

JISC DEVELOPMENT PROGRAMME

REVISED PROJECT PLAN

Project acronym	DocuSend
Project title	DocuSend: the one stop, integrated, document delivery broker service
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End date	30 October 2004 (originally 23 April 2004)
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Document history

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1.0 Introduction

The DocuSend Project commenced in late April 2001 and was scheduled to finish in May 2004. However, the departure of the Project Manager to another post in October 2002 led to the Project operating in a standby mode until the appointment of a replacement Project Manager in May 2003. This delay in filling the post led to a need to extend the term of the project.

Following approval from JISC to extend the term of the Project to the end of October 2004 and with the agreement to reprofile the Project to demonstrate a 'proof of concept' rather than a full service, it was agreed that the Project Plan should be revised to reflect these changes and submitted to JISC by 31 July 2003.

While the broad aim and overall objectives of the Project remain the same, every opportunity will be taken in the remaining period of the Project to make use of the latest developments that have occurred since the Project commenced. For example, the recent availability of portal technology from Fretwell-Downing has provided an opportunity to establish open linking from DocuSend to suppliers. Similarly, the latest upgrade of VDX from Fretwell-Downing has allowed the Project to start trials of delivery of documents to a designated web address and so to the end user. This functionality has only recently been made available.

In addition, early discussions with one publisher and an information intermediary agency suggested that there were likely to be difficulties in making available the range and diversity of published material required for full service. However, it was suggested that a project which demonstrated proof of concept, rather than an operational service, would probably be more acceptable to publishers.

The recent publication of the report 'Single article supply' by Peter Brophy has generated interest and discussion of the key concepts underlying document supply and given support to the work being undertaken by DocuSend.

The Project team will work with JISC and other projects in pursuing the recommendations of the Brophy report, and this revised plan addresses the pertinent recommendations from Brophy. In the case of e-prints, the project will carry out some desktop research in this area and make an assessment of what action is required.

This revised plan reflects the new emphases of the Project and makes the necessary changes to the text of the original document to indicate where events have overtaken the earlier plan. The timeline has been updated to reflect the current situation.

1.1 Background and broad aim of DocuSend

Information provision to the HE community in the UK is at a crossroads. A large amount of work has been done, with much progress made, on bringing a wide range of information sources, both metadata and full text, to the electronic reach of information users, whether researchers or teachers or students. The technical infrastructure in HE (and increasingly within FE) is pervasive, reliable and under constant dynamic development. In recent years much attention has been paid to the need for agreed standards to ensure optimum interoperability.

Yet the "information landscape", to borrow a phrase from UKOLN, is a confusing place for the user, full of signposts and arrows, but also frustratingly fraught with dead ends where U-turns need to be made and the search has to begin all over again. Users have found that they need a plethora of passwords to access various

databases. They need to familiarise themselves with a new interface every time they access a new resource. They have to waste time re-keying the same search terms each time they look for an item in more than one database. They find information about existing materials and resources, and maybe even location information too, but they are still often far from actually handling the source material they want. For that, there is a need to arrange either physical access to the resource at the identified location or an inter-library loan request that will (eventually) bring the resource to them.

The overwhelming need now is for integration of the services in ways which help the user to make more efficient and cost-effective use of the rich resources available and which extend the potential user community for any given service through the simplification and integration process, thereby creating better value for money all round.

DocuSend will contribute to the JISC Information Environment as an infrastructure service broker by creating a one-stop document delivery service for handling journal article requests which is hospitable to being accessed via other portal and broker services. DocuSend will deliver requested documents by electronic means, wherever possible.

The goal is to test and work towards a cost-effective, quick, integrated docdel service requiring minimum intervention from the initial stage of the end user requesting the item to the same end user receiving the item. Little progress appears to have been made in turnaround times from request to delivery over the past thirty years, and this is probably due to the number of steps in the process and the lack of interoperability between those steps. If ever there was an argument in favour of maximising the electronic and minimising the manual, this must be it. Automatic portability of search terms (to avoid re-keying), and further down the line end-user requesting, are key features of DocuSend.

In addition, through the JOIN-UP¹ cluster, DocuSend will be developed specifically to ensure it is inter-operable with a range of other search and locate services (initially with the Xgrain² and ZBLSA³ projects and the British Library's **zetoc**⁴ service).

Wherever possible, DocuSend will supply an electronic version of the requested article. This may be via a service connected to publishers' electronic article files, or it may be via electronic document delivery services which use printed originals and scan the articles for electronic transmission. Where no electronic version or service is available, the DocuSend one-stop service will forward the request to a conventional inter-library loan supplier of the requester's choice.

At the requesting end, it is expected that inter-library loans staff in libraries will request the article using a DocuSend web form (though other media/formats for requesting will be permissible). Where possible the request will be automatically downloaded from a library's ILL management system into the DocuSend web request form. However, DocuSend will also be ready to test direct end-user requesting, allowing users to import automatically the request/bibliographical details from other electronic sources, for example JISC data services/portals, or online abstracts and indexes, without the need for re-keying.

¹ <http://edina.ac.uk/projects/joinup/>

² <http://edina.ac.uk/projects/joinup/xgrain/>

³ <http://edina.ac.uk/projects/joinup/zblsa/>

⁴ <http://etoc.mimas.ac.uk/zetoc/>

At the delivery end, the article will be delivered electronically where circumstances permit. In the first phase of the project, delivery will be to library interloans departments, as with print document delivery services, and as with the Lamda⁵ electronic service as it is currently configured. DocuSend also aims to test direct end-user desktop delivery, initially by delivery in the form of a TIFF file to a nominated secure filespace. The user will then be notified of the delivery of the document by email, informed of the URL from whence to retrieve the item, and issued with the appropriate access information (user id and password) to enable him/her to do so.

2.0 Aims and objectives

DocuSend will bring together a wide variety of docdel services in an integrated one-stop service, transparent to the user

There is a huge range of journal article resources available to HE in the UK, both in terms of the printed volumes contained in library collections, including of course the BLDSC, and in terms of the electronic content available through JISC data services, nationally negotiated e-journal deals, third party electronic content suppliers, and journals publishers' own original electronic databases. By offering a one-stop service for journal articles, DocuSend will bring together the print and the electronic worlds in the service of users, starting with the Lamda supply libraries and extending outwards, without the users needing to know about the actual source of the supply. This extension beyond Lamda of DocuSend's supply communities, as though by increasing circles, is discussed in more detail in section 3.0 below.

The announcement to go ahead with the SUNCAT programme was made after the DocuSend project started. The project will pay careful attention to the ongoing development of SUNCAT over the remaining period of the term of the project. As these developments take place, the project team will look at necessary adjustments to the project plan, but as there is still some uncertainty about the timetable there has been no adjustment to the Workpackages at this stage.

DocuSend will permit requesters to choose from a range of supply methods and provide a request profile service to customers

There will be no need for the requester to search union lists or select a supplier; DocuSend will do that automatically for them. It will be capable of selecting and delivering according to pre-expressed conditions laid down by the requester. For example a requester can present a profile (which will be stored electronically and will be capable of easy modification if required) which prefers one supplier above another, depending on cost, speed of delivery, or other suitable criteria.

DocuSend will test the potential for end-user requesting

The ultimate in one-stop shopping for journal articles for users would undoubtedly be the opportunity to send a request from the desktop, either keyed in from scratch by the user or electronically transferred to the DocuSend web request form from another electronic source (e.g. via Xgrain or a subject portal). There will be a number of obstacles to be overcome in achieving this objective, from copyright issues to organisational and management issues for the library's ILL department, and from issues of user authentication and eligibility to cost control and user payment. DocuSend will work with other appropriate agencies in the UK and internationally,

⁵ <http://lamdaweb.mcc.ac.uk/>

both existing and future, in order to address and where possible resolve these issues.

DocuSend will support and underpin cross-searching of databases by linking docdel requesting to a number of JISC initiatives already established, under way, and awaiting future development

Bibliographical details will be automatically transferable on the desktop from JISC services such as EDINA⁶ and BIDS⁷ or from subject gateways such as SOSIG⁸, into the DocuSend web request form. Under the JOIN-UP cluster, DocuSend users will also potentially be able to move seamlessly from searching abstract and indexing databases via Xgrain to requesting document delivery. The Lamda document delivery service, which has been developed from a successful JISC-funded eLib Phase 1 project and which currently has over 80 customer sites, will be used by DocuSend to provide electronic versions of printed article materials where available.

These objectives will be met by:

- Working with the project's identified software supplier to develop and implement software which will support the DocuSend's complex routing and management information requirements
- Building a consortium of content supply partners, initially through linkage with Lamda supply libraries which will subsequently be extended to include non-Lamda HE collections, learned societies, commercial publishers, etc.
- Working with providers of Discover and Locate tools, such as bibliographic databases, JISC services and subject portals, to develop the capability for direct end-user requesting and delivery, to test that facility and to implement as appropriate
- Working with other projects in the JOIN-UP cluster to provide end-to-end service through the Discover/Locate/Request/Deliver spectrum
- Developing a continuation strategy to address the requirements of scaling DocuSend up into an operational service

To sum up, DocuSend will support JISC's aim of integrating access to resources, cross-searching of databases, and adding value to interloans all in one service; this vision will be further enhanced by DocuSend's participation in the JOIN-UP cluster.

3.0 Overall approach

The extension of DocuSend to include its chosen supply communities may be thought of as a series of concentric circles extending from a central point. Initially, the automated features of the VDX software will be used to overlay the routine checking currently required by the union list of the Lamda supply libraries. It should be noted that a full account of the outline DocuSend VDX functionality is contained in the project document *DocuSend VDX requirements* which is included in this plan as Appendix A.

3.1 DocuSend core functionality 'walk-through' and workplan description

Requests will be entered into DocuSend by requesting libraries without the current need for the requester first to identify and choose a location from the Lamda union

⁶ <http://edina.ed.ac.uk/index.shtml>

⁷ <http://www.bids.ac.uk/>

⁸ <http://www.sosig.ac.uk/>

list. The VDX software will match the request to the list apparently sequentially, but actually taking load balancing into account. VDX will also assign requests in compliance with the requester's preferred supplier profile, if this has been activated. When a supply library that meets these criteria has been identified, a system message will be sent to the requester informing the library of the destination of the request. Personnel at the chosen supply library, logging on to view requests which have been allocated to their library, will be offered the option to accept or reject incoming requests.

Accepted requests will be moved to the supply library's Ariel workstation, and an automated change will be made to the request's status to inform the requester that the request has been accepted. Rejected requests will be assigned by DocuSend to an alternative supplier within the consortium. If no alternative supplier can be found from within Lamda, the request will ultimately be routed to a conventional interloan supplier, such as BLDSC or BMA. The requesting library will be notified of this outcome.

The accepting supply library will use Ariel document transmission software to scan and deliver the requested documents to the requesting library's Ariel workstation. An alert will be sent to the requester notifying despatch. The requesting library will finally print the document and deliver it to the end user, as is currently the case with Lamda.

The above account represents the bare bones of the initial DocuSend business process. Within its initial work with the Lamda consortium, DocuSend will also address end-user delivery and end-user requesting.

In end-user delivery, the supply library will deliver scanned requests as TIFF files back into DocuSend. The VDX software will then deliver the file using FTP, not to the requesting library's Ariel workstation but to a designated secure webspace. VDX will send a user alert to the patron which will include the URL to which the article has been posted, and authentication (user name and password) to enable the patron to access that particular article. The document will be retained for a number of days before automatic deletion (whether accessed or not) in case of delivery problems such as network failure or printing difficulties. In end-user requesting, patrons will be able to enter their own requests directly into the system; either *ab initio* or imported from Discover and Locate tools such as commercial databases or component JOIN-UP projects. In order to manage demand, in addition to being subject to appropriate access and authentication procedures, end-user requests will also be mediated by local library personnel who will decide whether or not the patron's library is prepared to stand the cost of obtaining the request.

The most important deliverable of this phase of the project is the fully-working request and deliver functionality as described above. As previously noted (in Aims and objectives) DocuSend's principal outputs will be the working business processes at the end of each stage of the project's development. The success of each business process, as the project progresses, will of course be subject to review by the Management Group and Steering Committee.

DocuSend may be seen as an iterative project in that, once it has been shown to deliver the functionality required by Lamda, the project will be rolled out to wider supply constituencies and to mesh with other service providers in the information landscape. Information from frontline staff on such issues as operational usability (does the system work?), workload (does it ease or add to the burdens on interloans staff?), service enhancement (can a wider range of document supply sources be offered because of DocuSend?), value added (cost/performance ratio compared with other services) and system compatibility (how well does DocuSend mesh with other

systems?) will do much to inform the continuing development of the project in terms of interoperability, scalability and sustainability. Furthermore, individual members of the supplying libraries will act as links to their patrons to enable the project team to gather evaluative data on end-user functionalities. Such information will ultimately enable the project to conclude with a continuation strategy which is based to the optimal degree on sound practitioner evidence.

