

COMMISSION OF THE EUROPEAN COMMUNITIES



LIBRARIES PROGRAMME

TELEMATIC SYSTEMS IN AREAS OF
GENERAL INTEREST 1990-1994:
LIBRARIES

LIBRARIES PROGRAMME: CALLS FOR PROPOSALS

SYNOPSES OF PROJECTS

(Release: Cfp'91 and Cfp'92)

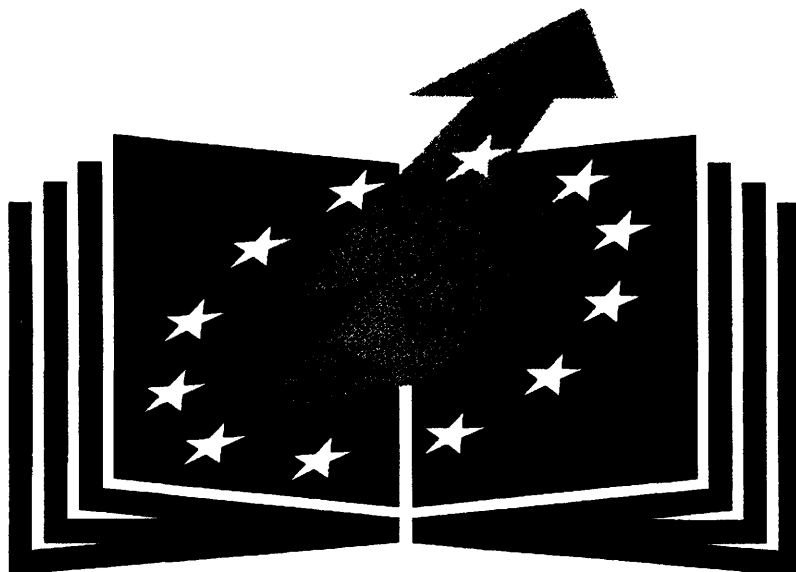
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30 October 1993



COMMISSION OF THE EUROPEAN COMMUNITIES
Directorate General XIII
Telecommunications, Information Market
and Exploitation of Research

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TELEMATIC SYSTEMS IN AREAS OF
GENERAL INTEREST 1990-1994:
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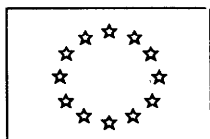
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SYNOPSIS OF PROJECTS

PREFACE

The present document is the second issue of the synopses of R&TD projects supported under the Libraries Programme. The Libraries Programme is one of the 7 distinct areas covered by the specific R&TD "Telematic systems in areas of general interest" (of the Third Framework Programme for Research and Technological Development, 1990-1994).

It contains the synopses of the 14 selected projects resulting from the first Call for Proposals which was issued in July 1991¹ and the 15 resulting from the second Call for Proposals which was issued in October 1992. Projects from the first call are numbered 1nnn and those from the second call are numbered 2nnn.

The synopses are presented according to the structure of the Libraries Workprogramme, described more fully in the Technical Background Document for the Programme². They are therefore grouped by action line and its themes:

- Action Line I: Computerised bibliographies, Parts I and II
- Action Line II: International interconnection of systems
- Action Line III: Provision of new library services using information and communication technologies
- Action Line IV: Stimulation of a European market in telematics products and services for libraries.

Appropriate indexes are provided.

As per usual practice, the document will be updated at regular intervals to reflect progress on the projects and to include the results of further Calls for Proposals in the Libraries area.

This issue does not contain synopses for the main precursor cooperative projects which were started during the preparatory phase of work prior to the launching of the Libraries Programme, and which are coherent with the Workprogramme and its objectives (e.g. Project ION and the CDBIB project). These projects are already well-known. Nevertheless, for completeness in terms of technical coverage, these may be included in a later update of this document.

¹ For more information on these Calls for Proposals, see the documents "Libraries Programme, Call for Proposals 1991, An Overview" (May 1992) and "Libraries Programme, Call for Proposals 1992, An Overview" (April 1993)

² Libraries Programme; Technical Background Document - Definition of Scope and Approach, Description of the Lines of Action and related Preferred Priority Themes, May 1991, updated September 1992

For further information on the Libraries Programme, contact the "Libraries Unit":

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or the National Focal Points for the Libraries programme in each EC Member State.

