



Hybrid Electronic Access and Delivery in the Library Networked Environment

Project Management

Third Year Annual Report

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The HeadLine project is partly funded by the Joint Information Systems Committee (JISC) of the Higher Education Funding Councils, as part of its Electronic Libraries Programme (eLib)

Executive Summary

HeadLine (**H**ybrid **E**lectronic **A**ccess and **D**elivery in the **L**ibrary **N**etworked **E**nvironment) is one of the **five** Hybrid Library projects funded under the Electronic Libraries (eLib) Phase 3 programme of the UK Higher Education Joint Information Systems Committee (JISC). Project Partners are the London School of Economics, London Business School and the University of Hertfordshire. This three-year project began in January 1998 and aims to design and implement a working model of the hybrid library, in actual academic environments in the subject areas of Economics and Business Studies. The project will present the user with a wide range of library resources, regardless of physical form, via a common Web-based interface.

This is the third annual report published by the HeadLine project and covers the period from 1st August 1999 to 31st July 2000. In this period the project has concentrated on implementation of the software and tools defined by our formative evaluation activities, and has just started the processes of rollout to users, and summative evaluation of our concept of the hybrid library in use.

Key work has centred on the implementation of an adequate Resource Description Model, the Authentication-Broker approach to user (rights) metadata, and the HeadLine Personal Information Environment. The End-user Electronic Document Delivery prototype service is a new 'discovery-to-access' mechanism which has also been developed and tested during this year. As in previous years, ongoing dissemination and collaboration has meant that HeadLine has continued to play a significant part in national and international advancement of our field.

The project experienced some changes and problems, primarily our decision not to implement system imposed configuration of resource presentation based on user behaviour, and also some changes in staff involvement in the project. But these have all been successfully resolved, and HeadLine will continue to work with an effective and well-integrated project team.

The main objectives for the remainder of the project are focused on releasing further upgrades to the Personal Information Environment, integrating further components and features (such as cross-target searching and user group-work tools), further refining the Resource Description Model, seamlessly up-grading the PIE at the partner sites, and in-depth evaluation of our model of the hybrid library from the points of view of end-users and of administrative library staff.

Main achievements this year

In summary, during this year the HeadLine Project has:

- Implemented the **Personal Information Environment** service and released the PIE at each of the partner sites.
- Implemented the **Resource Description Model** in a relational database, together with Web-based maintenance tools, and populated it with approximately 300 collection level resources.
- Adopted, refined and implemented a modular, infrastructure-independent **Authentication-Broker** model for access to user rights metadata, which will allow the library to take advantage of existing user data and thus avoid duplication of effort.
- Started the process of **evaluating the HeadLine hybrid library model** by recording staff time involved with its implementation and with user support, and by collecting qualitative feedback from library staff and end-users.
- Developed, implemented and tested a further 'discovery-to-access' component - the **End-user Electronic Document Delivery** service, which allows remote users to access hard-copy library resources.
- Participated actively in joint events undertaken by all or several of the projects funded by Phase Three of the eLib Programme.
- Promoted awareness of the aims, activities and achievements of the Project amongst library staff of the partner institutions, and the wider library community, and through timely dissemination to potential users of HeadLine services.

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0. Introduction

As an innovative project from which others are expecting to learn, the HeadLine Project Board and Project Team believe that it is important to provide information that will be speedily accessible to the wider community, so that the lessons emerging from monitoring and evaluating the progress and success of our project are recorded, systematised and disseminated. In general, we feel that this objective is best served by dissemination (individually or in collaboration with other appropriate bodies and projects) following the timetable of events and developments within our own project plans.

However, this report has been prepared primarily to meet the requirements and timetable specified in the "eLib Phase III: Format for 2nd Year Project Annual Reporting (August 1999)", which is intended to provide the eLib Programme Office (or successor agencies) with a consistent and coherent set of data from all projects about activities and progress, the process of implementation, reflections on what has been learned and revised understandings and expectations about project innovation. This in turn is intended to dovetail with management agreements made with eLib about regular reporting.

In terms of our own calendar this annual report covers the last 7 months of Phase 2 (August 99 - February 00) and the first 5 months of Phase 3.

0.1 Project and eLib Timetable

Calendar years	1998		1999		2000	
HeadLine phases	Phase 1: 1st January 98 - 28th Feb 99		Phase 2: 1st March 99 - 28th Feb 2000		Phase 3: 1st Mar 00 - 31st Dec 00	
eLib years	eLib year 1: 1st Jan 98 - 31st Jul 98	eLib year 2: 1st August 98 - 31st July 99	eLib year 3: 1st August 99 - 31st July 2000		eLib year 4: 1st Aug 00 - 31st Dec 00	

1. Activities and Progress

1.1 Main Activities undertaken by the Project

During the period from 1st August 1999 to 31st July 2000, the project has made significant progress in the areas of the implementation and testing of the Personal Information Environment (PIE), Resource Description, and Library User Metadata. During this phase of the project the team has mainly undertaken development activities, in addition to ongoing Project Management and Dissemination activities. These are reviewed in the following sections.

1.1.1 Research & Development Activities

The project is now involved with the development of the Personal Information Environment and Discovery-to-Access tools. The project's development work had previously been structured into the five independent work-packages (Core System Design, Resources, Users, Personal Information Environment and Discovery to Access), which correlate with the key elements of the HeadLine hybrid library model. The various project strands and hybrid library elements have now come together and so, during this reporting period, the work has focused mainly upon the development of the PIE itself.