After the completion of the initial work with Lamda supply libraries, DocuSend will be extended to a range of non-Lamda libraries. These libraries will be drawn from UK higher education institutions and electronic delivery will continue to be a focus of attention. Selection of libraries, and invitations to participate in the project, will be put in hand in parallel with the closing stages of the work with Lamda. In order to take part in DocuSend, the libraries' management systems will need to present a Z39.50 target which can be interrogated by DocuSend and which presents holdings statements in OPAC1 format. After inclusion of the selected new Z39.50 targets into the DocuSend system configuration, the functionality testing begun with the Lamda sites will be extended to the new participants; individual function followed by entire service chain. Particular attention will be given to DocuSend's interaction with the combination of a consortium union list on the one hand (Lamda) and a range of discrete Z39.50 targets on the other (non-Lamda libraries).

As before, the principal output of this phase of the project will be a fully-functioning Request and Deliver chain which can be demonstrated to be interoperable with Lamda and non-Lamda sites. The functionality will be subject to review by the project Management Group and Steering Committee.

After the inclusion of a range of non-Lamda libraries DocuSend's supply resources will be expanded by the participation of commercial information providers that are willing to act as supply sites. Most of this work will take place in the final year of the project. However, selection of and initial discussion with suitable providers has begun and due attention will be given to the highly commercially sensitive nature of the issues involved.

In carrying forward this aspect of the Project, an appreciation of earlier related projects, e.g. EASY, will be borne in mind.

Two areas of research will receive particular emphasis in this phase of the project: interoperability, and management issues. In respect of interoperability, the interaction of the DocuSend software will be closely scrutinised. It is to be expected that the server architecture used by commercial providers demonstrates a far greater degree of heterogeneity than the project is likely to have encountered among academic library systems. Furthermore, management issues (such as access, authentication and billing) raised by the inclusion of access to rights-protected material in DocuSend are likely to require extensive exploration if the findings of the project are subsequently to be scaled up into an operational service.

Once more, after this third iteration of the core VDX functionality, DocuSend's performance will be reviewed again by its Management Group and Steering Committee.

It is hoped that the iterative approach to the extension into three widening circles of the core supply-side functions of the project is clear from the above account. In addition, DocuSend will also interoperate with a wide range of Discover tools (both publicly and commercially funded) in order to extend its delivery functions to a still wider audience. These tools will include commercial databases (such as Web of

Knowledge⁹ or Cambridge Scientific Abstracts¹⁰), one or more of the Research Discovery Network portals and hubs (such as PSigate¹¹ or SOSIG) and the constituent projects of the JOIN-UP cluster. Docusend's role within these tools would be as an embedded delivery medium, conceivably in tandem with other, extant, document ordering services: a hyperlink within the interface of each Discover tool would take the user to the Docusend request screen, optionally without the need to re-key retrieved bibliographic records. Issues which will require exploration in this phase of the project will include:

- Interoperability – importation into Docusend of records from a wide variety of different systems
- Access and authentication – at institutional and patron level
- Local mediation of service – so that local interloans personnel are informed of and can regulate demand
- Management information – for requests routed outside the Docusend “core”.

Beyond the preceding outline description of the principal executive workpackages a number of pan-project activities have been included in the workplan. In addition to those pan-project components which are required by the JISC Office (e.g. evaluation and dissemination strategies), some pan-project strands have been included because they draw on the project team's experiences of similar measures in eLib Programme projects, where they were found to be beneficial.

3.2 Technology watch

Docusend will act alone and in concert with the other JOIN-UP cluster component projects in mounting a technology watch throughout the project. As part of JOIN-UP, Docusend's use of the commercial VDX software from Fretwell-Downing will render the project well placed to mesh new technical developments into the cluster through the continuing development of this software.

Proper to Docusend itself will be activity to ensure that the project includes in its one-stop service as many different and complementary journal article supply services as possible, including new ones which arise, with the emphasis on electronic transfer of information and delivery in electronic format wherever possible. In particular, given Docusend's early direction towards Z39.50 targets (Lamda and non-Lamda supply libraries) Docusend will, in addressing interoperability issues, monitor and respond to changes in best practise in cross-searching protocols. For example, since the project began, the project team has noted the increasing support evident for the use of the OpenURL standard for web-transportable bibliographic metadata, and notes that, in some quarters, Z39.50 is already becoming thought of as a legacy protocol.

3.2.1 Accessibility issues

As part of the technology watch Docusend will ensure that due consideration is given to accessibility issues, particularly in respect of users with visual impairment. In doing so, Docusend will consider the work of the Centre for Research in Library and Information Management. CERLIM has established itself as centre of excellence in visual impairment accessibility through landmark projects such as REVIEL¹² (electronic library resources for visually impaired users, funded by BL and JISC),

⁹ <http://wok.mimas.ac.uk/>

¹⁰ <http://www.csa.com/>

¹¹ <http://www.psigate.ac.uk/>

¹² <http://www.mmu.ac.uk/h-ss/cerlim/projects/reviel.htm>

Electronic Access for All¹³ (best practice in accessible websites, funded by DISinHE) and NoVA¹⁴ (non-visual access to digital library interfaces, funded by Resource). Furthermore, Docusend will promote awareness and use of shareware applications such as ReadPlease 2000¹⁵ and DocMorph¹⁶ among stakeholder groups. These products can assist visually impaired users of electronic information by file conversion and voice synthesis. DocMorph is especially suitable for use with files delivered by Ariel.

3.3 Copyright watch

The copyright watch function in Docusend will be principally discharged as part of the shared functions of the JOIN-UP cluster, as is indicated in the original cluster proposal document *JOIN-UP: a collaborative contribution to the DNER*. Copyright and licensing issues will have a significant effect on all the projects in the cluster, and by monitoring changes in legislation and practice at cluster level two advantages will accrue. Firstly, the costs involved will not fall upon single project funds but will be resourced from joint contributions. Secondly, information will be shared across the projects on a managed basis for maximum mutual benefit.

Developments following the introduction and implementation of the European directive will be monitored, as will access rights issues including fair use, authentication, authorisation and license negotiations with publishers. An external authority on copyright and related issues may be approached to assist with the copyright watch.

3.4 Continuation strategy

The rate of change within the document delivery market during the last few years is expected to continue, and accelerate, during the remainder of the term of the project. Therefore, it is not appropriate to be too prescriptive over Docusend's continuation plan. Nevertheless, Docusend will begin at an early date to consider strategies to plan a business case for a potential service model after the end of project funding. (This will be helped and informed by partners' experience of the successful transition of Lamda from project funding to independent, self-financing status). In addition, the possible availability from JISC of the services of a business analyst will be invaluable in this work. This process will start in the first year of the project and will be reviewed and updated regularly in response to developments. To achieve this, the project will include ongoing analysis of the market (actual and potential) and will include a price sensitivity analysis to help inform Docusend's exit strategy. This market analysis will be intensified during the final six months of the project. The Lamda service employed various approaches (surveys, customer feedback etc) to assist its own continuous development. Feedback from these processes will also be fed into Docusend.

Concurrent with market analysis, the project team will produce a clear statement of the future sought for Docusend, and the Steering Committee will be invited to contribute to this process. Three charging models, *inter alia*, will be investigated:

- The implications of charging a levy on content suppliers for use of Docusend services

¹³ <http://www.disinhe.ac.uk/library/article.asp?id=34>

¹⁴ <http://www.mmu.ac.uk/h-ss/cerlim/projects/nova.htm>

¹⁵ <http://readplease.com/>

¹⁶ <http://DocMorph.nlm.nih.gov/docmorph/default.htm>

- The implications of charging a levy on requesting institutions for use of DocuSend services
- The implications of charging end users direct for access to journal articles delivered as and when DocuSend is able to offer direct end user requesting and delivery

Once the agreed vision has been articulated, a strategy will be designed to secure it. The strategy will be based on sound business planning principles and will include three main components: Market, Operation and Finance. The operation of these components is discussed in more detail in the task descriptions for WP12.

4.0 Project Consortium

The consortium members already have a proven track record of working together and have been notably successful consortial bidders in post-Follett activities. The partners collectively can demonstrate substantial experience of managing large, consortial projects and, through Lamda, of the successful transition to an independent, self-financing service.

4.1 Consortium partners

The project consortium consists of King's College London (KCL) as the lead site, together with the supply libraries of the Lamda consortium and EDINA as partners. Anne Bell, University Librarian at the University of Warwick, is the Project Director. The Lamda consortium comprises the libraries of ten UK universities, each of which nominates a member as its representative on the Lamda Board. A subset of the Board is represented on the DocuSend Steering Committee.

DocuSend will build substantially on the development work done by Lamda in its four-and-a-half year existence, and on Anne Bell's previous expertise there gained as former chair of the Lamda Board. King's was also the lead site for a relevant eLib Phase 3 hybrid libraries project, Malibu¹⁷, which brought integrated services to the desktop for humanities users. Anne Bell herself has considerable project directorship experience leading Lamda in its critical phase of transition from project to service and also being director of Malibu.

Other Lamda partners are, or have been, involved in related projects such as the HeadLine¹⁸ hybrid libraries project, and the RIDING¹⁹ and M25²⁰ Link eLib Phase 3 large-scale resource discovery projects. Between them, the Lamda partners also have considerable project management experience across a wide range of JISC initiatives including consortial and cross-sectoral projects.

The addition of Edinburgh Data and Information Access (EDINA) at the University of Edinburgh, one of the three UK JISC datacentres, as a project partner brings to DocuSend the advantage of a partner in common with the three other projects in the JOIN-UP cluster: Xgrain, ZBLSA and **zetoc**. Originally EDINA discharged the technical functions of hosting and providing facilities management for the DocuSend server. This was to be under the control of a Technical Officer to be appointed to the project, but repeated failure to find a suitable candidate for this post led to the

¹⁷ <http://www.kcl.ac.uk/humanities/cch/malibu/>

¹⁸ <http://www.headline.ac.uk/>

¹⁹ <http://www.shef.ac.uk/~riding/>

²⁰ <http://www.m25lib.ac.uk/M25link/>

technical aspects being transferred, with the full cooperation of EDINA, to FDI under a managed service contract.

4.2 Other participants

Fretwell Downing Informatics (FDI), who have a long track record of work with electronic library projects, will be contracted to supply the technical infrastructure and software management that will underpin this project. The consortium has concluded that FDI are the leading developers of the integrated inter-library loan software required for this project. The software product identified as being suitable for DocuSend's needs (subject to adaptation by the inclusion of bespoke functionality as specified by the project team) is FDI's Virtual Document Exchange (VDX). This software, which is based around an Oracle relational database running on a UNIX platform, has already been successfully deployed in a number of relevant applications, most notably the eLib Phase 3 AGORA²¹ project.

5.0 Project direction and management

As noted in the consortium description, (see section 4.1 above) the Project Director is Anne Bell, University Librarian at the University of Warwick. The full-time Project Manager is Gordon Bower, who has extensive experience in project work here in the UK and in his native Australia. He has overall responsibility for the day to day management of the project, including financial management, and will work closely with other project staff to ensure project tasks are clearly defined, allocated, implemented in timely fashion and appropriately monitored.

Technical expertise has been made available through outsourcing. One or more contractors may be tasked to provide the required skills at any one time, and agreements made in this respect between the project and contractors will be subject to period review. External contractors will have responsibility for the technical work necessary for the development and implementation of the project, and management of the DocuSend server and software has moved from its original location with EDINA to Fretwell-Downing.

5.1 Project Management Group

The Project Management Group confers on the day-to-day direction of the project. The Project Management Group consists of the Project Director, the Project Manager and David Whitehurst, the UMIST representative in the consortium. The Project Director and Project Manager are in contact approximately weekly by telephone, and the Management Group meet in full, face to face, approximately once per month.

The reporting structure of the project will be linear: the Project Manager will report to the Project Director, and by extension to the Project Steering Committee. The composition and role of the project Steering Committee, and of the other groups which will be formed within the project, are discussed in detail in sections 9.0 to 9.2 below.

5.2 Control and escalation mechanisms

In order to avoid misunderstandings on either side, agreement was reached with Fretwell Downing on a number of control mechanisms were written into the contractual arrangements between DocuSend and FDI. These include the following:

²¹ <http://hosted.ukoln.ac.uk/agora/>

- FDI will be asked to confirm (in writing) their earlier assurances that they are able to provide the specified service deliverables, to a timetable to be agreed, within cost
- That timetable will indicate when escalation procedures will be implemented, (and the nature of those escalation procedures), for any deliverables which are not completed on time
- The schedule of payments to FDI will be phased; full payment will not be made until all required deliverables are implemented
- A named contact at FDI will be required to ensure regular liaison between project staff and FDI. The named contact will also attend meetings of the Project Steering Committee, at the invitation of the Committee
- The Project Manager will report regularly on progress against timetable to members of the Steering Committee both at, and between, Steering Committee meetings

6.0 Overall project structure

6.1 Executive workpackages

The first executive workpackage (WP6) encountered in the detailed plan is concerned with the technical foundation of the project, and should be seen as essential preparation for all that follows.

