sup>th</sup> February 2007

David Donald contributed to the EU Commission Expert Workshop on Repositories, Brussels, 4<sup>th</sup> – 6<sup>th</sup> March 2007

Iain Wallace, David Donald and David Jordan (BBC) attended the JISC Annual conference, Birmingham, 13<sup>th</sup> March 2007

Iain Wallace and Aidan Johnston attended the Podcast Network Meeting, Glasgow, 24<sup>th</sup> May 2007

Iain Wallace, David Donald, and Richard Wright (BBC) attended a meeting of the Fedora UK and Ireland Users group, Oxford, 20<sup>th</sup> May 2007

Iain Wallace presented to the JISC Repositories conference, Manchester, 5<sup>th</sup> – 6<sup>th</sup> June 2007

Iain Wallace contributed and facilitated at the JISC online conference, 11<sup>th</sup> – 12<sup>th</sup> June 2007

Iain Wallace, David Donald and Tom Finnigan presented to Clemson University and other visiting international scholars, 19<sup>th</sup> July 2007

## **2005/2006**

Iain Wallace and Aidan Johnston attended ALT-C 2006, Manchester, 6<sup>th</sup>-8<sup>th</sup> September 2005

Iain Wallace and Darren Mowat gave a brief presentation to FEDORA Users Meeting, Copenhagen, 28<sup>th</sup> September 2005

Iain Wallace, Aidan Johnston and David Donald attended Project Pad Workshop, Bologna, 5<sup>th</sup>-6<sup>th</sup> October 2005

Iain Wallace gave a presentation to Royal College of Physicians and Surgeons, Glasgow, 11<sup>th</sup> October 2005

Iain Wallace and David Donald gave a presentation to Learning Services Directors, 8<sup>th</sup> November 2005

David Donald gave a presentation to EDINA, University of Edinburgh, 21<sup>st</sup> November 2005

Iain Wallace gave a presentation to Professor Stephen Heppell, Learning Consultant, 23<sup>rd</sup> November 2005

Iain Wallace and David Donald gave a presentation to SCURL Directors, 24<sup>th</sup> November 2005

David Donald, Jerry Goldman, Mark Kornbluh and Mike Fegan gave a presentation to JISC/CNI Fall Meeting, Phoenix, AZ, 5<sup>th</sup>-6<sup>th</sup> December 2005

Iain Wallace and David Donald attended Sakai Conference, Austin, TX, 7<sup>th</sup>-8<sup>th</sup> December 2005

Iain Wallace and David Donald gave a presentation to Dr Arthur Loughran, Senior Lecturer, University of Paisley, 21<sup>st</sup> December 2005

Iain Wallace and David Donald gave a presentation to GCU Learning Services all staff meeting, 10<sup>th</sup> February 2006  
All GCU team - JISC Evaluators meeting with Sarah McNicol (Teachers present: Alan Hutton, Douglas Chalmers, Janice West & Kevin O'Gorman) - 2<sup>nd</sup> February 2006

Iain Wallace and David Donald - Presentation to GCU Learning Services - 10<sup>th</sup> February 2006

Iain Wallace, Darren Mowat and Susan Paterson – IntraLibrary Users Group event, Edinburgh - 13<sup>th</sup> February 2006

Iain Wallace – Web 2.0 Workshop GCU, Glasgow - 22<sup>nd</sup> March 2006

Iain Wallace, David Donald, Aidan Johnston and Darren Mowat - CILIP Multimedia Information and Technology Group, Scotland event, Glasgow - 23<sup>rd</sup> March 2006

Iain Wallace, David Donald and Aidan Johnston - Digital Libraries in the Classroom Joint Dissemination Event, Ross Priory, Glasgow - 28<sup>th</sup> - 29<sup>th</sup> March 2006

Iain Wallace and David Donald – Presentation to History in Higher Education Conference 2006, Oxford - 12<sup>th</sup> April 2006

Iain Wallace – Presentation to 1<sup>st</sup> Fedora UK and Ireland Users Group, Hull - 9<sup>th</sup> May 2006

David Donald, Kevin O'Gorman and Alison Morrison – Presentation to Hospitality, Tourism and Leisure Research Conference 2006 11<sup>th</sup> May 2006

Iain Wallace - Digital Curation Centre Associates Meeting, Edinburgh - 17<sup>th</sup> May 2006

Iain Wallace and all GCU team – Presentations and poster session for GCU Learning and Teaching Showcase, Glasgow - 25<sup>th</sup> May 2006