1.1.2 Project Management Activities

Steering Committee

The Steering Committee was established at the beginning of the project and comprises academics from partner institutions, and from the information sector, as well as representatives from vendors and information providers. During this reporting period the Steering Committee has played an active role in guiding the project, endorsing decisions and providing expertise in key areas such as exit strategies, the development of the PIE and its launch at the partner institutions.

Steering Committee Meetings during the year

4 November 1999 - Presentation on the HeadLine PIE, Consultation on Exit Strategies for the HeadLine Project.

27 June 2000 - Demonstration of the 1.0 release of the HeadLine PIE, Report on the launch of the PIE at the University of Hertfordshire and the planned launches at the London Business School and the London School of Economics.

Margaret Coutts of the University of Kent at Canterbury has been Chair of the Steering Committee since its inauguration, and has contributed a great deal of time and useful advice to the project in this role. Due to staff changes at Silver Platter, one new member has been recruited onto the Steering Committee.

Members of the Project Board and the Steering Committee made attempts to recruit additional academic representatives from the three partner sites for the Second Phase of the project. Unfortunately these attempts were unsuccessful due to already heavy demands on academic staff time.

Membership of the Steering Committee

Ms Margaret Coutts (Chair), University Librarian, University of Kent at Canterbury

Dr Colin Harris, University Librarian, Manchester Metropolitan University and JISC/CEI representative

Professor Danny Quah, LSE

Dr Jeff Sampler, LBS

Dr Mike Herman, University of Hertfordshire

Mr Albert Prior, Publisher Relations Manager, Swets & Zeitlinger

Mr Peter Gethin, Managing Director, SIRSI UK Ltd

Ms Jenny Walker, Silver Platter (until February 2000)

Ms Di Martin, Director of LIS, University of Hertfordshire

Ms Maureen Wade, Deputy Librarian, LSE

Mr Russell Altendorff, Director of Information Systems Division, LBS

Mr Pedja Pavlicic, Silver Platter (from February 2000)

Mr David Dalby, IT Services Manager, LSE

Project Board

The Project Board comprises a senior staff member who plays a key role in library strategy from each of the three partner institutions, and the Project Manager. The role of the Board is to advise the team and direct the project at a strategic level, as well as matching project aims with institutional policies and developments. The Project Board is chaired by the Project Director.

The Project Board has met approximately every two months, with meeting venues normally rotated between the sites of the three partners. Communication is also maintained amongst this group via the project board mailing list (hosted on Mailbase). Agendas, minutes and other formal reports to and of Project Board meetings are routinely copied to the Chair of the Project Steering Committee, and to the eLib Programme representative member of the Steering Committee.

Project Board Meetings during the year

12 October 1999, LBS Library

28 January 2000, LSE Library

30 March 2000, UH St Albans Library

16 May 2000, LBS Library

11 July 2000, LSE Library

1.1.3 Dissemination Activities

The following dissemination activities were scheduled for this period of the project, items in **bold type** are extracted from the **Communications Plan** (i.e. communication aims) and the plain text underneath is a description of HeadLine's progress in these areas. This reporting year covers the second and third phase of the project, the tasks scheduled for these phases mainly fall into similar categories (outlined below). However, the "Demonstration model", the "End of Project event" and "Building the software archive" were scheduled as phase three tasks only.

General awareness

The Website has been used to disseminate material to all interested parties and the url (www.headline.ac.uk/) is included on all project correspondence, email, presentations and literature. Branding has been made consistent by the use of the HeadLine logo which appears on all letter paper, Webpages, presentations etc., and the use of project stationery and business cards. Articles on HeadLine and related topics have been published in several journals during the period 1 August 1999 to 31 July 2000, and these are listed in the Appendix to this document. In addition to the articles listed in the Appendix, articles have also been published in newsletters, bulletins and Annual reports at the partner institutions.

Contribution to debate

Team members have contributed to relevant discussion via membership of mailing lists in various areas, and have also participated in conferences and seminars. Several papers have been given by team members on various topics (the HeadLine Personal Information Environment, the HeadLine Resource Description Model, authentication issues etc) as well as general presentations about the project which have been made to staff in partner sites, visitors, at library schools etc.

Project Reports

All published documents have been approved by the Project Board and are made available freely to the public via the Website; this Annual Report will be accessible from there.

Project Newsletter

The second HeadLine newsletter was produced in the Autumn, 1999, towards the end of Phase two - it described the design of the main features of the HeadLine Personal Information Environment (PIE) and the PIE portal model. This newsletter is entitled *'The HeadLine Personal*

Information Environment. It was sent to a mailing list of about 400, distributed in partner sites, advertised on various email lists and on the public Website. Reactions to this newsletter have been very positive, another newsletter (on the launch of the PIE) will be produced for Autumn 2000. The newsletter has been produced and distributed on a fairly regular basis, but only when the project has something to report on a particular topic.

Demonstration model (Phase three)

A new demonstration version of the HeadLine Personal Information Environment (Pete's PIE) was developed in February, 2000. Pete's PIE is a set of dummy PIE pages which aim to demonstrate and promote discussion of the functionality that the project seeks to incorporate within the working PIE. Pete's PIE has been promoted to librarians via various mailing lists and demonstrated during talks and conferences as mentioned in the Appendix.