The heart of DocuSend will be the project's work in extending an accessible, easy to use, one-stop, integrated document delivery service to users in UK higher education which draws on three groups of supply-side stakeholders: existing Lamda supply libraries, non-Lamda HE libraries and commercial content providers. These three groups may be considered in terms of concentric circles of content of widening diameter (as noted in section 3.0 above). DocuSend will be rolled out to draw on them in sequence as the core functionalities are tested, implemented and extended (WP7-9).

It is in these workpackages that the project's approach to deliverables can most clearly be seen. DocuSend's intention is to demonstrate proof of concept, by the end of the project, of its capability to act as a national gateway for docdel requests. It will be rooted in best practice, responsive to patrons' and practitioners' needs and have the potential to be further developed into an operational service. To do this, DocuSend will, for much of its early work, draw on the experience of LAMDA. Rather than a commitment to a heavy reporting overhead, DocuSend's deliverable outputs will therefore be demonstrative of operational functionality, subject to validation by the stakeholder groups involved at each stage, and to review by the various standing project bodies. These deliverable outputs are tied to milestones at intervals throughout the project.

This approach will be continued in DocuSend's user-side development. The project will move from mediated requests for academic patrons to end-user requesting via the DocuSend interface. Beyond this, the project will seek to demonstrate DocuSend's potential as a request and delivery medium within "third party" Discover and Locate services such as commercial databases and the JISC/RDN portals (WP10-11).

6.2 Generic workpackages

The detailed plan contains a number of pan-project workpackages which are generic to projects of this type. Most extend throughout the entire duration of the project, and relate to internal management and to the requirements made of the project by the funding body. These workpackages include project management (WP1), dissemination and evaluation (WP2-3), liaison between the project and its funder (WP4) and two areas of ancillary study (WP5). Workpackage 12 will be concerned with the preparation of the post project strategy.

7.0 Detailed project plan

A detailed schedule of the workpackages and component tasks begins overleaf.

Workpackage number: 1

Workpackage title: Project management

Partner responsible: KCL

Other partners involved: Lamda

Start date: Month 1

End date: Month 36

Objectives and brief description of work: To co-ordinate, manage and administer the project in an efficient and effective manner. To ensure that the project achieves its aims and implements its workplan by providing the framework for co-ordination of the activities and contributions of the partners and for meeting formal project management requirements.

Quality assurance & review: Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Project plan, project team in post, formation of Steering Committee.

Task descriptions

Task	Title	Partners	Description
1.1	Project plan	KCL	To prepare the project plan in compliance with the model published by the JISC Office, taking into account potential for contributions and suggestions from consortium members.
1.2	Project personnel	KCL	To recruit and appoint the personnel required to undertake the project to completion, specifically including the Project Director, Project Manager and any staff recruited or contracted to provide technical support.
1.3	Project Steering Committee	KCL Lamda	To form and put in place a Project Steering Committee to oversee all aspects of the project and to provide strategic direction, taking into account any technological, legal, commercial and other practical changes which impact on DocuSend during the life of the project.
1.4	DocuSend suppliers' group	KCL Lamda	To form and put in place a consultative group drawn from the document delivery/ILL staff of the Lamda supply libraries. This will be an informal group, which may be formalised at a later stage and it will contribute to the project from the perspective of front-of-house service operation.
1.5	Project monitoring	KCL Lamda	To monitor project progress at day-to day and milestone-to-milestone levels in order that the project conforms to the workplan, both in terms of direction and use of resources. To retain a project archive as part of this process.

Workpackage number: 2

Workpackage title: Dissemination

Partner responsible: KCL

Other partners involved: None

Start date: Month 1

End date: Month 36

Objectives and brief description of work: To disseminate the interim and final outcomes of the project effectively in appropriate local, national and international fora. Liaison with other JISC projects will be sought, as will input from other experts active in the field. Dissemination, where appropriate will include reference to the JOIN-UP project cluster and may be developed and delivered collaboratively with JOIN-UP partners.

Quality assurance & review: Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Dissemination strategy, project website, published outputs.

Task descriptions

Task	Title	Partners	Description
2.1	Dissemination strategy	KCL	To create and include in the project plan a strategy which indicates DocuSend's overall approach to dissemination. To append a framework of specific dissemination methods, showing intended audience, contributors and frequency.
2.2	Creation and maintenance of core dissemination materials	KCL	This task involves the creation and maintenance of a set of core materials such as the JISC flyer, PowerPoint slides, written papers and drafts of oral presentations. The task also involves the creation of a 'visual identity' for the project.
2.3	Creation and maintenance of website	KCL	A DocuSend website will be managed by the Project Manager. The purpose of the web presence is to facilitate wide access to project information, dissemination activities and events.
2.4	Presentations, demonstrations and written outputs	KCL	This task involves dissemination activities at local, national and international levels, and will include the representation of the project at conferences and seminars, as well as written outputs for hard copy and/or electronic publication.
2.5	Regional workshops	KCL	To organise a series of regional workshops at which a variety of DocuSend stakeholders will share with a wider audience the lessons learned and the benefits which the HE community has gained from the project.

Workpackage number: 3

Workpackage title: Evaluation

Partner responsible: KCL

Other partners involved: None

Start date: Month 1

End date: Month 36

Objectives and brief description of work: To evaluate the project in conformance with the requirements of the JISC Office. The project will adopt a dual strategy which includes both formative and summative approaches in relation to the project's objectives. Evaluation will be used, *inter alia*, to match achievements with objectives and to ensure that objectives are met, identify both successes and problems and to inform future plans for service continuity, expansion and portability. The project will continue to explore with JISC the possibility of summative evaluation being carried out by an external source.

Quality assurance & review: Tasks 3.1 to 3.3: review by Management Group (monthly) and Steering Committee (quarterly). Task 3.4: review by JOIN-UP Steering Committee (quarterly).

Outputs including reports: Evaluation strategy

Task descriptions

Task	Title	Partners	Description
3.1	Evaluation strategy	KCL	To create and include in the project plan a strategy which indicates Docusend's overall approach to evaluation. To distinguish between formative and summative elements and to assign responsibility for each.
3.2	Formative evaluation	KCL	To assess the <i>process</i> and <i>progress</i> of the project as it moves forward. Formative evaluation acts as a quality control mechanism in respect of the requirements of the project plan. It is used to ensure that progress continues in accordance with the project timetable (and to design and put in place corrective actions if it does not) and to ensure that deliverables and other milestones are completed as specified in the project plan. Formative evaluation will be conducted by the project team.
3.3	Summative evaluation	KCL	To assess the potential effect of the project on the wider community in terms of the effectiveness of services produced by the project, and the impact of those services on the project's stakeholder groups. The data gathered by summative evaluation will be used to measure the project's effectiveness in terms-of resources applied and value added.

			Given the work being undertaken by JISC, ongoing consideration will be given to summative evaluation being undertaken by an external evaluation contractor.
3.4	Cluster-level evaluation	KCL	To participate in and contribute to the common JOIN-UP cluster strategy for formative and summative evaluation. Cluster-level formative evaluation will be achieved by the sharing of project-specific formative findings among project teams, while summative evaluation will be outsourced to an external evaluation contractor appointed by the JOIN-UP Steering Committee.

Workpackage number: 4

Workpackage title: Docusend and JISC

Partner responsible: KCL

Other partners involved: None

Start date: Month 1

End date: Month 36

Objectives and brief description of work: To ensure that the objectives and progress of the project remain compatible with the vision of JISC as 'a managed environment for accessing quality assured information resources on the Internet available from many sources' and to contribute to and be responsive to subsequent elaborations of that vision. In particular, to generate the deliverable reports as required by the JISC Office under the terms of the offer of award.

Quality assurance & review: Task 4.1 to 4.2: review by Management Group (monthly) and Steering Committee (quarterly). Tasks 4.3 to 4.4: review by JOIN-UP Steering Committee (quarterly).

Outputs including reports: Six-monthly report to the JISC Office

Task descriptions

Task	Title	Partners	Description
4.1	Liaison with the JISC Office	KCL	To maintain regular contact with the JISC Office (through, <i>inter alia</i> , membership of the JISCmail discussion lists) and to take account of new JISC initiatives as appropriate.
4.2	Six-monthly report	KCL	To prepare and submit to the JISC Office the six-monthly report on progress on Docusend during the periods to January and July each year. The reporting framework and template to be put in place by the JISC Office will be used for this purpose.
4.3	Liaison with JOIN-UP	KCL	To participate fully in and to contribute to the culture and ethos of the JOIN-UP cluster, particularly in respect of the cluster's role in the emerging JISC infrastructure of a distributed service platform. To participate in cluster-level management and co-ordination. To be represented on the JOIN-UP Steering Committee.
4.4	Peer review of JOIN-UP cluster	KCL	To participate in the annual peer review of component projects in the JOIN-UP cluster by an expert panel to be appointed by the JISC Office.

Workpackage number: 5

Workpackage title: DocuSend supporting studies

Partner responsible: KCL

Other partners involved:

Start date: Month 5

End date: Month 36

Objectives and brief description of work: To provide for pan-project current awareness monitoring, which will enable DocuSend to be contextualised in terms of emergent trends, particularly in terms of new developments in document delivery and other information technologies as well as copyright and IP rights management. The supporting studies will enable DocuSend to remain well-informed in these areas, and thereby to respond to and to embrace new elements of best practice in these areas as they emerge.

Quality assurance & review: Task 5.1: review by Management Group (monthly) and Steering Committee (quarterly). Task 5.2: review by JOIN-UP Steering Committee (quarterly).

Outputs including reports: DocuSend contribution to JOIN-UP documentation

Task descriptions

Task	Title	Partners	Description
5.1	Technology watch	KCL	To set up a constant technology watch to ensure that DocuSend includes in its one-stop service as many different and complementary journal article supply services as possible, including new ones that arise, with the emphasis on electronic transfer of information and delivery in electronic format wherever possible. DocuSend will also contribute to the JOIN-UP cluster technology watch.
5.2	Copyright watch	KCL	As part of the JOIN-UP cluster technology watch, developments following the introduction and implementation of the European copyright directive will be monitored, as will access rights issues including fair use, authentication, authorisation and license negotiations with content providers. A watching brief will also be maintained on rights management initiatives. An external authority in these areas may be co-opted onto the DocuSend Steering Committee to assist with the copyright watch.

Workpackage number: 6

Workpackage title: DocuSend infrastructure

Partner responsible: KCL

Other partners involved: Fretwell Downing

Start date: Month 1

End date: Month 36

Objectives and brief description of work: To put in place all components of the DocuSend system which are not content specific and which will be common to all likely operational fora. Specifically, these will include the procurement and systems administration of a hardware platform of appropriate specification as well as the installation of the Fretwell-Downing VDX (Virtual Document Exchange) software which will form the core of DocuSend. The bespoke VDX functionality which DocuSend will require will be agreed and implemented, a DocuSend web interface will be written and the VDX management reporting framework will be validated for DocuSend's requirements.

Quality assurance & review: Validation of infrastructure at milestone no. 1. Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Appropriate server purchased, installed, supported and running VDX.