Iain Wallace - Jorum Outreach and Training Event, Glasgow - 13<sup>th</sup> June 2006

Iain Wallace and David Donald – Presentation to DIVERSE 2006 (Developing Innovative Video Resources for Students Everywhere), Glasgow - 5<sup>th</sup> July 2006

Iain Wallace and David Donald - THE JISC/CNI Meeting: Envisioning future challenges in networked information, York - 6<sup>th</sup> – Fri 7<sup>th</sup> July 2006

David Donald – Presentation and panel discussion at JISC Intellectual Property Rights in e-Learning Programmes event, London - 11<sup>th</sup> July 2006

David Donald – Presentation and participation in JISC Personalisation Workshop, London - 21<sup>st</sup> July 2006

## **2004/2005**

Steve Cohen, Susan Eales, Dean Rehberger, and Michael Fegan. "A Framework for Teaching and Assessing Sourcing Using Digital Libraries, LWW6, Levos Greece, September 2005.

David Donald and Alan Hutton. Paper to Political Economics Conference, City University, London, July 16th 2005

David Donald, Iain Wallace, Graeme West and Andrew Gruen. Spoken Word poster and demonstrations, JISC Programmes Meeting, Cambridge, July 6th-8th 2005

David Donald, Graeme West and Andrew Gruen. Spoken Word demonstrations, University of Bournemouth, July 15th 2005

David Donald, and Iain Wallace. Spoken Word demonstrations to BBC Information & Archives and New Media senior staff, July 27th-28th 2005

Alan Hutton, David Donald and Suzanne Lobban. "Talking Economics: Integrating Digitised Spoken Word Audio into Web Based Learning in Economics". Royal Scottish Economics Society Annual Conference, Perth, Scotland, March 2005

Mark Kornbluh, Michael Fegan, and Dean Rehberger. "Media Matrix: Creating Secondary Repositories," European Conference on Digital Libraries, Research and Advanced Technology for Digital Libraries, Proceedings, Bath, England, September 2004.

Mark Kornbluh. "Interoperability and Secondary Repositories: What Can we Do to Build for the Future Now," TICFIA 2004 Project Directors Meeting, San Diego, April 2004.

Mark Kornbluh. "Giving Voice to History: Incorporating Aural Literacy in History Teaching," H-Net Affiliated Session at the Annual Meeting of the American Historical Association," Washington, D.C., January 2004.

Dean Rehberger. "Speech on the Internet: Active Use of Online Digital Audio in the Classroom," (in press) with Brad Rakerd, International Journal of Technology, Knowledge and Society.

Dean Rehberger. "Speech on the Internet: A New Educational Resource and Cautionary Note," (in press) with Brad Rakerd, International Journal of Technology, Knowledge and Society.

## **2003/2004**

David Donald, "Spoken Word Project," Synergy, 1, February 2003.

David Donald, "Spoken Word Project," Synergy, 2, September 2003.

David Donald, "DISCOVERing the Spoken Word," Sentient Discover User Group, Liverpool, February 2004.

David Donald, "The Spoken Word project," The Caledonian, June 2004, 1-2.

David Donald with Richard Wright and Anne Longmuir, "JISC/NSF Digital Libraries in the Classroom: "Spoken Word project," JISC/CNI Meeting 2004, Brighton, July 2004.

David Donald, "Listen and learn through the web," Synergy, 3, September 2004.

Jerry Goldman with Mark Kornbluh and Dean Rehberger, "The Problems of Ingesting and Delivering Complex Objects from Digital Repositories," Workshop on Multimedia Contents in Digital Libraries, Chania, Crete, June 2003.

Jerry Goldman with Anne Longmuir, "Supporting Student Learning through Use of a Digital Repository," Alt Surf Spring Conference and research Seminar, 22nd April 2004.

Mark Kornbluh, with Dean Rehberger and Michael Fegan, "The Challenge of Building Complex Objects from Digital Repositories," CNI Taskforce Briefing, Washington, DC, April 2003.

Mark Kornbluh "Building Multimedia Repositories for the Future," OCLC Institute Symposium, "Growing the Digital Library," Annual Meeting of the American Library Association, January 2003.

Mark Kornbluh. "'Envisaging the Future:' Building Multimedia Digital Repositories For Long-Term Preservation, Access, and Use," "Envisaging the Future": Digital Research and scholarship in the Humanities Conference, The Australian National University, 2003.

Mark Kornbluh, Michael Fegan and Dean Rehberger, "Media Matrix: Using the Media of Digital Libraries," JCDL 2004, Portland, Oregon, June 7-11, 2004.