Guest access to the live PIE (subject to any copyright restrictions associated with resources that it contains) will be made available by October 2000. Each guest user will be asked to complete a web-form and will given username and password access to their own PIE account. Guest users will be invited to participate in the PIE evaluation. Further information and instructions for becoming a guest user will be made available on the HeadLine-Users mailing list.

End of Project Event (Phase three)

Planning for HeadLine's end of project event (as scheduled in the Communications Plan) has commenced. Following preliminary discussions with other hybrid library projects, the HeadLine Project Board agreed that holding a joint "end of project event" would be more beneficial than holding an individual HeadLine event. HeadLine will be participating in an end of project workshop that will be presented jointly by all five eLib Hybrid Library Projects. This workshop has been provisionally scheduled for the 1st of November at the British Library and will include presentations and demonstration/workshop sessions.

Building the Software Archive (Phase three)

An archive of all the software that the project has developed is currently being compiled. This archive will be released towards the end of the project.

Dissemination Achievements

A list of dissemination achievements undertaken in this period is appended to this report - this covers the period of 1 August 1999 - 31 July 2000, previous activities are detailed in **the First and Second Year Annual Reports**.

1.2 Changes to the project

Changes/additions to the membership of the Project Team

Laura Johnson (Project Officer based at the LSE) left the project in October, 1999 to take up a consultancy post at PricewaterhouseCoopers. Anne Gambles was recruited as the new Project Officer; she joined the team early in January, 2000 and very quickly and effectively established herself in this role.

There have also been changes to project staff based at the London Business School. Lindsay Jones joined the Project Team at the beginning of February, 2000. Lindsay has contributed to the work of the team, her specific tasks have included helping to populate the Resource Description Database with resources and managing the launch of the PIE at the LBS.

Preparations for the launch of the PIE at each of the project's partner sites required a considerable amount of staff time and involved contributions from non-project staff within each library. The University of Hertfordshire is the project's largest test-bed. Unlike the two other project partners, UoH do not have a funded HeadLine post. Nick Goodfellow, a Faculty Information Consultant based within the Library at UoH's Hertford Campus has provided invaluable support with regard to the task of launching the PIE at UoH. He has attended team meetings where relevant, he has provided the project team with current resource information (hence ensuring that the UoH resources are kept up-to-date), he has identified and set up target user groups through liaison with academics and course teams, produced reports on the launch of the PIE at the UoH and planned, organised and taken part in launch/demonstration events for students and staff.

The LBS have had unexpected calls on their staff's time and hence, with the agreement of the Project Board, they invoiced the Project for a half-time post for the period August 1999 to January 2000.

The possibility of funding a part-time post at the University of Hertfordshire to reduce the pressure on library staff at UH was provisionally agreed at the Project Board Meeting on the 11th July, 2000. This proposal was subject to confirmation of the end of year budget and the anticipated under-spend and to confirmation of the anticipated loss of a member of project staff based at LBS (Lindsay Jones) to a new RSLP project. The Project Board agreed that half of the LBS post could be moved to the University of Hertfordshire starting in October, 2000.

System-configuration of resources in the PIE

The project originally planned to implement system imposed configuration of resource presentation based on user behaviour, by retaining feedback based on user's actions. This idea is now rather out-dated. The project has decided not to implement this objective. User study findings suggested that users would prefer to be able to explicitly control the presentation of resources in their PIE themselves, rather than allow the system to impose changes based upon their behaviour. With regard to web-based portal systems the current thinking is that (as far as possible) the presentation of information should be customisable by the user.

Authentication interface with the ATHENS service

The HeadLine Project has been in discussion since 1998 with staff and the NISS Assistant Director responsible for the ATHENS service, with the objective of enabling HeadLine web-portal-based services to use ATHENS as one method of access management. We are pleased to report that, shortly before the end of July 2000, we obtained agreement and the necessary software and information from ATHENS to enable us to proceed with adding this to existing methods of available user authentication.

However, the opportunity for HeadLine to undertake the software development to enable this interface has now missed the available 'window' in our project calendar. We will do our best, in the remaining funded months of the project, to include the development of an ATHENS Authentication-Broker module, but this may not now be possible. ATHENS had also been our planned method for providing 'guest' access to the PIE for most users within UK Higher Education, and we had already diverted some of our own available development resources into devising alternative methods to meet this planned objective.

1.3 Main Objectives for this period

The main objectives for this Phase of the HeadLine Project were outlined in the Project Plan:

Synthesis of hybrid library working model (stage 1)

- production of the resource compendium database in line with user specification
- population of the resource compendium with library resources (all sites)
- consolidation of hybrid library components so far developed into working model
- implementation of working model at institutional sites

Deployment of working model in institutions

- testing of the model by library staff (management and information provision) and users (teaching, learning and research)
- development of the information content, especially from the perspective of subject librarians and teaching staff
- enhancements to the resource base; investigation of including resources not traditionally managed by the library such as software or computerised teaching materials in the resource compendium

Deliverables

- multi-perspective evaluation of the hybrid library working model

Development of feedback mechanisms

- development of methodology for tracking resource use
- investigation of the use of qualitative feedback measures (on-line dialogue, evaluation forms etc.)
- implementation of individual configuration of resource presentation based on user preference/behaviour
- investigation of proactive alerting strategy based on user behaviour

Deliverables

- prototype feedback component

Enhancement of service environment

- ongoing development from Phase 1

1.4 Outputs from the project

The project has produced deliverables in the form of documentation and reports and also prototype software:

Documents

- Newsletter (see Dissemination section).
- Report on the launch of the HeadLine PIE at the University of Hertfordshire and the planned launches at the London School of Economics and the London Business School.
- Report on the launch of the HeadLine PIE at the London Business School.