Task descriptions

Task	Title	Partners	Description
6.1	Server purchase	KCL EDINA	To purchase a hardware platform capable of supporting the DocuSend software. The server specification will be, as a minimum, a Sun Ultra 10 workstation with a processor speed of at least 400 MHz, running Solaris 8 or later. The server will have at least 518 Mb of RAM and at least 8 Gb of hard disk storage. Consideration will be given to increasing the hard disk storage as the project progresses.
6.2	Software hosting and facilities management	KCL FDI	At the start of the project, DocuSend server was hosted at EDINA, but repeated failure to recruit a Technical Officer to the project led to a decision to opt for a managed service. FDI now provide this service, which involves the running of the DocuSend system, including (but not necessarily limited to) general UNIX administration, disaster management and recovery, fault finding and problem diagnosis. The server is physically based in Leeds.
6.3	Software installation and testing	KCL FDI	To load Fretwell-Downing's VDX (Virtual Document Exchange) software onto the DocuSend server. Version 2.2.7 was loaded initially, and was

			subsequently replaced by version 2.3 in May 2003. VDX will manage the allocation of requests and messaging between the supply services and requesters. The software is tested after each loading.
6.4	Integration with ILL systems	KCL FDI	To test the integration of the VDX software with automated ILL systems likely to be encountered in requesting academic libraries. DocuSend will be tested to ensure that it will accept and can execute requests received in any of the usual output formats of ILL systems: ISO ILL protocol, structured email or ARTmail.
6.5	VDX functionality	KCL	To agree DocuSend-specific bespoke functionality with Fretwell-Downing before the first loading of the software. This functionality was agreed by negotiation between the project team and the designated FDI contact. The required bespoke functionality for the loading of versions 2.3 and 3.0 is contained in the project document <i>DocuSend VDX requirements</i> and was eventually delivered in a revised version 2.3. To revisit required functionality during the project, and request further bespoke development as may become necessary as DocuSend is extended to widening circles of users and content providers.
6.6	Management reporting framework	KCL	To ensure the management reporting functionalities of VDX log all transactions handled by the request service through its interface with the delivery service. This will enable invoicing of requesting libraries, payment to content providers and internal management information of single transaction granularity. It is intended that DocuSend will integrate with BEDLAM, the existing Lamda management information system.
6.7	Web interface and DocuSend web forms	KCL	To write a web interface to the server and web forms as required by DocuSend. The web interface will include forms and such other utilities as will be required by the various DocuSend stakeholders: requesting institutions, content providers, DocuSend project personnel. Authentication and authorisation will be applied to all functions.
6.8	Open URL software	KCL	To load FDI's OL2 open linking software and Zportal to the DocuSend server. Software will be tested by linking to abstracting and indexing services.

Workpackage number: 7

Workpackage title: DocuSend and Lamda

Partner responsible: KCL

Other partners involved: Lamda

Start date: Month 5

End date: Month 13

Objectives and brief description of work: To configure the DocuSend software for use by Lamda requesting and supply libraries and to test the operation of the service. After configuration, specific functionalities will be tested singly and in combination. Particular attention will be given to functionalities which enhance, extend and add value to the extant Lamda service, such as holdings parsing, customer profiles and end-user delivery. Beta-testing of the service will be conducted as an iterative process, with the number of test sites being gradually increased within the Lamda requesting and supply library communities. Training in the use of the service will be provided by the project team to test-site personnel.

Quality assurance & review: Validation of output functionality at milestone no. 2. Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Fully-functioning Locate/Request/Deliver service drawing on Lamda supply libraries.

Task descriptions

Task	Title	Partners	Description
7.1	Server configuration	KCL Lamda	The installed VDX software will be configured, using the web interface, to include the supply libraries of the Lamda consortium and its requesting institutions. Configuration will include locations, component sites and requesters' preferred supplier profiles. Training in configuration will be provided by FDI.
7.2	Initial testing including integration with Lamda union list	KCL Lamda	To test the integration of the VDX software with the Lamda union list. VDX will be tested to ensure that the rota is populated where the union list indicates that a required item is held. This task will be repeated, as DocuSend is gradually expanded to include all the Lamda libraries (task 7.11 below), to ensure that integration remains robust with all types of holdings syntax.
7.3	Integration with ARIEL	KCL Lamda	To test the integration of the VDX software with Ariel, the internet document transmission application. Ariel will be used to scan and transmit articles via FTP to the requesting library's Ariel workstation. Integration will be tested with current and future versions of Ariel released during the project period.

7.4	Known requests to known suppliers	KCL Lamda	To test the Request and Deliver functionalities of DocuSend by routing a number of previously agreed requests to Lamda supply libraries which are known to hold the required items. DocuSend's ability to handle messages from requesting libraries will be validated by this test, as will the changing status of a live request and DocuSend's delivery procedures.
7.5	Test holdings parsing	KCL Lamda	To test the integration of the VDX software with the syntax of holdings statements in the Lamda union list, as discussed in the project document <i>DocuSend VDX requirements</i> . In particular, DocuSend's default response to instances in which the holdings strings cannot be analysed fully (i.e. the assumption that the library does not hold the item) will be tested for acceptability.
7.6	Test request and supply chain	KCL Lamda	To draw together the validated functionalities emerging from tasks 7.2 to 7.5 above and to test the entire request and supply chain, from the input of a request to the receipt of the item in electronic form by the requesting library.
7.7	Customer profiles	KCL Lamda	To test the operation of requesting libraries' preferred supplier profiles in assigning requests. The server will identify the most appropriate supply library, taking account of the requesting library's profile in terms of criteria such as price, delivery method or speed of response.
7.8	Unique numbering	KCL Lamda	To test the unique numbering of requests by DocuSend, especially in respect of requests which cannot be met by participating supply libraries and which are assigned to British Library Document Supply Centre (or other external supplier). It will be essential that a unique identification number is assigned to and retained by requests which are subsequently satisfied outwith the DocuSend supply libraries.
7.9	Test end-user delivery	KCL Lamda	To test delivery of requested articles to the end-user, rather than to the end-user's library. This functionality will draw on work done under the eLib Phase 3 HeadLine project to enable end-user delivery by means of the emailing of TIFF files to a designated filespace within the DocuSend environment. An associated alerting message will be sent to the end-user, incorporating the URL of the stored TIFF file with instructions for downloading or printing.
7.10	Test end-user requesting with selected libraries	KCL Lamda	To design, incorporate and test a functionality by means of which end-users at requesting libraries can initiate a DocuSend request, without requiring the mediation of interloans personnel. End-users keying requests <i>ab initio</i> into the DocuSend web request form and direct importation of the bibliographical details from other electronic services will both be tested. Demand management

			techniques will also be explored, possibly including the automatic generation of an email requesting authorisation by every user-generated request. The financial tracking, accounting and other practical issues involved with end-user requesting will be investigated.
7.11	Expansion to wider user group	KCL Lamda	Once the component functions of DocuSend have been tested singly and in combination, beta-testing of the service will be extended to a selection of Lamda requesting libraries. This process will be undertaken iteratively, with the number of testing sites being gradually increased as each phase of testing is successfully completed.
7.12	User alerts	KCL Lamda	To test VDX end-user functionality whereby patrons are alerted when a request has been routed out of DocuSend to an external provider (e.g. BLDSC).
7.13	Training and advice	KCL Lamda	Training in the use of the DocuSend service will be supplied to both request and supply libraries by the project team.

Workpackage number: 8

Workpackage title: Docusend and other libraries

Partner responsible: KCL

Other partners involved: External institutions invited to participate.

Start date: Month 10

End date: Month 20

Objectives and brief description of work: Once the entire Docusend request and supply chain has been extensively tested in the context of the Lamda supply libraries, Docusend's supply resources will be expanded by the participation of other academic libraries which are willing to act as supply sites. In order to take part in Docusend, the libraries' management systems should present a Z39.50 target which can be interrogated by Docusend and which presents holdings statements in OPAC1 format. After inclusion of new Z39.50 targets into the Docusend system configuration, the functionality testing begun with the Lamda sites (see WP7 above) will be extended to the new participants; individual function followed by entire service chain. Particular attention will be given to Docusend's interaction with the combination of a consortium union list on the one hand (Lamda) and a range of discrete Z39.50 targets on the other (non-Lamda libraries). Participating libraries will be identified and selected via the project team's membership and knowledge of various professional and research fora.

Quality assurance & review: Validation of output functionality at milestone no. 3. Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Fully functioning Locate/Request/Deliver service drawing on participating academic libraries beyond Lamda.

Task descriptions

Task	Title	Partners	Description
8.1	Identify and begin discussions with appropriate partners	KCL	To locate and secure the co-operation of libraries, beyond the Lamda consortium which are willing to act as supply sites in Docusend. A number of approaches will be used to identify and recruit suitable collections, including the professional diaspora of the project team, the contacts afforded by the wider forum of the JOIN-UP cluster and the assistance of the JISC Office.
8.2	Server configuration	KCL	The installed VDX software will be configured, using the web interface, to include the new sites contributed by non-Lamda libraries. Configuration will include locations, component sites and requesters' preferred supplier profiles. The configuration process will draw upon the original configuration for Lamda-only sites in task 7.1 above.
8.3	Initial testing including	KCL	To test the operation of the VDX software with a range of Z39.50 targets. VDX will be tested to

	integration with a range of Z39.50 targets		ensure that requests can be matched against the catalogues of non-Lamda libraries, as well as against the Lamda union list as described in task 7.2 above. VDX will be further tested to ensure that the rota is populated by non-Lamda targets where they indicate that a required item is held (and where the preferred supply profile permits or requires this).
8.4	Integration with ARIEL	KCL	To advise on the installation of Ariel in participating non-Lamda libraries if required, and to test the software as a scanning and transmission application for DocuSend requests.
8.5	Known requests to known suppliers	KCL	To test the Request and Deliver functionalities of DocuSend by routing a number of previously agreed requests to non-Lamda supply libraries which are known to hold the required items. DocuSend's ability to handle messages from requesting libraries will be validated by this test, as will the changing status of a live request in process at a non-Lamda library and DocuSend's delivery procedures.
8.6	Test holdings parsing	KCL	To test the integration of the VDX software with the holdings syntax of the catalogues of participating non-Lamda libraries using OPAC1 format for holdings statements. In particular, DocuSend's response to instances in which the holdings strings cannot be analysed fully will be extensively tested.
8.7	Test request and supply chain	KCL	To draw together the validated functionalities emerging from tasks 8.2 to 8.6 above and to test the entire request and supply chain, from the input of a request to the receipt of the item in electronic form by the requesting library, in respect of non-Lamda supply sites.
8.8	Customer profiles	KCL	To build on the work of task 7.7 above in testing the operation of requesting libraries' preferred supplier profiles in assigning requests. The server will identify the most appropriate supply library, taking account of the requesting library's profile in terms of criteria such as price, delivery method or speed of response. This functionality will be tested in the context of an information landscape comprising the Lamda supply libraries and non-Lamda Z39.50 targets.
8.9	Unique numbering	KCL	To test the unique numbering of requests by DocuSend, especially in respect of requests which cannot be met by any participating supply library and which are assigned to British Library Document Supply Centre (or other external supplier) after all possible or acceptable Z39.50 targets have been interrogated. It will be essential that a unique identification number is assigned to and retained by requests which are subsequently satisfied outwith the DocuSend supply libraries.
8.10	Test end-user	KCL	To test delivery to the end user of articles sourced

	delivery		outwith the Lamda supply libraries, rather than to the end-user's library. This functionality will draw on work done under the eLib Phase 3 HeadLine project to enable end-user delivery by means of the emailing of TIFF files to a designated filespace within the DocuSend environment. An associated alerting message will be sent to the end-user, incorporating the URL of the stored TIFF file with instructions for downloading or printing.
8.11	Test end-user requesting with selected libraries	KCL	To build on the work of task 7.10 above, and to extend and test this functionality in the context of supply libraries beyond the Lamda consortium. As before, end-users keying requests <i>ab initio</i> into the DocuSend web request form and direct importation of the bibliographical details from other electronic services will both be explored, as will demand management techniques.
8.12	Training and advice	KCL	Training in the use of the DocuSend service will be supplied to staff in new participating libraries by the project team.

Workpackage number: 9

Workpackage title: DocuSend and other commercial content providers

Partner responsible: KCL

Other partners involved: External commercial institutions invited to participate.

Start date: Month 6

End date: Month 36

Objectives and brief description of work: Once the entire DocuSend request and supply chain has been extensively tested in the context of a combination of Lamda and non-Lamda supply libraries, DocuSend's supply resources will be expanded by the participation of commercial information providers which are willing to act as supply sites. Two areas of research will receive particular emphasis in this workpackage: the interaction of the DocuSend software with the server architecture used by commercial providers, and management issues (such as access, authentication and billing) raised by the inclusion of access to rights-protected material in DocuSend.

Quality assurance & review: Validation of output functionality at milestone no. 5. Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Fully-functioning Locate/Request/Deliver service drawing on participating commercial content providers.