Mark Kornbluh, Michael Fegan and Dean Rehberger, "Media Matrix: Using the Media of Digital Libraries," ECDL, University of Bath, U.K., September 12-17, 2004.

Anne Longmuir "The Spoken Word: New Resources to Transform Teaching and Learning." D-Lib. 10.3 (2004). <<http://www.dlib.org/dlib/march04/03inbrief.html>

Anne Longmuir "The Spoken Word Project". E-learning@gcal. April 2004. 35.

Anne Longmuir "The Spoken Word Project: Using BBC Digital Audio Archives online for Teaching", Radio Studies Network, Glasgow Caledonian University, Glasgow, 20th May 2004.

Anne Longmuir "The Spoken Word". Viewfinder. 55. June 2004. Longmuir, Anne with Martin Morrey, Steve Ryan, Hugh Davis and Bill Ion, "Tools and technologies: Digital Libraries in the Classroom," JISC Joint Programmes Meeting, Brighton, UK, July 2004.

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## **Appendix C - Spoken Word Publicity**

## **REPORTS**

### **New Statesman Magazine - Spoken Word listed as a University "Strength"**

#### **2007**

Complete Guide Only PDF: <http://www.newstatesman.com/pdf/psg2007.pdf>

Listing PDF: <http://www.newstatesman.com/pdf/psg2007listingonly.pdf>

#### **2006**

Guide Only PDF: <http://www.newstatesman.com/pdf/psg2006guideonly.pdf>

Listing PDF: <http://www.newstatesman.com/pdf/psg2006.pdf>

#### **2005**

Complete Guide PDF: <http://www.newstatesman.com/pdf/politicalstudies2005.pdf>

### **HEA Academy Projects - Publicity**

Talking Economics - <http://www.economicsnetwork.ac.uk/projects/mini/talk05.htm>

Talking Hospitality - [http://www.hlst.heacademy.ac.uk/guide/references\\_resources/rr03b.htm](http://www.hlst.heacademy.ac.uk/guide/references_resources/rr03b.htm) |

SWAP - <http://www.swap.ac.uk/elearning/jiscprojectqbanks.asp>

PDF Newsletter: <http://www.swap.ac.uk/news/newsletter11.pdf>

Final Report: [http://www.swap.ac.uk/elearning/spokenword\\_report\\_final.doc](http://www.swap.ac.uk/elearning/spokenword_report_final.doc)

Other references: <http://www.swap.ac.uk/elearning/elte.asp>

### **Intrallect IPR Case Study**

Document: <http://www.intrallect.com/HEFCE-IPR/Spoken.doc>

<http://www.intrallect.com/HEFCE-IPR/index.htm>

<http://www.intrallect.com/HEFCE-IPR/Spoken.htm>

### **Northwestern University - Annual Reports**

#### **2006**

IT Services : <http://www.it.northwestern.edu/bin/news/report2006.pdf>

University Annual Report:

#### **2005**

IT Services: <http://www.it.northwestern.edu/bin/news/report2005.pdf>

## **CITATIONS/REFERENCES/PRESENTATIONS**

The Spoken Word web site at GCU was featured in an Institute for Learning and Research Technology (ILRT) SOSIG Podcast in July 2006. We also have a long standing relationship with the Glasgow Centre for Population Health, and provide podcast feeds from our Spoken Word repository for all their expert seminars.

GCU are now sharing audio and video resources with the Cambridge University Science Live service (<http://www.sciencelive.org/>). ScienceLive is an initiative that seeks to bring some of the best popular science events (discussions, lectures, interviews) directly to your home, so that you can watch these events whenever and from wherever you can.

As of 31<sup>st</sup> July 2008 we have over 3000 registered users on our GCU Spoken Word site. There is increasing evidence that new users are finding us through a variety of different channels which reflects the maturity of this stage of our dissemination.