Software

- The PIE user interface generator (Web portal), and underlying relational configuration database.
- A working RDM (Resource Description Model), comprising a relational database and Web-based maintenance forms.
- The Authentication Broker.
- The EEDD (End-user Electronic Document Delivery) prototype.
- A working Z39.50 client.
- A working Whols++ client (to enable the use of the PIE as a front end to legacy databases).

1.5 Major Successes

During this year of the project major objectives have been successfully achieved in the areas of:

Implementation of Personal Information Environment services

The Personal Information Environment (PIE) interface has become the focus of HeadLine's model for hybrid library services, as apparent to library users. Releases of the service to library staff and end-users have been undertaken at all three partner sites, supported by training materials, guided introductory sessions, and liaison with teaching staff. Two successive versions of the PIE software were released between May and July 2000, with the next release scheduled for the start of Autumn term. Work is in progress on an online registration system to allow interested individuals Internet-wide to try out using the PIE.

Library Resources description

The structured resource metadata model designed during Phases 1 and 2 of the project was implemented in a relational database management environment (PostgreSQL, but using only database-platform-portable functionality) and populated with descriptions of approximately 300 collection-level resources appropriate to the subject focus of target users. Staff at all three partner sites were involved in the collection and assimilation of data. Experience gained in this process, and technical considerations for the implementation of heterogeneous cross-resource searching, have led to the design of a radically revised data model, into which descriptions already compiled will be imported, for use by the next release of the PIE service.

Library User metadata

The modular, infrastructure-independent 'Authentication-Broker' model has been adopted, refined and implemented for the acquisition of metadata about subject-interests and access-rights of end-users of the PIE. This effectively allows the library to take advantage of existing user data to which substantial university management information services resources are typically already committed, avoiding duplication of the same work by library staff. The project has also helped to promote and influence greater 'joined-up' working in this way, between elements of university infrastructure - with the same model and software tools becoming adopted as an institutional standard by the lead partner.

Evaluation of the HeadLine hybrid library model

Detailed recording of staff effort involved in implementation and user support, and collection of qualitative feedback from library staff and end-users has been undertaken as part of the independent roll-out exercises for the PIE at each of the partner institutions. This is being used in a managed process of continuous formative evaluation (identifying deficiencies and desirable additional features) to shape future releases of the software and to influence the types of resource content that are included.

End-user Electronic Document Delivery

A 'discovery-to-access' component was developed by HeadLine to facilitate access by remote users to library content held in print-only form, inter-operating with the RLG Ariel software which is widely used for 'scan-on-demand' delivery between libraries, such as the Lamda Consortium in the UK. Following a trial service to users from a single library, EEDD is currently being piloted between three Lamda Consortium members, and is also cited as an essential element of a proposed new national document access service which has been granted JISC funding.

Dissemination and Communication with the library community

Almost every person directly associated with the project has been involved in representing HeadLine in some way in national and international events or publications for the communities of library providers and academic library users. This brings the dual benefits of promoting the project's view of how library services will (or should) develop, and hearing alternative views and ideas. We have also endeavoured to keep in touch with developments in the wider field of e-commerce and Internet-based portal services. Although this activity consumes significant amounts of project resources, we regard it as essential to ensure that the developmental strands of the project are continually steered by relevant external forces in these rapidly-moving fields.

2. Learning from the process of implementation

2.1 Difficulties encountered

The project team spent a considerable amount of time developing our Resource Description Model from a theoretical point of view. In retrospect, the project should have spent a shorter length of time on the theory and hence developed a working RDM at an earlier stage. The development of a RDM that meets the needs of the project's hybrid library system has been an iterative process. Inputting resources into first version of the working RDM has highlighted problem areas. A second iteration of the working RDM is currently being developed, its release is planned to coincide with the release of PIE version 1.2 in the Autumn term 2000.

2.2 Influence of other projects and the eLib programme

HeadLine has worked with other projects, particularly those in Phase 3 of the eLib programme. The Project Manager attends regular meetings with the 9 other project managers - these meetings keep the managers informed of what the other projects are doing, and provide mutual help and advice in areas of work (e.g. contacting information providers). Dissemination has frequently been undertaken in collaboration with other Phase 3 projects, e.g. talks and the joint eLib Projects exhibition stand at the Institutional Web Managers Conference held at Goldsmith's college, London. This interaction has proved beneficial to HeadLine, in terms of keeping up to date with hybrid library development, sharing resources and ideas and also sharing the work of dissemination (various managers representing the projects at different events, taking flyers from other projects to conferences etc.). The majority of activities that have been undertaken in common with other eLib Programme Phase 3 projects are detailed (in Appendix 1) as Dissemination activities.

eLib Concertation days have also been very useful, again by maintaining contact with other projects and teaching about relevant initiatives in the UK and world-wide.