ABBREVIATIONS

EC Member States

B	Belgium
D	Germany
DK	Denmark
E	Spain
F	France
GR	Greece
I	Italy
IRL	Ireland
L	Luxembourg
NL	The Netherlands
P	Portugal
UK	United Kingdom

EFTA Member States

A	Austria
CH	Switzerland
FL	Liechtenstein
ISL	Iceland
N	Norway
S	Sweden
SF	Finland

Roles

C	Coordinator
P	Partner
A	Associate Partner
S	Sub-Contractor

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1025	EBP	European books in print (Theme 15)	21
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Investigation into Greek language transliteration problems

HELEN

Keywords: automatic transliteration; Greek;. character sets; bibliographic record conversion

Proposal No: 1040

- Theme** Service packages to enhance international use of national bibliographic records (conversion programmes; delivery mechanisms; standards etc) (Theme: 2)
- Project description** The main goals of the project are:
- * the development of advanced transliteration software for the conversion of bibliographic records into and out of the Greek character set;
 - * to promote the wider use of consistent and reversible transliteration standards.
- Machine-readable records for Greek language materials exist mostly in transliterated form. Past practices in transliteration have been diverse and the use of reversible schemes limited, thus impeding the conversion and exchange of records for use in the Greek alphabet. The project will develop software to aid the conversion of bibliographic records between Greek & Roman alphabet languages. The structure of the bibliographic record, the MARC format, and the relationship of key data elements to authority files will be used to enhance the transliteration software. In the process, research will be carried out on name authority issues and transliteration standards and practices. The software will be designed as general purpose modules for use in a stand-alone environment but will be tested operationally by being integrated into a library system in Greece.
- Technical approach** The basis for development is a core transliteration module to handle simple character by character transliteration, logically independent of any character-set representation scheme. This will be enhanced in stages: to handle main, common transliteration schemes in different languages; to incorporate name conversion routines, based on name authority files; to develop more intelligent features such as automatic recognition of transliteration schemes, routines for treating ambiguous characters. Problems of access and display of Greek script records in Roman alphabets will be investigated and solutions tested. The software will be evaluated and tested by partners in Greece after each of the key development phases as input to the final version.

Key issues The main technical issues to be explored are:

- * Reconciliation of past transliteration practices with current requirements for easy reversible transliteration;
- * Use and integration of name authority files as a tool in transliteration;
- * Development of transliteration tools for potential multi-lingual sources;
- * Conformity with standards for character sets, bibliographic records in Greek environment.

Impact and expected results The project will enable wider access to Greek material both for native and non-native Greek speakers and encourage the exchange of records for current and retrospective cataloguing. The testing and evaluation programme in Greek libraries will promote the potential of such record exchange in Greece.

The results will be: modular software available to libraries in Greece and other interested parties; and a prototype implementation, integrated into an operational Greek library system.

Expected duration 24 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	University of Bradford, Dept Computing	UK	C
	King's College Library, London	UK	P
	University of Crete Library	GR	P
	Athens College Library	GR	A
	National Hellenic Research Foundation	GR	A

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Status Operative Commencement Date: 1st January, 1993
Main deliverables produced:
Core character set conversion software (R) + test diskette (R)
Transliteration principles report (P)
Attained objectives: initial software design and implementation

Date 30 October 1993

User-controlled Generic MARC Converter

USEMARCON

Keywords: MARC; converter; bibliography

Proposal No: 2054

Theme	Service packages to enhance international use of national bibliographic records (conversion programmes; delivery mechanisms; standards; etc.) (Theme: 2)
Project description	<p>At the (national) libraries in the European Community about ten different standards of MARC formats are being used. The goal of the project is to develop a toolbox able of converting bibliographic records from any MARC format into any other format through a central conversion format: UseMARCON. For usage of the toolbox no programming experience is required.</p> <p>The objectives of the project are:</p> <ul style="list-style-type: none">- to produce a data-driven tool- to enable, via a user-friendly interface- to define how the conversion is to take place between the source and the destination formats.
Technical approach	<p>The Project is divided in 3 main phases: first it will investigate the feasibility of the converter by analysing the conversion problems and by evaluating whether those problems can be solved by a data-driven tool. This phase will end up with a go/no go decision to implement further in the second phase. The technology to be used will be defined at this stage. The third phase will consist of a pilot experiment on real set s of bibliographic data coming from the participating libraries.</p>
Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none">* validate the use of UNIMARC as common format* automatic filling of the reverse conversion tables* user-friendly tool with no programming skills needed
Impact and expected results	<p>Impact: facilitates the interchange of bibliographic information between libraries</p> <p>Results:</p> <ul style="list-style-type: none">* software tool to convert MARC formats* validation of UNIMARC as common bibliographic format
Expected duration	25 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Koninklijke Bibliotheek	NL	C
	VNI Informatica & technologie	NL	P
	Instituto da Biblioteca Nacional e do Livro	PO	P
	The British Library	UK	P
	Die Deutsche Bibliothek	DE	A