SCOTTISH EXECUTIVE: A Framework for Higher Education in Scotland: Higher Education Review Phase 2

Project Acronym: The Spoken Word  
Version: 1.0  
Contact: Iain Wallace iain.wallace@gcal.ac.uk  
Date: 14 July 2008

<http://www.scotland.gov.uk/Publications/2003/03/16786/20357>

Jerry Goldman - Wired Magazine

<http://www.wired.com/science/discoveries/news/2003/07/59588>

Educause Connect - An Interview with Northwestern's Jerry Goldman

[http://connect.educause.edu/An\\_Interview\\_With\\_Jerry\\_Goldman?time=1179308493](http://connect.educause.edu/An_Interview_With_Jerry_Goldman?time=1179308493)

CNI 2005 Presentation - Mark Kornbluh

<http://www.cni.org/tfms/2005b.fall/abstracts/PB-spoken-kornbluh.html>

[http://www.cni.org/tfms/2005b.fall/abstracts/handouts/CNI\\_Spoken\\_kornbluh.doc](http://www.cni.org/tfms/2005b.fall/abstracts/handouts/CNI_Spoken_kornbluh.doc)

Blog: The High Temple of Reith: Spoken Word/Annotable Audio

<http://reithian.blogspot.com/2005/11/spoken-word-annotatable-audio.html>

On-line Collections of Digital Audio as a Research Resource for the History of Economics

<http://www.sceme.stir.ac.uk/pdf/digital%20audio%20project.pdf>

ECDL - Alicante 2006

<http://www.csfic.ecs.soton.ac.uk/Wallace.doc>

Repositories in Learning - CETIS

[http://wiki.cetis.ac.uk/Repositories\\_in\\_learning](http://wiki.cetis.ac.uk/Repositories_in_learning)

Blog: On the BBC Annotatable Audio project...

[http://www.plasticbag.org/archives/2005/10/on\\_the\\_bbc\\_annotatable\\_audio\\_project/](http://www.plasticbag.org/archives/2005/10/on_the_bbc_annotatable_audio_project/)

DIVERSE 2006

<http://elisu.gcal.ac.uk/diverse2006/pages/summary.asp?ID=54>

MIDESS Project : CLT to DC Metadata

[http://www.leeds.ac.uk/library/midess/CLTMediaDatabase\\_CLTtoDC\\_forwebsite.doc](http://www.leeds.ac.uk/library/midess/CLTMediaDatabase_CLTtoDC_forwebsite.doc)

DART: Reference to relationship with Columbia University

<http://www.columbia.edu/dlc/dart/project/projectdocuments/BIAn3sansFinancial.doc>

AHRC/BBC New Media Knowledge Transfer Event:

[http://tell.memore.info/OpenArchive\\_participants](http://tell.memore.info/OpenArchive_participants)

JISC/CNI Conference 2004:

<http://www.ukoln.ac.uk/events/jisc-cni-2004/programme.html>

Science Live @ Cambridge University:

[http://www.sciencelive.org/component/option,com\\_mediadb/task,view/idstr,SpokenWord-gcu-a0a0r2-b](http://www.sciencelive.org/component/option,com_mediadb/task,view/idstr,SpokenWord-gcu-a0a0r2-b)

<http://www.sciencelive.org/content/blogsection/6/50/9/9/>

JISC Infonet: "Students Interaction with specialists off-site including voice contact; online 'chat' and annotation of slides etc"

<http://www.jiscinfonet.ac.uk/infokits/learning-space-design/anticipation/together>

MATRIX Presentation: Crete 2003

[http://matrix.msu.edu/mkornbluh/pdf/crete\\_5\\_28\\_03.pdf](http://matrix.msu.edu/mkornbluh/pdf/crete_5_28_03.pdf)

Derek Hoy (GCU Research Fellow): Topic Maps: experiences from healthcare applications

<http://idealliance.org/proceedings/xttech05/papers/03-07-02/>

BUFVC Media On-Line Magazine - March 2007:

Project Acronym: The Spoken Word  
Version: 1.0  
Contact: Iain Wallace iain.wallace@gcal.ac.uk  
Date: 14 July 2008

[http://www.bufvc.ac.uk/publications/mediaonlineissues/mof27\\_vf66.pdf](http://www.bufvc.ac.uk/publications/mediaonlineissues/mof27_vf66.pdf)

British Library & JISC Online conference:

[http://jisc-1.eduserv.org.uk/uploaded\\_documents/Usability\\_workshop\\_invitation\\_GroupA.pdf](http://jisc-1.eduserv.org.uk/uploaded_documents/Usability_workshop_invitation_GroupA.pdf)

Media Matrix: A Digital Library Research Tool

[http://portal.acm.org/ft\\_gateway.cfm?id=1065516&type=pdf](http://portal.acm.org/ft_gateway.cfm?id=1065516&type=pdf)

Media Matrix: Creating Secondary Repositories

<http://www.springerlink.com/content/u6811ct0ck36wv4k/>

Creative Commons Interview With Jerry Goldman

<http://www.onlisareinsradar.com/archives/001445.php>

DLIB 2006: Iain Wallace -

<http://www.dlib.org/dlib/october06/ill/10fill.html>

DLIB 2004: Anne Longmuir - The Spoken Word: New Resources to Transform Teaching and Learning