HeadLine has continued good relationships with the other 'e-library' projects based at the LSE (Decomate 2 and M25 Link) and these have enabled sharing of some work and resources, shared dissemination activities and transfer of good ideas. HeadLine has continued to make contact with other relevant projects in Britain, Europe and other parts of the World with an interest or involvement in common with HeadLine. HeadLine has been communicating with the "MyLibrary" project based at North Carolina State University, specifically with the Project Manager - Eric Lease Morgan. HeadLine will be submitting an article on the PIE for publication in a forthcoming issue of the American Library Association's Journal: *Information Technology and Libraries* (ITAL), for which Eric will be the guest editor.

2.3 Changes made to HL plans and reasons for these changes

As detailed in section 1.2 some changes have been made to our plans in the areas of staffing - specifically with regard to the membership of the Project Team and to the system-configuration of resources in the PIE.

The Project Board has agreed to a proposal to fund a part-time post at the University of Hertfordshire (as mentioned in section 1.2). The launch of the PIE at the University of Hertfordshire required a considerable amount of UH Library staff's time. Forthcoming launches, up-grades and maintenance of resources within the PIE will also require work by UH Library staff. The University of Hertfordshire is the project's largest test-bed. Our experience of launching and maintaining the PIE has shown us that a funded post is required at UH.

The project had originally planned to hold an end of project event towards the end of phase three. Our plans re the end of project event have changed slightly. HeadLine will now be participating in an end of project workshop event that will be presented jointly by all five eLib Hybrid library Projects. This workshop has been provisionally scheduled for the 1st of November at the British Library and will include presentations and demonstration/workshop sessions.

2.4 *Unanticipated outcomes or results*

The SHERLOC shelfmark and facilities locator will be used to facilitate the LSE Library's move back to the Lionel Robbins building. SHERLOC will be updated frequently during the period of the move. This will ensure that users can continue to locate resources and that they are able to plan their work around the inevitable (but hopefully short) periods of resource unavailability.

The End-user Electronic Document Delivery service (EEDD) has been adopted for use by the Lamda Consortium in a multi-site document access pilot service commencing in August 2000.

2.5 *What have we learnt?*

In the process of implementing successive software releases and deploying services for large numbers of academic users, we have learned in particular that additional time and effort are necessary for end-user support, and promotion of service take-up in this environment, even compared with the deployment of commercial systems of similar complexity. This may possibly be a negative effect of the perception or valuation by end-users of a product or service which they receive "for free" (as opposed to a product or service for which they pay for directly).

We have also learned not to under-estimate the time and effort needed to transfer the maintenance and support of such services from specialised project staff to 'mainstream' library or IT support staff. Due to various delays (particularly the 'gap' in staffing the Project Officer post at LSE) it may not prove possible to fully hand-over operation of HeadLine-developed services to staff at all three partner sites before the agreed project end-date of 31st December 2000. The Project Board will therefore be considering alternative plans to enable this to happen.



3. Participation in the eLib programme

3.1 *Role of the eLib programme office*

The staff of the programme office, Elizabeth Graham in particular, have been very helpful in offering dissemination guidelines and advice and in acting as co-ordinators for a number of inter-project events.

3.2 *Scope for co-working between projects*

There has been scope for co-working between projects during this reporting period. HeadLine and Malibu team members participated in a joint meeting on collection Metadata in September, 1999.

There has been scope for collaboration with regard to project dissemination, the proposed joint end of project event will benefit from co-working between the five eLib hybrid library projects. Holding a joint event (rather than individual events) will facilitate a coherent presentation of the hybrid library projects' outcomes and how these will feed into the development of the DNER. The joint event should also ensure a larger audience with a broader range of perspectives.

4. Interim evaluation results

The main areas for evaluation during this period of the project, are listed in the **Evaluation Plan**. The Second Year Annual Report mostly detailed formative evaluation results. The during the current reporting period, the project has developed in the directions identified by the previous formative evaluation.

The project has moved on, rather than reporting on formative evaluation (of which there has been little during this period), the project can now report on the first stages of the summative evaluation process. The results of the summative evaluation have been based upon the launch of the PIE to end-users at each of the partner sites. The following reports on the launch of the PIE have been written:

- Report on the May 2000 launch of the PIE at the University of Hertfordshire and the planned launches at the London Business School and London School of Economics.
- Report on the July 2000 launch of the PIE at the London School of Economics.
- Report on the August 2000 launch of the PIE at the London Business School.

5. Future development

5.1 *Main objectives for the remaining period of the project*

The original (Project Plan) objectives for Phase 3 of the HeadLine Project were stated as:

- Implementation of feedback mechanisms at consortium sites
- Implementation of enhancements/modifications at consortium sites
- Possible extension to other subject areas
- Potential extension to additional sites outside the consortium
- Summative evaluation
- Final reports, seminars and other dissemination activities

Additional objectives include:

- **Development of PIE maintenance tools for library staff**

Development of an administrator's interface within the PIE to enable library staff to maintain and up-date the resources within the PIE.

- **Implementation of an Exit strategy**

To explore the various options available, as detailed in the consultation document that was put before the Steering Committee in November 1999. To implement the Exit strategy.

5.2 *Proposed Changes in overall direction*

Deployment of the working model in institutions

The hybrid library model that the project has deployed has provided scope for the release of further versions of the HeadLine system. We can now manage a programme of more releases than were originally planned, subject to our capacity to do so.

The plan is to up-grade each of the partner sites to the third release to the PIE (version 1.2) during the Autumn term 2000. This version will include search functionality - users will be able to search for resources of relevance to their search for information and they will also be able to search two or more databases simultaneously. It will also include a threaded discussion area within each page. The discussion areas will each be relevant to a particular area of the user's interest and will be searchable. A fourth and final release of the PIE will occur shortly before the end of the project.