Task descriptions

Task	Title	Partners	Description
9.1	Liaison with EASY pilot service	KCL	The project paid close attention to the EASY Project and has held discussions with members of the EASY Project in order to learn from the outcomes of that project.
9.2	Identify and begin discussions with appropriate partners	KCL	To locate and secure the co-operation of commercial content providers which are willing to act as supply sites in DocuSend. In particular, emphasis will be given to inviting the co-operation of small specialist publishers, such as learned societies. A number of approaches will be used to identify and recruit suitable participants including the identification of appropriate commercial partners in related projects and the assistance of the JISC Office.
9.3	Server configuration	KCL	The installed VDX software will be configured, using the web interface, to include the new services contributed by commercial content providers. Additionally, consideration will be given to meeting the rights-holders' requirements for authentication and billing etc, typically using the transaction logs and other management information generated by DocuSend. The

			configuration process will draw upon the original configuration for Lamda-only sites in task 7.1, and its extension to other libraries in task 8.2, above.
9.4	Initial testing including integration with a range of rights-holders' servers	KCL	To test the operation of the VDX software with a range of rights-holders' servers containing full-text documents. VDX will be tested to ensure that requests can be matched against publishers' servers, as well as against the pre-existing DocuSend information landscape as described in tasks 7.2 and 8.3 above. VDX will be further tested to ensure that the rota is populated by commercial targets where they indicate that a required item is held (and where the preferred supply profile permits or requires this).
9.5	Integration with document delivery software	KCL	To test the integration of DocuSend with the document storage and delivery applications used by commercial content providers.
9.6	Test holdings parsing	KCL	To test the integration of the VDX software with the holdings syntax of the servers of participating commercial content providers.
9.7	Test request and supply chain	KCL	To draw together the validated functionalities emerging from tasks 9.3 to 9.6 above and to test the entire request and supply chain, from the input of a request to the receipt of the item in electronic form by the requesting library, in respect of participating commercial content providers.
9.8	Customer profiles	KCL	To build on the work of task 8.8 above in testing the operation of requesting libraries' preferred supplier profiles in assigning requests. The server will identify the most appropriate supply source, taking account of the requesting library's profile in terms of criteria such as access and authentication, price, delivery method or speed of response. This functionality will be tested in the context of an information landscape comprising the Lamda supply libraries, non-Lamda Z39.50 targets and the servers of participating commercial content providers.
9.9	Unique numbering	KCL	To test the unique numbering of requests by DocuSend, especially in respect of requests which cannot be met by any participating supply source and which are assigned to British Library Document Supply Centre (or other external supplier) after all possible or acceptable Z39.50 (and other) targets have been interrogated. It will be essential that a unique identification number is assigned to and retained by requests which are subsequently satisfied outwith the participating DocuSend suppliers.
9.10	Test end-user delivery	KCL	To test delivery to the end user of articles sourced from participating commercial content providers, rather than to the end-user's library. This functionality will draw on work done under the eLib

			Phase 3 HeadLine project to enable end-user delivery by means of the emailing of TIFF files to a designated filespace within the DocuSend environment. An associated alerting message will be sent to the end-user, incorporating the URL of the stored TIFF file with instructions for downloading or printing. Issues proper to the delivery of rights-protected material in this way, such as access, authentication and billing, will be addressed.
9.11	Test end-user requesting with selected libraries	KCL	To build on the work of task 8.10 above, and to extend and test this functionality in the context of participating commercial content providers. As before, end-users keying requests <i>ab initio</i> into the DocuSend web request form and direct importation of the bibliographical details from other electronic services will both be explored, as will demand management techniques. Issues proper to the end-user requesting of rights-protected material in this way, such as access, authentication and billing, will be addressed.
9.12	Training and advice	KCL	Training in the operation of the DocuSend pilot will be supplied to staff in participating commercial content providers by the project team.

Workpackage number: 10

Workpackage title: DocuSend and JISC/RDN portals

Partner responsible: KCL

Other partners involved: JISC/RDN portals invited to participate

Start date: Month 10

End date: Month 34

Objectives and brief description of work: To explore the possibility of the inclusion of DocuSend as a document supply medium in those RDN hubs undergoing portalisation during the course of the project. The essential pre-requisite for this exploration will be the entire DocuSend request and supply chain having been extensively tested in the context of an information landscape comprising varied and complementary supply sources (see WP7-9 above). The principal objective of this workpackage will be to deploy DocuSend as a delivery medium, both for current awareness records from selected publishers and for journal articles retrieved from a wide range of bibliographical sources. These functionalities will be tested initially with the PSIGate physical sciences portal before being rolled out to selected hubs which have undergone portalisation under the JISC 5/99 SAD2 initiative. DocuSend will demonstrate the capability to ultimately integrate with hubs which will only undergo portalisation in the final stages of the project (e.g. Arts and Creative Industries, and Geography and Environment).

Quality assurance & review: Validation of output functionality at milestones nos. 3 and 4. Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Fully functioning Request/Deliver service (as described in tasks 10.2 and 10.3 below) capable of being embedded in participating JISC/RDN portals.

Task descriptions

Task	Title	Partners	Description
10.1	Identify and begin discussions with appropriate partners	KCL	To locate and secure the co-operation of JISC portals which are willing to incorporate DocuSend as a potential document delivery medium in their services on an experimental basis. It is expected that this process will begin with the PSIGate physical sciences portal based at Manchester.
10.2	Delivery medium – current awareness services	KCL	To deploy DocuSend as an experimental delivery medium for papers included in the electronic current awareness services of selected learned society publishers as presented by one or more portals. It is expected that this process will begin with services such as the Royal Society of Chemistry, the Institute of Physics and/or the British Geological Survey within PSIGate, subject to confirmation.

10.3	Delivery medium – heterogeneous targets	KCL	To deploy DocuSend as an experimental delivery medium for citations retrieved by seamless searching, via a portal, of a range of Z39.50 targets. The focus of this task will be to ensure interoperability between DocuSend and the metadata retrieved from the heterogeneous targets addressed by a portal. It is expected that this process will begin with PSIGate.
10.4	Management issues	KCL	Extensive validation will be required of DocuSend management functions such as access, authentication and billing if DocuSend is successfully to offer end-user requesting and delivery. This will be a prerequisite if and when DocuSend is embedded as a delivery service as described in tasks 10.2 and 10.3 linking one or more subject portals. The operation of these management functions will need to be rendered simultaneously acceptable to the DocuSend team, portal management team(s), supply and request libraries, participating commercial rights-holders and end users.
10.5	Extension of service to established portals	KCL	The work undertaken in tasks 10.2 to 10.4 above will be extended to selected hubs which have become established as portals under the JISC 5/99 SAD2 initiative. Potential services include EEVL, BIOME and SOSIG.
10.6	Extension of DocuSend to new portals	KCL	The work undertaken in tasks 10.2 and 10.4 above will be extended during the final phase of the project to selected hubs which are then completing the portalisation process. Potential services include Arts and Creative Industries hub (ARTEFACT) and the Geography and Environment hub.

Workpackage number: 11

Workpackage title: DocuSend and commercial intermediaries

Partner responsible: KCL

Other partners involved: External commercial intermediaries invited to participate

Start date: Month 19

End date: Month 28

Objectives and brief description of work: To explore the potential capability of including DocuSend as a document supply medium in commercial Discover services such as bibliographic databases accessible over the web. The essential prerequisite for this exploration will be the entire DocuSend request and supply chain having been extensively tested in the context of an information landscape comprising varied and complementary supply sources (see WP7-9 above). As the objective of this workpackage will demonstrate the potential for DocuSend to become more widely accessible than ever before, management issues will once again be revisited. Liaison with existing document supply media which are incorporated in database services will be crucial to the success of this workpackage, as will co-operation with related projects such as *Zetoc*.

Quality assurance & review: Validation of output functionality at milestone no. 4. Review by Management Group (monthly) and Steering Committee (quarterly).

Outputs including reports: Fully-functioning Request/Deliver service embedded in participating bibliographic databases.

Task descriptions

Task	Title	Partners	Description
11.1	Identify and begin discussions with appropriate partners	KCL	To locate and secure the co-operation of commercial bibliographic databases which are willing to incorporate DocuSend as a pilot document delivery medium in their services on an experimental basis. The advice of the DocuSend Steering Committee will be sought in the identification of suitable services.
11.2	Test integration with web interfaces	KCL	DocuSend's capacity for integration with the web interfaces of participating bibliographical databases will be tested. It is envisaged that users will be offered document delivery services in a dedicated area of each database interface and, within this area, a hyperlink behind a DocuSend icon would launch the DocuSend user-requesting interfaces (see tasks 7.10, 8.11 and 9.11 above).
11.3	Management issues	KCL	Extensive validation will be required of the operation of DocuSend management functions such as access, authentication and billing if DocuSend is to successfully demonstrate end-user requesting and delivery when embedded as a

			document delivery service within commercial databases. The operation of these management functions will need to be rendered simultaneously acceptable to the DocuSend team, supply and request libraries participating commercial databases and end users.
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Workpackage number: 12

Workpackage title: DocuSend continuation strategy

Partner responsible: KCL

Other partners involved: Lamda, EDINA, external participants

Start date: Month 31

End date: Month 36

Objectives and brief description of work: To prepare a project continuation strategy which includes a convincing and persuasive business case for the continuation of DocuSend being developed into an operational service. The strategy will include a statement of the current position (a market survey and analysis), a clear statement of the future the project team is seeking, and a strategy for securing that future vision. The resulting continuation strategy will include an assessment of the market-worthiness of the service and threats thereto, and will also consider the potential for the inclusion in DocuSend's future of co-operation with other services in the continuing extension and development of JISC. The possible availability of a JISC business analyst, if such an appointment is made, would be extremely beneficial in developing this strategy.

Quality assurance & review: Validation of strategy by Management Group (monthly) and final two Steering Committee meetings.

Outputs including reports: DocuSend continuation strategy – report.

Task descriptions

Task	Title	Partners	Description
12.1	Market survey and analysis	KCL	To undertake an analysis of the document delivery market, and DocuSend's potential position in it, in order to create a benchmark against which the project can measure its continuing relevance to the academic community. Drawing on the input of all stakeholders, the past performance of the project will be appraised. Strengths (potential selling points) will be identified, particularly those features that could give DocuSend a commercial advantage over comparable services. Weaknesses will also be identified and addressed.
12.2	Statement of future aims	KCL	To produce a clear statement of the future the project team is seeking for DocuSend. The DocuSend Steering Committee will be invited to contribute to this process. Particular attention will be given to making a clear statement of scope; the conditions under which any service would be deemed ready for operational launch.
12.3	Strategy for securing future vision	KCL	To determine the optimum means for advancing DocuSend to the position articulated by task 12.2 above. The resulting strategy will include three

			<p>main components: Market, Operation and Finance. Briefly, Market will take as its baseline the information gathered in task 12.1 above. Operation will consider requirements for resourcing and managing the proposed service at the required operational level. Finance will address what funding would be required for the pilot service to continue as an operational level service and whether this should be generated internally, whether support should be sought externally, or whether a mix of funding formulae is appropriate. In addition, consideration will be given to the optimum organisational and governance structure for any proposed post-project operational service.</p>
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DocuSend project Year 1 – May 2001 to April 2002

		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
		May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Project management	Task 1.1												
	Task 1.2												
	Task 1.3												
	Task 1.4												
	Task 1.5												
Dissemination	Task 2.1												
	Task 2.2												
	Task 2.3												
	Task 2.4												
	Task 2.5												
Evaluation	Task 3.1												
	Task 3.2												
	Task 3.3												
	Task 3.4												
DocuSend and JISC	Task 4.1												
	Task 4.2												
	Task 4.3												
	Task 4.4												
D'send supporting studies	Task 5.1												
	Task 5.2												
DocuSend infrastructure	Task 6.1												
	Task 6.2												
	Task 6.3												
	Task 6.4												
	Task 6.5												
	Task 6.6												
	Task 6.7												
	Task 6.8												
DocuSend And Lamda	Task 7.1												
	Task 7.2												
	Task 7.3												
	Task 7.4												
	Task 7.5												
	Task 7.6												
	Task 7.7												
	Task 7.8												
	Task 7.9												
	Task 7.10												
	Task 7.11												
	Task 7.12												
	Task 7.13												
DocuSend And other libraries	Task 8.1												
	Task 8.2												
	Task 8.3												
	Task 8.4												
	Task 8.5												
	Task 8.6												
	Task 8.7												
	Task 8.8												
	Task 8.9												
	Task 8.10												
	Task 8.11												
	Task 8.12												
DocuSend And Other commercial content Providers	Task 9.1												
	Task 9.2												
	Task 9.3												
	Task 9.4												
	Task 9.5												
	Task 9.6												
	Task 9.7												
	Task 9.8												
	Task 9.9												
	Task 9.10												
	Task 9.11												
	Task 9.12												
DocuSend And JISC/RDN Portals	Task 10.1												
	Task 10.2												
	Task 10.3												
	Task 10.4												
	Task 10.5												
	Task 10.6												
D'send & commercial intermediaries	Task 11.1												
	Task 11.2												
	Task 11.3												
DocuSend continuation Strategy	Task 12.1												
	Task 12.2												
	Task 12.3												