<http://www.dlib.org/dlib/march04/03inbrief.html>

eGov Monitor: JISC VSM Portal: Multimedia portal could open doors to sound and moving pictures

<http://www.yakwap.com/node/3520>

Blog: Andrew's DIVERSE Conference Blog

[http://andrew-conf.blogspot.com/2006\\_07\\_01\\_archive.html](http://andrew-conf.blogspot.com/2006_07_01_archive.html)

Higher Education Academy - Annual Report 2006:

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Innovation - Spoken Word Project

The support for Spoken Word Service has required us to tune the network and firewall to allow access for its users and federation of resources. Web based IP telephony has made it easier for the Spoken word staff to contact their partner institutions.

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## **Appendix D - Spoken Word End-User Licence Agreement**

Normally, this page is filled with incredible amounts of fine print legal mumbo-jumbo. We at the Spoken Word suspect that most of you would rather read this agreement in English instead of "legalese". With this in mind, our friendly lawyer has written a somewhat non-standard licence agreement.

OK, it goes like this... you just accessed our materials archive, for which we are truly grateful (after all, your interest keeps us in business). However, when you accessed it, you were actually only being given the right to download or stream parts of it for educational use, not to republish or repost it. The stuff contained in the archive still belongs to us, or those third parties who have allowed us to make it available to you. By allowing you access to this material, we are "licensing" it to you. This is a lot like renting it forever... we still own it but you can use it all you want but only for educational use. What does all this mean to you? Not much. It simply gives us the right to require the following rules. We know it all sounds pretty sneaky, but bear with us... this is all normal stuff.

Here are the rules:-

- \* You can only use the material for educational purposes, so don't go selling it on e-Bay. Beyond the fact that it is illegal, it is also not very nice. After all, we and many others worked hard to make this archive what it is. Sometimes, some material will be subject to extra restrictions and this will be indicated clearly. You must observe these extra restrictions. In particular BBC archive material cannot be used, added to or altered without the prior consent of the BBC unless that action is permitted by the BBC end user agreement.
- \* Unless specifically mentioned otherwise, you can quote, excerpt and annotate the material for educational purposes. This includes teaching, research, private study and presentations at academic conferences.
- \* You may link education sites to the Spoken Word's audio streams and downloadable files, but please tell us as we like to know how our material is being used.
- \* You may not remove or alter any copyright or ownership information, and must clearly acknowledge copyright ownership in any use you make of the material. That's only fair after all as without others' work you would have no material at all.
- \* You can't make any money from the use of the material. This includes selling, reselling, redistributing or otherwise making the material available in any medium including the internet. You were granted a licence for the material for you ... but we don't allow you to then licence it to others. If you'd like to do that, send us your proposal for consideration. We do read our mail... honest.
- \* All these rules apply not only to the entire database but also to every part of it. So, don't do giving away copies of documents / files - that's not legal either. Our copyrights and other proprietary rights (sounds a bit like that legal talk, I know) apply not only to the material, but to any derivation of it. In other words, if you make something using part of our database – and which is not educational use - we will send our legal-types after you... so don't do it.
- \* The material in the archive is provided "as is" and we make no guarantees about the quality, relevance, accessibility or completeness of the materials. We have worked to make a good archive... but we don't make any promises. So, if you run into a problem, you may call our support line and we will help if we can.
- \* We are also not liable for any problems our material may cause. Legally, we cannot be held responsible for any use you make of the material. Though this may sound particularly underhanded, it is standard for all of these agreements. As before, if you run into a problem, just call.
- \* You will pay us any costs and damages we suffer if you do something you're not allowed to. This would include the costs of our legal types. As we are proud to be a Scottish based project, this agreement will be under Scots law and enforced in the Scottish courts.

That's the entire agreement, in a nutshell. If you have any questions about this agreement or any other facet of the Spoken Word, feel free to call. We hope you find the materials of use and we look forward to creating more materials for you to enjoy.

Spoken Word is a project of Glasgow Caledonian University , 70 Cowcaddens Road, Glasgow G4 0BA , Scotland. It is supported by funds from JISC/NSF as part of the Digital Libraries in the Classroom programme.

If you like this end-user licence agreement and would like to adapt it to your own purposes, please contact David Flint, MacRoberts, 152 Bath Street, Glasgow G2 4TB, Scotland .

Project Acronym: The Spoken Word  
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