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NL-2509 LK The Hague
Tel: +31 703140597
Fax: +31 703140424

Status In final stages of negotiation

Date

30 October 1993

Action Line I, Part 2: Retrospective conversion of catalogues of important collections at international level - tools and methods

Fast Automatic Conversion with Integrated Tools: OCR/ICR in retroconversion of catalogues - automatic error detection/correction and formatting

FACIT

Keywords: OCR/ICR; retrospective conversion; library catalogue cards; automatic formatting; character recognition

Proposal No: 1044

Theme Use of OCR/ICR for RECON (Theme:4)

Project description The project aims to produce a working prototype for automatic error detection and correction and automatic formatting of catalogue cards, based on and matching high-volume, fast throughput from the scanning process. The conversion to machine-readable form of library catalogue cards confronts issues relating to: quantities of cards; the physical properties of the cards, eg their size and highly variable print quality; the variations in the format and content. The twin factors of volume/scale of the operations and cost have been effective deterrents to large-scale retrospective conversions. This project is based on previous work which developed a customised scanner, with a bulk card feed, for fast conversion to ASCII of catalogue card data. It will extend the automatic processing to include error correction of typical, analysed errors and to provide automatic formatting of the scanned data to UNIMARC. Using input from libraries in Denmark, Italy and Greece a prototype workstation will be developed and tested. At the same time, the project will be the means for establishing centres of relevant experience and knowledge in these countries.

Technical approach The project is structured round the following phases: analysis; specification and development of initial prototype; test and evaluation of the methodology, leading to finalisation of the prototype. The initial analyses cover: the formal features and data content of catalogue cards in the partner libraries; typical errors, identified after the test conversion via OCR of samples in the partner libraries. The specifications and development will be carried out by the main subcontractor. The prototype will then be tested in each of the partner libraries, according to a defined evaluation methodology. The prototype software will be developed to be independent of specific OCR/ICR hardware so that it can be interfaced to any comparable, fast scanning and character recognition process.

Key issues	<p>The main technical issues underlying the project relate to:</p> <ul style="list-style-type: none"> * Diversity of source cards in terms of quality and content and the extent to which this can be accommodated; * Quality of output format that can be obtained; * Character sets, both for recognition and representation; * Speed and cost-effectiveness of the approach. 																								
Impact and expected results	<p>The project will further the automation of libraries in Europe by providing tools for fast and cheap mass conversion of catalogue cards into a machine-readable format suitable for use in library online catalogues and circulation systems. It will also boost recon expertise in Italy and Greece.</p> <p>The key results will be a series of methodological tools: methods for formal analysis of catalogue cards; methods for formal analysis of typical errors; methods for the assessment of the quality, speed and cost of recon using OCR/ICR. The prototype software, with accompanying manual, will be available as public domain software to other libraries for non-commercial use and to the main subcontractor under licence for commercial exploitation.</p>																								
Expected duration	26 months																								
Participants	<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><u>Organisation</u></th> <th style="text-align: left;"><u>Country</u></th> <th style="text-align: left;"><u>Role</u></th> </tr> </thead> <tbody> <tr> <td>Statens Bibliotekstjeneste</td> <td>DK</td> <td>C</td> </tr> <tr> <td>Statsbiblioteket Aarhus</td> <td>DK</td> <td>P</td> </tr> <tr> <td>Biblioteca Nazionale Centrale di Firenze</td> <td>I</td> <td>P</td> </tr> <tr> <td>Biblioteca Nazionale "V.E. III" Napoli</td> <td>I</td> <td>P</td> </tr> <tr> <td>Ethnike Bibliotheke tes Hellados</td> <td>GR</td> <td>P</td> </tr> <tr> <td>Det Kongelige Bibliotek</td> <td>DK</td> <td>A</td> </tr> <tr> <td>Synergi I/S</td> <td>DK</td> <td>S</td> </tr> </tbody> </table>	<u>Organisation</u>	<u>Country</u>	<u>Role</u>	Statens Bibliotekstjeneste	DK	C	Statsbiblioteket Aarhus	DK	P	Biblioteca Nazionale Centrale di Firenze	I	P	Biblioteca Nazionale "V.E. III" Napoli	I	P	Ethnike Bibliotheke tes Hellados	GR	P	Det Kongelige Bibliotek	DK	A	Synergi I/S	DK	S
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Statsbiblioteket Aarhus	DK	P																							
Biblioteca Nazionale Centrale di Firenze	I	P																							
Biblioteca Nazionale "V.E. III" Napoli	I	P																							
Ethnike Bibliotheke tes Hellados	GR	P																							
Det Kongelige Bibliotek	DK	A																							
Synergi I/S	DK	S																							
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Status	<p>Operative Commencement Date: 2nd January 1993</p> <p>Main deliverables produced:</p> <ul style="list-style-type: none"> Specification of User Interface (R) Draft specification for error detection/correction & formatting (R) <p>Attained objectives: completion of the first phase has been delayed to November 1993. This is not expected to affect the overall project timetable.</p>																								
Date	30 October 1993																								