Milestone 1
Infrastructure complete

Milestone 2
Integration with Lamda

DocuSend project Year 2 – May 2002 to April 2003

		M13	M14	M15	M16	M17	M18	Proi.	in	hold	mode	for	now
		May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Project management	Task 1.1												
	Task 1.2												
	Task 1.3												
	Task 1.4												
	Task 1.5												
Dissemination	Task 2.1												
	Task 2.2												
	Task 2.3												
	Task 2.4												
	Task 2.5												
Evaluation	Task 3.1												
	Task 3.2												
	Task 3.3												
	Task 3.4												
DocuSend and JISC	Task 4.1												
	Task 4.2												
	Task 4.3												
	Task 4.4												
D'send supporting studies	Task 5.1												
	Task 5.2												
DocuSend infrastructure	Task 6.1												
	Task 6.2												
	Task 6.3												
	Task 6.4												
	Task 6.5												
	Task 6.6												
	Task 6.7												
	Task 6.8												
DocuSend And Lamda	Task 7.1												
	Task 7.2												
	Task 7.3												
	Task 7.4												
	Task 7.5												
	Task 7.6												
	Task 7.7												
	Task 7.8												
	Task 7.9												
	Task 7.10												
	Task 7.11												
	Task 7.12												
	Task 7.13												
DocuSend And other libraries	Task 8.1												
	Task 8.2												
	Task 8.3												
	Task 8.4												
	Task 8.5												
	Task 8.6												
	Task 8.7												
	Task 8.8												
	Task 8.9												
	Task 8.10												
	Task 8.11												
	Task 8.12												
DocuSend And Other commercial content Providers	Task 9.1												
	Task 9.2												
	Task 9.3												
	Task 9.4												
	Task 9.5												
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	Task 9.7												
	Task 9.8												
	Task 9.9												
	Task 9.10												
	Task 9.11												
	Task 9.12												
DocuSend And JISC/RDN Portals	Task 10.1												
	Task 10.2												
	Task 10.3												
	Task 10.4												
	Task 10.5												
	Task 10.6												
D'send & commercial intermediaries	Task 11.1												
	Task 11.2												
	Task 11.3												
DocuSend continuation Strategy	Task 12.1												
	Task 12.2												
	Task 12.3												

DocuSend project Year 3 – May 2003 to April 2004

		M19 May	M20 Jun	M21 Jul	M22 Aug	M23 Sep	M24 Oct	M25 Nov	M26 Dec	M27 Jan	M28 Feb	M29 Mar	M30 Apr
Project management	Task 1.1												
	Task 1.2												
	Task 1.3												
	Task 1.4												
	Task 1.5												
Dissemination	Task 2.1												
	Task 2.2												
	Task 2.3												
	Task 2.4												
	Task 2.5												
Evaluation	Task 3.1												
	Task 3.2												
	Task 3.3												
	Task 3.4												
DocuSend And JISC	Task 4.1												
	Task 4.2												
	Task 4.3												
	Task 4.4												
D'send supporting studies	Task 5.1												
	Task 5.2												
DocuSend infrastructure	Task 6.1												
	Task 6.2												
	Task 6.3												
	Task 6.4												
	Task 6.5												
	Task 6.6												
	Task 6.7												
	Task 6.8												
DocuSend And Lamda	Task 7.1												
	Task 7.2												
	Task 7.3												
	Task 7.4												
	Task 7.5												
	Task 7.6												
	Task 7.7												
	Task 7.8												
	Task 7.9												
	Task 7.10												
	Task 7.11												
	Task 7.12												
	Task 7.13												
DocuSend And other libraries	Task 8.1												
	Task 8.2												
	Task 8.3												
	Task 8.4												
	Task 8.5												
	Task 8.6												
	Task 8.7												
	Task 8.8												
	Task 8.9												
	Task 8.10												
	Task 8.11												
	Task 8.12												
DocuSend And Other commercial content Providers	Task 9.1												
	Task 9.2												
	Task 9.3												
	Task 9.4												
	Task 9.5												
	Task 9.6												
	Task 9.7												
	Task 9.8												
	Task 9.9												
	Task 9.10												
	Task 9.11												
	Task 9.12												
DocuSend And JISC/RDN Portals	Task 10.1												
	Task 10.2												
	Task 10.3												
	Task 10.4												
	Task 10.5												
	Task 10.6												
D'send & commercial intermediaries	Task 11.1												
	Task 11.2												
	Task 11.3												
DocuSend continuation Strategy	Task 12.1												
	Task 12.2												
	Task 12.3												

Milestone 3
Integration with non-LAMDA libraries
Integration with portals

Milestone 4
Commercial intermediaries
Extension of portals

DocuSend project Year 4 – May 2004 to October 2004 (ends 31 October 2004)

		M31 May	M32 Jun	M33 Jul	M34 Aug	M35 Sep	M36 Oct
Project management	Task 1.1						
	Task 1.2						
	Task 1.3						
	Task 1.4						
	Task 1.5						
Dissemination	Task 2.1						
	Task 2.2						
	Task 2.3						
	Task 2.4						
	Task 2.5						
Evaluation	Task 3.1						
	Task 3.2						
	Task 3.3						
	Task 3.4						
DocuSend And JISC	Task 4.1						
	Task 4.2						
	Task 4.3						
	Task 4.4						
D'send supporting studies	Task 5.1						
	Task 5.2						
DocuSend infrastructure	Task 6.1						
	Task 6.2						
	Task 6.3						
	Task 6.4						
	Task 6.5						
	Task 6.6						
	Task 6.7						
	Task 6.8						
DocuSend And Lamda	Task 7.1						
	Task 7.2						
	Task 7.3						
	Task 7.4						
	Task 7.5						
	Task 7.6						
	Task 7.7						
	Task 7.8						
	Task 7.9						
	Task 7.10						
	Task 7.11						
	Task 7.12						
	Task 7.13						
DocuSend And other libraries	Task 8.1						
	Task 8.2						
	Task 8.3						
	Task 8.4						
	Task 8.5						
	Task 8.6						
	Task 8.7						
	Task 8.8						
	Task 8.9						
	Task 8.10						
	Task 8.11						
	Task 8.12						
DocuSend And Other commercial content Providers	Task 9.1						
	Task 9.2						
	Task 9.3						
	Task 9.4						
	Task 9.5						
	Task 9.6						
	Task 9.7						
	Task 9.8						
	Task 9.9						
	Task 9.10						
	Task 9.11						
	Task 9.12						
DocuSend And JISC/RDN Portals	Task 10.1						
	Task 10.2						
	Task 10.3						
	Task 10.4						
	Task 10.5						
	Task 10.6						
D'send & commercial intermediaries	Task 11.1						
	Task 11.2						
	Task 11.3						
DocuSend continuation Strategy	Task 12.1						
	Task 12.2						
	Task 12.3						

Milestone 5
Integration with commercial content providers

8.0 Dissemination

Dissemination, like evaluation, is a crucial aspect of DocuSend and the consortium intends to undertake dissemination activities in a continuous fashion through a variety of means from early in the project. It is expected that there will be considerable interest, across both the academic and commercial sectors, in the outcomes and evaluation findings of DocuSend. Given the possible changes to established thinking about document delivery which will be explored during the lifetime of the project, it is likely that academic interest will come from disciplines which are traditionally heavy users of document delivery services (such as the pure sciences) as well as from LIS. Furthermore, as DocuSend's enhancements to the operations of the Lamda supply libraries are rolled out to include direct delivery of rights-protected material, substantial interest from publishers and other rights holders can be predicted in the project's experience of such issues as access, authentication and billing. The project will therefore consider dissemination in appropriate fora with regard to all of these interested groups.

A set of core materials, such as PowerPoint presentations and overhead transparencies will be maintained by the Project Manager at the project office. In addition, individual consortium members will be free to undertake their own dissemination activities but will be encouraged to lodge with the Project Manager copies of materials they develop. These may include substantial items such as presentations, but will more typically include publicity leaflets, posters and pieces for insertion in library newsletters. The Project Manager will continue to co-ordinate dissemination effort over the period of the project.

Potential stakeholders for dissemination include:

- Academic library staff (particularly subject support, interloans and document delivery personnel)
- Academic library directors
- Relevant professional fora (e.g. Forum For Interlending)
- Undergraduate students (but typically finalists)
- Postgraduate students
- Academic teaching staff
- Other related research communities (e.g. RSLP, JCIEL, JTAP)
- RDN hubs
- Publishers and other owners of rights protected material
- Publishers' trade and professional organisations
- Research ventures to address rights-management issues (e.g. EASY consortium)
- Learned societies
- Bibliographical database producers
- JCIE and the Journals Working Group
- Related audiences overseas (e.g. LIDDA, IFLA Interlending and Document Supply Group)

In respect of the first half of the above list, DocuSend will naturally direct its efforts toward the HE sector, but in the context both of franchise agreements between HE and FE institutions, and of the growing cross-sectoral recognition of the importance of lifelong learning, the project may also seek dissemination in the FE sector. Over the three years of the project, dissemination will move from awareness-raising and initial publicity to full written and oral presentations articulating the functionality of the complete Request/Deliver chain, and its associated management and resourcing

issues. It will be equally important to report difficulties and challenges as it will be to report success, so that other practitioners can learn from the DocuSend experience.

A website will be developed and maintained throughout the life of the project. Responsibility for the development management and updating of the site will rest with the DocuSend project team, although the expertise to do so may be sourced externally under the project's provision for technical expertise. The site will give access to project news, information, dissemination activities and reports. An internal JISCMail discussion list will be set up for internal communication among project participants. The Project Manager will act as list owner.

Other means of dissemination utilised during the project may include:

- Awareness raising articles in the professional and academic press
- Training seminars to intending test sites
- Presentations and demonstrations to libraries wishing to use the service
- Presentations and demonstrations to potential participants among publishers or other rights-holders
- Open consultation days for interested practitioners
- National and international conference presentations
- General dissemination e.g. press, media, THES

A number of specific dissemination activities have been formulated in accordance with the strategic outline set out above. These are tabulated in the dissemination framework overleaf.

Method	Audience	Frequency	Contributor(s)
Web site	Potentially all	Ongoing	Project team
Links project on other websites (e.g. JISC, INSPIRAL)	Potentially all	Ongoing	Project Manager
Docusend JISCMail discussion list	Project Participants	Ongoing	Project participants (Project Manager as list owner)
Membership of appropriate external discussion lists e.g.: JISC Programme Managers	As appropriate	As appropriate	Project Manager
Local presentations	User groups	As appropriate	All partners
Training seminars	User institutions	As appropriate	Project team
Publicity/awareness raising seminars	Potential user institutions/potential suppliers (inc. commercial sector)	As appropriate	Project team
Report to JISC	JISC and the wider academic community	Twice per year	Project Manager
JISC teaching and learning meetings	JISC and the wider academic community	Once per year	Project team
JOIN-UP cluster meetings	Sharing of expertise with related projects	Thrice per year	Project team
Published papers: Professional press e.g. <i>Lib. Assoc. Rec.</i> Academic press e.g. <i>New review</i> titles	Practitioners Service managers, researchers	As appropriate	Project Manager Project Director
National conferences e.g. <i>Online, Libtech, FIL conference</i> Intern'l conferences e.g. <i>IFLA, Libraries Without Walls</i>	Practitioners Service managers, Researchers	As appropriate	Project Manager Project Director

9.0 Project Steering Committee

A Project Steering Committee will be formed to provide strategic direction, taking into account any technological, legal, commercial and other practical changes that impact on DocuSend during the life of the project. In order that the Steering Committee can be responsive and flexible, it will consist of:

- Anne Bell, Project Director
- David Whitehurst, Deputy Librarian, UMIST
- A small number of members of the Lamda Board
- DocuSend Project Manager (in attendance)
- A representative of Fretwell-Downing (at the invitation of the Committee)

This composition of the Steering Committee represents the senior LIS personnel (and members of the Lamda Board) who devised the original DocuSend proposal, as well as the Project Manager and DocuSend's main contact at the project's software supplier. It is expected that the DocuSend Project Director will report on DocuSend's progress to the Lamda Executive Group meetings.

A small number of additional members, including those from other appropriate organisations and initiatives, may from time to time be invited to join the Steering Committee. These additional members may include (but not be limited to):

- An independent consultant to assist with the copyright watch
- A nominee with expertise in related JISC projects /a JISC Programme Office representative

The DocuSend Steering Committee will meet at least quarterly, and more frequently if required, normally in London or Manchester. Some meetings may be conducted virtually, using videoconferencing. The Steering Committee will provide strategic direction, taking into account any technological, legal, commercial and other practical changes which impact on DocuSend during the life of the project. The Steering Committee will operate in conformance with the terms of reference elaborated by the JISC Office for the then DNER 5/99 cluster-level Steering Committees (Annex B of the management protocol alluded to in section 10.2 below).

The need to in-build academic and user input into the project is recognised. The Steering Committee will set in place appropriate arrangements to obtain user input at key stages. These arrangements will include the potential for contribution offered by the DocuSend Suppliers' Group discussed below.

9.1 DocuSend suppliers' group

In addition to the Steering Committee, an informal group made up of Document delivery/ILL staff from the Lamda supply libraries, who respond to Lamda requests on a daily basis, will be consulted. The Project Manager will also be a member. The frequency of the group's meetings will take account of the availability of personnel in busy services, and much (if not most) group discussion will take place by email. Group meetings will be supplemented by the Project Manager meeting with individual members on an *ad hoc* basis.