Development of feedback mechanisms

Proposed feedback mechanisms for the collection of qualitative data include an on-line questionnaire and focus groups. Development of a more detailed long-term strategy for evaluating feedback from users as they become more mature would be beneficial to the evaluation process and hence to any future development of the PIE.

Postponement of launch of the PIE to students at the LSE

We had proposed to launch the PIE to LSE students on course EC102 during the summer term. However, the oncoming student exams meant that very little time was left to set up and create a PIE for this course. The Project Team, with the agreement of the Board, postponed the PIE launch to EC102 students until the Autumn term (this launch will be in addition to the launch to LSE courses that had already been identified as Autumn term PIE targets). In the mean time, the Project Team set up a PIE for people in the LSE Economics Department (researchers, academics and staff) which was launched during July, 2000.

Re-allocation of staff resources for user support and evaluation

As detailed in section 1.2 of this report, the Project Board agreed on 11th July to reduce the HeadLine funded staff provision at LBS to a 0.5 FTE post, and to fund a new 0.5 FTE post based at UoH, both with effect from 1st October 2000. The project will also seek permission from JISC to allocate a year-end underspend (see Appendix 2 - Expenditure Summary) to funding extensions of

a few months to one or more of the Project Officer posts, to support an amended plan for extension of the implementation & evaluation phase of the project, within originally agreed budget limits for the project.

5.3 *Interim conclusions about the results and implications of the project.*

It would be fair to conclude that the work done so far by the HeadLine Project has had an impact on the overall development of "the hybrid library", both within UK Higher Education and potentially in wider spheres of influence.

The 'personalised portal' model for the end-users view of the hybrid library that we proposed, designed and have now implemented in working, scaleable form as the PIE has attracted considerable interest and positive comment (and perhaps even emulation) from other researchers in the field world-wide.

Our earlier decision to use HTML 'mock-ups' of the PIE, together with 'walk-through' scenarios based on anticipated patterns of use (end-user and library staff maintainer) has proved to be an extremely wise one. This technique has allowed us to gather early reactions from potential users and peer e-library researchers, and to have clearly-defined targets for our own development of the desired working functionality and appearance. This may be a useful design visualisation, prototyping and presentation technique for other JISC-funded projects to adopt.

Our "necessarily more complex" relational model of resource description metadata at collection and holdings levels has now been acknowledged by others (such as the developers of ROADS) as more appropriate today than the simpler 'flat' data models which still prevail in most large-scale applications.

Arguably, the generic concept and structure of the PIE, creating a different, personalised collection of resources for every single individual end-user, together with standards-based metadata initiatives such as those of the Resource Discovery Network, has influenced the design of end-user focussed services well beyond the library field - such as the current concepts for the development of citizen service portals ("UK-Online", previously "My.Gov.uk") by the British Government. Certainly there are wider applications in Higher Education and other education sectors, and this has been recognised by JISC in the approval of new projects within the Distributed National Electronic Resource framework, to commence in the coming year.

Early indications are that our approach to end-user authentication and access management may fit well into developing proposals, lead by the JISC Committee for Authentication & Security, for a UK national resource access management infrastructure.

Individuals involved in HeadLine have continued to participate in a wide variety of activities undertaken collectively by projects funded under Phase Three of the eLib Programme, in several instances taking on the responsibility of leading or co-ordinating major joint initiatives, and we have met or exceeded the targets that we set ourselves in the Dissemination Plan, promoting awareness of the aims, activities and achievements of the Project amongst library staff of the partner institutions, and the wider library community.

We have learned that more work is involved in establishing services provided by HeadLine in end-user communities, and promoting their take-up, and have therefore proposed a re-allocation of staff resources to support this activity, and evaluate user response in more detail than originally proposed.

We are confident that the project will meet all of its' objectives, and yield some originally unexpected benefits as well, in its' remaining months.

Appendix 1 - Dissemination Achievements - August 99 - July 00

Date	Event	Name	Details
01-Sep-99	Meeting	Collection Metadata Meeting	Meeting on Collection Metadata between HeadLine and Malibu team members.
01-Sep-99	Journal	Managing Information	Simon McLeish wrote an article on the HeadLine PIE for the September issue.
07-Sep-99	Workshop	Institutional Web Managers Workshop	Participation/staffing eLib Projects exhibit at Institutional Web Managers conference, Goldsmiths College, London. John Paschoud attended this (as a delegate) and helped with the exhibition, demos of HeadLine and posters etc. HeadLine flyers were also distributed.
10-Sep-99	Conference	Libraries Without Walls 3 - The Delivery of Library Services to Distant Users	This was an international conference organised by CERLIM. Helen Edwards attended and gave a paper entitled: "Helping the Librarian to help the user - the Headline personal user interface". This paper describes the personal user interface (PUI) used by Headline to present resources to users which includes feedback mechanisms to support development of the service in response to user interaction.
20-Sep-99	Visit	Visit by Alan Smith from New Zealand	Alan Smith visited John Paschoud to find out about HeadLine and Decomate.
23-Sep-99	Conference	Scrambling for Safety 3.5	Simon McLeish attended Scrambling for Safety conference organised by the Foundation for Information Policy Research. John Paschoud also attended part of this event.
24-Sep-99	Journal	Vine	Stephen Graham wrote an article about the HeadLine RDM for VINE Issue 117.
01-Oct-99	Newsletter	HeadLine Newsletter: Autumn	Laura Johnson and Simon McLeish wrote the Autumn 99 edition of the HeadLine newsletter , which was based around project research undertaken into portals and the design of the PIE. It was called 'The HeadLine Personal Information Environment'. 1000 newsletters were printed and were sent to a mailing list of about 400, distributed in partner sites and advertised on email lists; they proved very popular as around 60 requests were received for additional copies. It is also made available to users via the HeadLine public Website at http://www.headline.ac.uk/
06-Oct-99	Visit	Visit from Kobe Library	Three visitors from Kobe Library came to see John Paschoud to discuss HeadLine and Decomate - they also had a tour of the LSE Library.
13-Oct-99	Conference	MODELS 9 Workshop	John Paschoud attended and participated in discussion.
14-Oct-99	Seminar	Local Government Association Seminar	John Paschoud gave a paper on application of personalised Web portal e-library models to the delivery of citizen-focused e-government services.
01-Nov-99	Conference	MODELS 10 Workshop	John Paschoud attended, he participated in discussion and gave a paper: "Authentication of users and resources:

Date	Event	Name	Details
			management overview".
02-Nov-99	Conference	Authentication in UK Higher Education	John Paschoud gave a paper reviewing Access Management approaches in eLib and EC projects, at "Authentication in UK HE", held at the Policy Studies Institute, London.
10-Nov-99	Seminar	ASLIB Event: Hybrid Libraries 2	Simon McLeish gave a paper ('Hybrid Libraries and Portals: the Headline Personal Information Environment') on HeadLine PIE at this event, which was organised by the ASLIB Computer Group and held at the LSE. Simon also distributed the Autumn newsletter.
12-Nov-99	Meeting	Bath Profile Concertation Day	Stephen Graham attended the Bath Profile Concertation Day.
24-Nov-99	Conference	Integrate, Co-operate, Innovate	Maureen Wade participated in this conference, which was about Hybrid Libraries and resource sharing.
29-Nov-99	Visit	Visit from University College Dublin Library	John Paschoud talked about HeadLine with Carmel O'Sullivan and Pauline Corrigan.
06-Dec-99	Conference	Online Information 99 conference	John Paschoud gave a paper on Decomate (but relevant to general dealings with publishers etc).
14-Feb-00	Talk	Presentation to LSE Library staff	Anne Gambles gave a presentation on Decomate II and HeadLine as part of the LSE Library's Refresher Sessions. This was an opportunity to give an introduction and overview of the projects, as well as information on their current progress.
01-Mar-00	Talk	Talk at Loughborough University	Anne Gambles gave a talk on eLib and the HeadLine project to Library School students at Loughborough University.
07-Mar-00	Meeting	eLib Collection Level Description Concertation Day	Anne Gambles gave a paper on the HeadLine Resource Description Model.
08-Mar-00	Conference	Irish Universities Information Systems Colloquium	This 3 day annual conference had "Technology in Teaching and Learning: the New Challenge" as its theme, John Paschoud gave a paper about HeadLine.
09-Mar-00	Seminar	Open University Library Research Seminar	Anne Gambles gave a paper at this seminar: "The HeadLine Project: Developing the Hybrid Library".
16-Mar-00	Talk	Talk at Strathclyde library school	Anne Gambles gave a talk on eLib and the HeadLine project to Library School students at the University of Strathclyde.
21-Mar-00	Visit	Visit from Miss Reiko Asanuma	Miss Asanuma is from the Japan External Trade Organisation in Tokyo, Japan. Anne Gambles demonstrated the dummy version of the HeadLine PIE (Pete's pages) and spoke to her about the HeadLine

Date	Event	Name	Details
			Hybrid Library concept.
22-Mar-00	Show	LibTech / ILI-2000: eLib slot	John Paschoud gave a joint lecture at LibTech with Karen Neal of South Bank University. The lecture was titled: "Personal Information Environments and Push Technology".
01-Apr-00	Journal	D-Lib Magazine	Anne Gambles' article "Put yourself in the PIE - the HeadLine Personal Information Environment" appeared in the April 2000 issue of D-Lib Magazine (vol 6(4)).
05-Apr-00	Workshop	Library Association Workshop	This LA workshop was titled "library.com - we're delivering service!" Maureen Wade gave a paper: "Hybrid Libraries and the HeadLine Project" and demonstrated Pete's PIE pages.
07-Apr-00	Talk	Talk at King's Norton Library, Cranfield University	Anne Gambles gave a presentation on the HeadLine project and demonstrated Pete's PIE pages.
12-Apr-00	Talk	Talk at Robert Gordon University	Anne Gambles gave a talk about eLib and the HeadLine project to Information and Library Students within the School of Information and Media.
13-Apr-00	Conference	British Business Schools Librarians Group Conference	Anne Gambles gave a paper on the eLib and the HeadLine project at the BBSLG's annual conference. She also demonstrated Pete's PIE pages.
17-Apr-00	Meeting	Presentation to the CAUL	Anne Gambles gave a presentation on eLib and the HeadLine Project to members of the Council of Australian University Librarians.
17-Apr-00	Seminar	SCURL eLib seminar	This event was for university chief librarians & senior managers. The programme covered how hybrid-libraries & clumps could be implemented in their institutions; strategic issues; issues of implementation (of e-lib services). John Paschoud gave a paper: "Linking the Hybrid Library into MIS and Information Strategies".
05-May-00	Talk	University of Hertfordshire - talks to target groups of students.	Anne Gambles and Nick Goodfellow demonstrated the PIE to students on target courses at the University of Hertfordshire.
10-May-00	Visit	Open University Library visit re metadata	Richard Stubbs, Juliet Baxter, Michelle Barnes and Anne Ramsden of the Open University Library visited the LSE Library. Anne Gambles talked to them about what HeadLine has been doing in the area of metadata.
22-May-00	Talk	Presentations to LSE Library staff	Anne Gambles gave talks to Library staff LSE Library's Refresher Sessions to up-date staff on HeadLine's progress with the PIE. She demo'd Pete's pages and allowed hands-on use of the live 1.0 version of Herts PIE.
02-Jun-00	Talk	University of Hertfordshire Library - HeadLine talk and PIE demonstration	Anne Gambles demonstrated Pete's PIE pages and the live 1.0 Herts PIE to senior library staff at the University of Hertfordshire.