It is believed that the formulation of this group will add much to the project. The members will be able to contribute to the implementation of DocuSend from the perspectives of scheduling, workload, required functionality, system bugs, service

enhancement and inter-operation with extant systems. In addition, it should be noted that the libraries and user communities served by the supply library members represent a richly contrasting (and thereby informative) corpus of service environments. The data which the document delivery/ILL staff can supply in these respects will valuably complement the strategic perspectives, such as management overhead implication, cost, faculty response and conformance with library mission, which are proper to the Project Steering Committee. Feedback from service personnel will likewise usefully inform the project's internal, formative, evaluation.

9.2 JOIN-UP Steering Committee

As noted in the project's aims and objectives (section 2.0) Docusend is fully committed to supporting the implementation of the vision of the JOIN-UP cluster of 5/99 projects (ZBLSA, Xgrain, Docusend and zetoc) which are variously exploring complementary elements of the Discover/Locate/Request/Deliver information seeking/retrieval continuum. To this end, Docusend will seek to liaise and share experience with other JOIN-UP projects principally (though not exclusively) by attendance at JOIN-UP cluster Steering Committee meetings. Docusend will generally be represented at these meetings by members of the Docusend Steering Committee (usually the Project Director and David Whitehurst) and the Project Manager.

10.0 Quality assurance and evaluation

10.1 Quality assurance

Quality assurance of the deliverable outputs of the project will be, as indicated in the detailed workpackages and task schedule, by means of review by Project Management Group and Project Steering Committee at designated milestones.

10.2 Evaluation

The consortium regards evaluation as a key element of the project, and one that needs to be addressed from the outset. The evaluation strategy is a dynamic document: it forms part of this project plan, and will change and expand as the plan itself is elaborated. In designing the strategy, the following broad principles have been taken into consideration:

- The strategy should meet the requirements of the JISC Office as expressed in the project management protocol²²
- The strategy should be broadly compliant with the Tavistock Institute guidelines²³ for evaluation developed for the eLib Programme and endorsed in the JISC protocol
- The strategy should be consonant with the evaluation strategy used by the other three constituent JOIN-UP projects, and that used by the JOIN-UP cluster as a whole.

The project will adopt a dual strategy which includes both formative and summative approaches. Evaluation will be used to:

- Ensure that the project runs according to plan

²² <http://www.jisc.ac.uk/programmes/guidance/managementprotocol.html>

²³ <http://www.ukoln.ac.uk/services/elib/papers/tavistock/evaluation-guide/>

- Identify successes
- Identify problems, mistakes and weaknesses, and to devise appropriate corrective actions
- Match achievements with objectives and to ensure that objectives are met
- Provide evidence of the benefits and potential demand for the service provided for users
- Develop and use the expertise of the project team effectively
- Provide evidence of the impact and effectiveness of the project
- Provide information for stakeholders such as LIS and content providers
- Inform future plans for expansion and portability and, in particular, a continuation strategy

10.2.1 Formative evaluation – purpose

The purpose of formative evaluation is to assess the *process* and *progress* of the project as it moves forward. Formative evaluation acts as a quality control mechanism in respect of the requirements of the project plan. It is used to ensure that progress continues in accordance with the project timetable (and to design and put in place corrective actions if it does not) and to ensure that deliverables and other milestones are completed as specified in the project plan.

10.2.2 Summative evaluation – purpose

The purpose of summative evaluation is to assess the effect the project is having on the wider community in terms of the *effectiveness* of services produced by the project, and the *impact* of those services on the project's stakeholder groups. The data gathered by summative evaluation will be used to measure the project's effectiveness in terms of resources applied and value added, and to inform DocuSend's continuation strategy.

10.2.3 Formative evaluation – methodology

Formative evaluation will be undertaken internally within the project. This will involve continuous monitoring of the progress of the project by the Project Manager with regard to communications, achievement of milestones, problems arising and how these are overcome. Findings will be disseminated to project partners and to other stakeholders as part of the learning process fundamental to DocuSend.

The project management and control structures, and their corresponding reporting lines, as identified in section 5.0 of this project plan, will act as a framework for the formative evaluation methodology. The Project Manager (or his representative) will make regular updates on progress to the Project Director, the DocuSend Steering Committee and other fora as follows:

- Project Manager/Project Director: progress meeting (weekly, by telephone)
- Project Manager/Project Director/David Whitehurst: management meeting (monthly, in person)
- DocuSend Steering Committee (quarterly)
- Lamda Executive Group (at their meetings)

The formative evaluation methodology will comprise three main components:

- Identification and reporting of critical moments
- Project log book
- Bi-annual report to the JISC Office

10.2.3.1 Identification and reporting of critical moments

Fundamental to the formative evaluation will be the identification of a number of *critical moments* within Docusend's timetable. A critical moment may be defined as an event or process in the life of a project, without the successful completion of which the project cannot go forward. A full list of critical moments within Docusend, and their timings, will be identified as this project plan is elaborated, and will be included in a later release of the plan. Furthermore, the list will remain dynamic during the duration of the project, and will admit of the inclusion of supplementary critical moments, or changes to existing ones, as they arise.

A template will be designed for the reporting of critical moments. This template will include fields for description of whether the fulfilment process was successful or not and, if the latter, the impact on progress (including other critical moments), corrective actions required, and project resource implications. Critical moment reports will be completed by the Project Manager and will be submitted to the Docusend Steering Committee via the Project Director.

It is believed that evaluation by critical moment is more appropriate to Docusend than would be a fixed-period reporting requirement. Although there are many distinct elements to a notionally "complete" Docusend (e.g. extension of service to Lamda libraries, to non-Lamda libraries, to end-users, to commercial content providers, integration with other JOIN-UP projects) the overall dynamic of the project is one of extension rather than exact repetition. Management by critical moment enables the project team to evaluate progress against strategic milestones as they occur, and to take account of the frequently (and often necessarily) unequal periods which separate them.

10.2.3.2 Other formative evaluation mechanisms

Evaluation by critical moment will be supplemented by other measures to monitor the process and progress of the project. These will include:

Project log book

A project log book will be kept by the Project Manager, in which will be recorded:

- The day-to-day occurrences of the project
- A summary of regular and *ad hoc* meetings held – particularly liaison with the Docusend Suppliers' Group, either individually or together
- A record of requests processed by Docusend and their outcome by broad category (this will be undertaken by the Docusend system but shall be deemed to be part of the project log book for evaluation purposes)
- A record of training or assistance provided to Docusend users and other stakeholders, including an assessment of cost where possible

In addition to providing a linear record of the project, the logbook will be used to inform the business plan/continuation strategy during Docusend's third year. In order to demonstrate potential models for Docusend as an operational service, the project team will have to adduce market information to demonstrate viability, such as:

- Number of potential users
- Number of actual users (per stakeholder group) during trials

- Number of requests generated
- Percentage of requests successfully met
- Cost per request
- Training needs of stakeholders, and costs thereof

The project logbook will be used to supply information of these and other necessary types.

Bi-annual report to the JISC Office

In common with all JISC 5/99 development projects, DocuSend will report to the JISC Office at the end of January and July of each year. These bi-annual reports will include a narrative of progress during the period under review and, in the regularity of their preparation and submission, will complement the mechanism of evaluation by critical moment discussed above. The bi-annual reports will be prepared according to the template to be provided by the JISC Office.

10.2.4 Summative evaluation – methodology

Subject to ongoing discussions with JISC, summative evaluation may be outsourced by the project to an external contractor, although funding for this would need to be made available. An important element in these discussions would be the ongoing work of Peter Brophy and his evaluation of the Join-Up programme as a whole.

A contractor should be able to demonstrate:

- expertise in appropriate evaluative techniques
- a track-record of impact and effectiveness evaluation
- a proven history of undertaking evaluation in comparable prior projects

Several advantages would accrue to DocuSend through this approach. These would include the fact that this crucial phase of evaluation would be conducted with a very high degree of expertise, thoroughness and impartiality, and the evaluation would be completed with the minimum impact on project personnel time.

The precise configuration of the summative evaluation and the source of funding for it would need to be agreed between JISC, the DocuSend Steering Committee and the contractor. However, the evaluation would be concerned to assess DocuSend's impact and effectiveness and will consequently focus on the project's stakeholders in four major groups:

- Stakeholders whose support and co-operation is important for the success of the project (e.g. interloans and document delivery personnel, content provider contacts, technical staff)
- Stakeholders who are the intended beneficiaries of the project's outcomes (e.g. users, including under- and postgraduate, research, teaching; also interloans personnel)
- Stakeholders who will be expected to use or act on the findings (e.g. LIS managers and content providers)
- The project team and fora in which it is represented (e.g. the Lamda board)

The evaluation strategy would thus be compliant with the Tavistock guidelines' recommendations regarding the involvement of stakeholders:

“Involving the end users (librarians, academic teaching and research staff, students) as active participants in the development process increases the likelihood that the final products and services will meet the needs of users and achieve project goals... Users are thus a valuable sources of input and feedback that can enhance the quality of what is being developed”.

A managed mix of collection techniques would be used to gather the evaluation data, possibly including questionnaire surveys, face-to-face interviews, focus groups and user observation.

The summative evaluation would be undertaken as a single exercise since, as noted above, the overall dynamic of the project is one of linear extension, and DocuSend should best be evaluated at the point when the project has reached the largest range of stakeholders. The exact scheduling of the evaluation would need to be agreed between JISC, the DocuSend Steering Committee and the contractor. However, it is expected that the evaluation would take place during the first half of the final year of the project. The rationale for this timing is that it would allow the project to have been rolled out to as many different stakeholders as possible, thus permitting evaluation to be undertaken with all the groups concurrently. Furthermore, an important application of the results of the impact and effectiveness evaluation would be to inform the DocuSend exit strategy, which will demonstrate models of DocuSend as an operational service. The proposed timing thus affords an elegant balance between the need to collect data that is as current as possible by the project's end, and retaining sufficient time in hand to put in place any corrective actions which the evaluation may show to be necessary.

11.0 Risk assessment

It is very difficult, in a project of this size and complexity, to identify and quantify all the risks that might arise during the course of the Project. However, a number of the most obvious and serious risks are discussed below, as are either measures DocuSend will adopt to anticipate them, or the reasons why they are not thought likely to affect the project.

Loss of project personnel

The loss of one or more members of the project team could bring DocuSend to a temporary halt. The most serious loss would be either the Project Manager or the Project Director. In the event of the loss of the Project Manager (and loss of staff before the expiration of a temporary contract is both frequent and likely), progress could be maintained in two ways: recruitment of a replacement manager (if the remaining contract term made this a viable possibility) or the secondment to the post of a member of staff. The Project has already had to deal with this situation. During the course of the Project to date, the original Project Manager was offered and accepted another post. A new Project Manager was recruited to manage the project until completion, although there was a six-month hiatus. The Steering Committee is confident that this hiatus has not unduly prejudiced the project. In the event of the loss of the Project Director (which is not likely) another member of the Steering Group could take responsibility for the project. Progress could thus continue.

Dispute with software provider

A serious dispute with the project's software provider could impede progress. In projects of this nature, the area in which such disputes are most likely to arise is delays in releases of an agreed upgrade to the software or a delay in supply of

software. In DocuSend this risk will be addressed by escalation measures which will be agreed between the DocuSend Steering Committee and the software supplier. These measures will include the scheduling of payments to the software supplier over the whole term of the project, and the retention by DocuSend of a percentage of the value of invoices, year on year. While the project has experienced some problems with delays, this had been remedied by July 2003 and all outstanding project software has been delivered.

Dispute with external provider of technical expertise

As with the software provider, a dispute with the project's source of technical expertise could halt progress. The most likely cause of dispute is felt to be contracted tasks such as maintenance not being completed or not completed to schedule. This risk will be addressed in DocuSend by securing technical assistance by six-month periods which are subject to review at the end of each period. A provider will be invited to continue to offer support to the project only if performance has been acceptable in the period under review.

Reluctance of HE libraries to participate in the project

There is a risk that higher education libraries will be reluctant to participate in the project. Practitioners are understandably reluctant to participate in, and promote to their users, experimental services which can ultimately prove temporary. Should a pilot service fail to meet users' needs or, worse still, prove very successful but be withdrawn at project end, LIS staff sustain an appreciable loss of the good will and professional credibility among their readers whom they have carefully cultivated. This they are unwilling to forfeit. Nevertheless, DocuSend is well equipped to pre-empt this risk by its co-operation with the Lamda consortium. Lamda has demonstrated since its inception that experimental projects can sustain continuity of service and can be supported on an operational level. Also, the members of the DocuSend Steering Committee, and the other members of the Lamda board, will be able to utilise their high standing within the UK HE library community to encourage co-operation with the project among their colleagues in potential partner libraries.

Reluctance of private sector content providers to participate in the project

DocuSend will engage with and seek to resolve issues surrounding rights-protected material of the most extreme commercial sensitivity. It is these issues which the private sector, in the form of publishers and other aggregators, has shown itself somewhat reluctant to address and which constitute a potentially powerful disincentive to companies to co-operate with DocuSend. Although the project is unable to eliminate this risk, DocuSend has adopted measures to reduce it. Also, it has been suggested that by moving to a proof of concept approach, there is likely to be less concern from publishers. DocuSend intends to seek content providers from among those who are best acquainted with the needs and practices of the UK higher education sector. Such firms will include learned society publishers, the often smaller scale of whose publishing operations will also render them more suitable to the project than many larger concerns.

12.0 Budget

The cost of the project, excluding the value of partners' contributions in kind (see below) is £315,207 over three years. The breakdown is as given overleaf.

It should be noted that this is the budget as proposed in the original Project Plan. As there is now the requirement to spread the existing budget over the extended term of the project, i.e. until October 2004, some variations in spending patterns will occur. These variations will be reported through the bi-annual reports to JISC. An overview of the latest overall financial position appears at the end of the tables.

Year 1 (24 April 2001 – 23 April 2002)	£
Staffing (including salary oncosts)	
Project Manager, full-time at ALC 4 grade	40,700
Technical expertise (sourced externally)	11,100
Clerical support (on hourly basis)	6,000
Sub-total staffing	57,800
Non-staffing (including VAT)	
Software licence (capital expenditure)	42,625
Software support and maintenance (capital expenditure)	8,225
Hardware (capital expenditure)	5,542
Systems installation and training (capital expenditure)	10,225
Facilities management	3,000
Office equipment (capital expenditure)	2,000
Office expenditure	1,800
Travel	2,000
Sub-total non-staffing	75,417
Total Year 1: £133,217	
Partners' contributions	
<i>Project Director (0.1 fte at ALC 6 grade)</i>	6,300
<i>Steering Committee attendance (0.2 fte at ALC 6 grade)</i>	12,600
Year 2 (24 April 2002 – 23 April 2003)	£
Staffing (including salary oncosts and inflation)	
Project Manager, full-time at ALC 4 grade	43,100
Technical expertise (sourced externally)	11,700
Clerical support (on hourly basis)	6,200
Sub-total staffing	61,040
Non-staffing (including VAT)	
Software maintenance and support	8,225
Hardware maintenance	800
Facilities management	3,100
Software development	10,000
Office expenditure, including evaluation costs	4,000
Travel	2,000
Sub-total non-staffing	28,125
Total Year 2: £89,165	
Partners' contributions	
<i>Project Director (0.1 fte at ALC 6 grade)</i>	6,678
<i>Steering Committee attendance (0.2 fte at ALC 6 grade)</i>	13,356

Year 3 (24 April 2003 – 23 April 2004)	£
Staffing (including salary oncosts and inflation)	
Project Manager, full-time at ALC 4 grade	45,700
Technical expertise (sourced externally)	12,400
Clerical support (on hourly basis)	6,400
Sub-total staffing	64,500
Non-staffing (including VAT)	
Software maintenance and support	8,225
Hardware maintenance	800
Facilities management	3,300
Software development	10,000
Office expenditure, including dissemination costs	4,000
Travel	2,000
Sub-total non-staffing	28,325
Total Year 3 : £92,825	
Partners' contributions	
<i>Project Director (0.1 fte at ALC 6 grade)</i>	7,079
<i>Steering Committee attendance (0.2 fte at ALC 6 grade)</i>	14,158
Total project funding from JISC	£
Year 1	133,217
Year 2	89,165
Year 3	92,825
Total	315,207
Total partners' contributions	
Year 1	18,900
Year 2	20,034
Year 3	21,237
Total	60,171

Note on current financial situation and use of remaining funds:

As at the latest available date of 30 June 2003, total expenditure was £166 839.
The amount available for the remainder of the project is therefore £155 190.

It is anticipated that this sum will be spent as follows:

Project Year 3 (May 2003 – April 2004)	£ 96 804
Project Year 4 (May 2004 – October 2004)	£ 58 386
Total:	£155 190

Regular financial reports will be prepared and will be reported in the Bi-annual Progress report to JISC.

Appendix A - DocuSend VDX Requirements

Request creation

1. A request can be created by a requesting library to the DocuSend server in a number of ways:
 - As an ISO ILL request
 - Through submission via a web form (the FDI VDX web interface blank form, already available in VDX, or equivalent)
 - By submitting a structured e-mail which conforms to the format as described in the document "E-Mail Request Interface: mail_reader"
2. The requesting library will almost certainly have allocated its own unique number to each request which must be retained by VDX throughout the business process.
3. The Lamda union list will also be searched as a Z39.50 target. See Note 1 to this document (*Journal holdings parsing*).

Document delivery via FTP under Phase 1 (Lamda supply libraries only)

1. Request submitted by requesting library through one of the routes described above.
2. The DocuSend server locates potential supply libraries and transmits the request to the preferred supplier where one has been specified. If the requesting method is a structured email, the email must include the preferred supplier in an appropriate format for VDX, i.e. the code in the suppliers' directory in VDX. This will require the supplier codes to be added to the Lamda union list by MCC.
3. Where more than one supply library is identified, and where no preferred supplier is specified, the server will achieve load balancing by date-stamping each responding location when it is used as an actual responder (not just when it is in a rota). Then, an extra sort will be added to the auto-routing so that all else being equal, locations with the least recent date-stamp will be favoured.
4. Libraries will be able to 'suspend' their availability with a specific reason (cannot be picked for rota, will be skipped when rota moved on, or cannot make requests) defined by 'from/to' dates. This suspend/resume function will be activated by the DocuSend office at the supply libraries' request, not by the libraries themselves.
5. An alert will be sent to the requesting library giving rota details.
6. The supply libraries will log on to the system to view requests allocated to them.
7. The supply library to which the request has been allocated accepts or rejects the request by means of the web administration form.
8. Requests for material not available from Lamda will automatically be forwarded to BLDSC. In these cases:

- Either the original request or the requesting library's profile must include their BL account username and profile (in this case the account username and password must be in the profile in VDX)
 - The requesting library must have a deposit account with BLL
 - The requesting library will be informed by VDX that the request has thus been forwarded.
9. A change in status will generate an alert to the requesting library giving details.
 10. Accepted requests move to the appropriate ARIEL workstation.
 11. The supply libraries will use ARIEL to scan and transmit articles to the requesting library's ARIEL workstation.
 12. Successful transmission of the requested document as above will change the request status to 'shipped'.
 13. Those libraries that act as both requesters and suppliers will use the web administration interface for service operation. Requesting only libraries will place their requests and will be sent human readable emails giving updates on a request's progress.
 14. Full transaction logs will be kept and data from them will be downloaded and used in the Lamda Support Office's Bedlam system (or any other Access-based accounting application) for the preparation of invoices and supply library payments.

Document delivery to intermediate store (Lamda supply libraries only)

1. As *Document delivery via FTP* paras 1-10 above.
2. The supply libraries will use ARIEL to scan and transmit articles to a designated web space as an intermediate store.
 - The end-user's id, name and e-mail address must be included in the original request
 - The requested article is scanned and sent back to VDX as a TIFF file using FTP
 - When the article reaches VDX, a driver will pick it up and post it to the designated web server
 - It is envisaged that the designated web space will be on the DocuSend server but outside the VDX environment. It is imperative that requesting libraries will not need to purchase VDX licenses so their end-users can access it
 - On a shipped or received message (configurable) VDX will send a user alert to the patron which will include a URL where the article has been posted to, and authentication (user name and password – system generated per article) for the patron to access that particular article from the server.
 - The end-user logs on to the server and downloads the document
 - The document will be retained for a number of days before deletion (whether accessed or not) in case of misdelivery. The number of days can be specified as part of the configuration. During this period the document will only be accessible to the local system administrator, and only the local system administrator will be able to authorise the user to re-access the document
 - The document is deleted from the store after a pre-set period of time

3. When the request is sent from Ariel back to VDX the status of the request will change to 'shipped'. A full audit trail will be generated and retained when the driver picks up the document and posts it to the designated filespace.
4. Those libraries that act as both requesters and suppliers will use the web administration interface for service operation. Requesting only libraries will place their requests and will be sent human readable e-mails giving updates on a request's progress. Where electronic delivery to the end-user is required, the end user's e-mail address must be included in the original request.
5. Full transaction logs will be kept which can be downloaded to the Lamda Support Office's Bedlam system (or any other Access-based accounting application) for the preparation of invoices and supply library payments.

Phase 2: General observations

1. During the first year of the project we will look at the addition of other supply services and their catalogues to DocuSend. During Phase 2 full request profiles will need to be set up (by the DocuSend staff) defining user preferences for supply services which may be based on price, means of delivery etc).
2. The DocuSend server locates a potential supplier based on the preferences in the requesting library's profile.

Note 1 – Journal holdings parsing

1. The aim of the journal holdings parsing facility is to ascertain which libraries hold a particular issue of a journal. The DocuSend server will automatically search the Lamda union list using ISSN (and optionally exact journal title) and retrieve records and their holdings information.
2. Having analysed the format of the holdings data within the union list, the scope of the parsing facility must be defined as those formats which can be considered computer parsable. Examples of holdings formats from the union list include:

Example	Intelligently analysable?
(3,Holding) Q1.A3 1972-1989; BLPES	N
(3,Holding) L16 VOL.1-VOL.1(4), 1969-1970.; BLPES	N
(3,Holding) L915 1995/96 ONLY; BLPES	N
(3,Holding) JA11 VOL.1-, 1951-; BLPES	N
(3,Holding) HV243.A2; BLPES	N
(3,Holding) H11 1940/41-1996/97; BLPES	N
(3,Holding) H61.8 VOL.1, NO.1 (OCTOBER 1980) – VOL.5; BLPES	N
(3,Holding) JN821; BLPES	N
(3,Holding) H8 VOL.1 (1985)-; BLPES	N
(3,Holding) H1 N1-VOL.6, 1956-1965.; BLPES	N
(3,Holding) JX1901 VOL.5 (FALL 1980)-; BLPES	N
(3,Holding) JA26 VOL.11 (1981)-; BLPES	N
(3,Holding) B1 .A1 V.8 (1939/40) ONLY; BLPES	N
(3,Holding) AP4 VOL.1-VOL.3(1), SPRING 1943-SUMMER 1; BLPES	N
(3,Holding) UNESCO (R21); BLPES	N
(3,Holding) HUTCHINSON COLL.1901 [SPEC]; BLPES	N
(3,Holding) HE1 VOL.28 NO.1 (FEBRUARY 1994)-; BLPES	N
(3,Holding) v.1-91 (1966-1983); Joule Library	Y
(3,Holding) Vol.5.75, 1969-1981; KINGS – STRAND CAMPUS	Y
(3,Holding) Vol.1-5(3), 1966-1969; KINGS – STRAND CAMPUS	Y
(3,Holding) Vol. 1-, 1978-; UNIVERSITY COLLEGE LONDON	Y
(3,Holding) v.1-5 (1975-1982); Edward Boyle Library	Y
(3,Holding) v.1- (1986-); Edward Boyle Library	Y

Development commitment

1. The following level of intelligent journal holding analysis will be developed into the VDX software:
 2. The call number will be displayed from a search and will be populated against that location in the rota.
 3. The request date and/or issue enumeration will be analysed against the chronology and/or enumeration fields in the holdings data.

4. The enumeration field will be analysed for single numbers – indicating a single issue, ranges separated by “-“ and multiple occurrences of these separated by “,”. For example:
 - Vol 1 Indicates volume 1 held
 - V1 Indicates volume 1 held
 - 2- Indicates volume 2 onwards held
 - V1-5 Indicates volume 1 to 5 held
 - Vol1-Vol5, 7 Indicates volume 1,2,3,4,5 and 7 held

5. The chronology field will be analysed in the same manner looking for year numbers only. For example:
 - 1995 Indicates 1995 issues held
 - 1995- Indicates everything from 1995 onwards is held
 - 1995-96 Indicates 1995 and 1996 held
 - 1995-96, 99- Indicates 1995 and 1996 held and 1999 onwards

6. Noise words will be ignored (for example Vol, V, From etc).

7. In all cases, if the holdings strings cannot be analysed fully the assumption will be that the library **DOES NOT** hold the item. This functionality to be switchable to least dissatisfactory option in practice (to be decided).

Commitments required from Lamda

1. List of unique Library Symbols as they appear in the union list to be provided.

2. Adoption of format OPAC1:
 - Local location: Library Symbol
 - Call Number: Call Number
 - EnumandChron: Enumeration and Chronology
 - Copy number
 - Public note

3. Where possible enumeration and chronology data should be standardised and, if possible, in the future separated into separate tags.