Date	Event	Name	Details
12-Jun-00	Seminar	LSE Academic Staff Development Programme	John Paschoud gave a presentation: "Electronic Library initiatives in the School: HeadLine & the Personal Information Environment".
30-Jun-00	Seminar	International Graduate Summer School - Aberystwyth	Visit by delegates on the International Graduate Summer School in Librarianship and Information Science. Anne Gambles gave a presentation "HeadLine and the Personal Information Environment".
30-Jun-00	Workshop	Vienna workshop on Authentication	This was a Cultural Heritage Projects Concertation Event. It included a workshop on Authentication in which John Paschoud gave a presentation on Decomate II (also of relevance to HeadLine) under the heading: "Authentication and authorisation issues".
10-Jul-00	Visit	Visit by Frank Moretti of Columbia University	Frank Moretti (Executive Director of the Columbia Center for New Media Teaching & Learning) visited the LSE to discuss synergies with developments at his own institution, and added to his schedule a visit to see the prototype PIE.
10-Jul-00	Meeting	Visit from Hybrid Library Project at Leeds	Bill Jupp (Technical Officer) and Claire Ryan (Hybrid Library Project Officer), Leeds University came to visit HeadLine to discuss the technical side of creating PIE's and transferable technology. They were also interested in how HeadLine liased and communicated with academics throughout the project, what their input has been and what they think of the finished product.
19-Jul-00	Talk	Talk to LSE Library staff	Anne Gambles ran four half hour sessions in which she demonstrated the 1.1 LSE PIE to LSE library staff. Attendees were shown how to use their PIE and were able to practice customising their PIE pages.
26-Jul-00	Talk	University of Hertfordshire Library - HeadLine talk and PIE demonstration	Anne Gambles demonstrated the 1.0 Herts PIE and the 1.1 LSE PIE to UH Library staff and to Library staff from Cranfield University (the latter had previously attended an earlier talk held at Cranfield University).

Appendix 2 - Expenditure Summary

FY 1999-00 Out-turn	Anticipated	JISC grant	Actual	Variation (against Anticipated)	Variation (against JISC grant)
Staffing	£92,866		£85,914	£-6,953	
Travel & subsistence	£2,000		£1,617	£-383	
Publishing & dissemination	£4,333		£2,159	£-2,174	
Recurrent subtotal	£99,200	£100,617	£89,690	£-9,510	£-10,927
(b/fwd from 1998-99)	-----	£20,046			£-30,973
Equipment & software	£3,917		£572	£-3,345	
Capital subtotal	£3,917	£0	£572	£-3,345	£572
(b/fwd from 1998-99)	-----	£0			£572
Total	£103,116	£100,617	£90,262	£-12,855	£-10,355
				c/fwd to 2000-01:	£-30,401

Notes on the Expenditure Summary

The HeadLine Project Proposal that was accepted by JISC cast projected expenditure under the four recurrent and two capital headings listed, over the three (January - December) calendar years for which the project will run. JISC funding was approved on the basis of recasting this unequally into the four (August - July) JISC financial years over which the project spans, under just two aggregated budget heads for recurrent and capital funding, but totalling the same as the Proposal over the three-year period. This results in the project appearing to be over-funded in the early stages, but correspondingly under-funded in its' second and third years. It is therefore more prudent and informative to monitor actual expenditure against the Proposal profile than the funding profile used by JISC.

Anticipated expenditure has been calculated for the twelve month period covered by this Annual Report pro-rata from the amounts under each budget head in the Project Proposal (5/12 of 'project year' 1999, and 7/12 of 'project year' 2000).

The variation between Actual expenditure and Anticipated expenditure shows a net **underspend** of **£12,855** on the overall adjusted budget projection of £103,116 during this financial year.

A total underspend of £20,046 of the JISC grant made in 1998-99 was brought forward with JISC approval. The net variations between Actual expenditure and the JISC grant for the 1999-2000 financial year (including brought forward amounts) therefore show the amounts available to be carried forward into the financial year 2000-01. The primary reasons for this expenditure below profile are unanticipated 'gaps' in staffing at LSE and LBS, which are addressed in the body of this Annual Report.

Permission will be sought from JISC for this virement (totalling £30,401), together with approval for an amended plan for extension of the implementation & evaluation phase of the project, within originally agreed budget limits.