Electronic Data Interchange for Libraries and Booksellers in Europe

EDILIBE II

Keywords: EDI; EDIFACT; library business messages; OSI; X.400

Project No: 1011

Theme	Acquisition functions using EDIFACT (Theme: 10)
Project description	<p>The objective of this project is the standardised electronic information change of business messages between libraries and booksellers in Europe.</p> <p>EDILIBE I, a Libraries preparatory pilot project, examined the business messages BISAC, TRADACOMS, EDIFACT and ANSI X.12 and analysed X.400 communications facilities available in four countries. The consortium has also produced an EDIFACT recommendation for four library orientated business message types, namely: quoting, ordering, order response and invoicing.</p> <p>This phase of the project involves the implementation of OSI based EDIFACT and X.400 software in each of the participants systems, interoperability testing and support of the standardisation process for the library related EDIFACT subsets.</p>
Technical approach	<p>The participants will select the required hardware and software and prepare a detailed realisation concept and project plan for each participant. The plan will include specifications for software to implement the library related EDIFACT messages in each system. They will implement the individual system specific EDI software, connect to the X.400 networks and execute final integration tests. Interoperability tests will then be run between all participating libraries and booksellers.</p>
Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none">- Initialisation and monitoring of the standardisation process for the developed EDIFACT subsets.- Inter-operability testing including the investigation of transactional security- Dissemination of results and the inclusion of new partners for further testing
Impact and expected results	<p>The project will demonstrate the efficiency and viability of EDIFACT and X.400 based services in handling acquisitions procedures between libraries and library suppliers.</p>

Expected duration 22 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Stadt-und Universitätsbibliothek Frankfurt	DE	C
	Otto Harrassowitz	DE	P
	Casalini Libri Firenze	IT	P
	Biblioteca Nazionale Roma, Firenze	IT	P
	B.H. Blackwell	UK	P
	Biblioteca Nacional Madrid	ES	P
	John Rylands University Library	UK	A
	PICA, Leiden	NL	P
	BLCMP, Birmingham	UK	P
	Universitätsbibliothek Göttingen	DE	P

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Status The participants have completed conceptual outlines for the implementation of EDIFACT and X.400 hardware and software at each of the sites and are currently analysing possible X.400 network solutions. The group will be implementing the 1988 X.400 standard. EDIFACT standardisation work is progressing well, the project is currently investigating migration from EDILIBE I message types to common EANCOM standard messages in cooperation with the pan-European book sector EDI group, EDItEUR. Additional partners from Spain and Italy have been integrated into the group. The partners are also active in information dissemination through journal articles and conference presentations.

Operative commencement date: April 1993

Date

30 October 1993

Electronic Document Interchange between Libraries

EDIL

Keywords: document delivery; OSI; networking; FTAM

Proposal No: 1042

Theme	Fast document transfer and delivery (Theme:11)
Project description	<p>The main objectives of the EDIL project are:</p> <ul style="list-style-type: none">- to demonstrate the international electronic interchange of documents between main European library networks,- by using standard or widely available products,- to disseminate the results by an active pilot and demonstration stage. <p>Within the context of European cooperation in the implementation of networked library services, the EDIL project will automate the transfer and delivery of documents between participating national nodes. The project will experiment the electronic exchange of documents at several site libraries selected from each national network involved in the project. The project will then evaluate and modify as necessary the operation of the EDIL system.</p>
Technical approach	Based on the work of the GEDI group, the EDIL project will implement a European document delivery network by building, in each of the participating countries, gateways between the national document delivery system (where it exists) and the standard format chosen by the project. The project intends to use, at least during this first pilot stage the FTAM protocol above the international X25 services offered by IXI.
Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none">* Validate the use of standards for international interconnection and document delivery* Foster within European libraries the expertise in communication standards and the building of national systems to connect to EDIL.* Improve the quality of document delivery in Europe.
Impact and expected results	<p>Impact - increased cooperation between libraries in the IT area</p> <p>Results</p> <ul style="list-style-type: none">- Fast interchange of printed and electronic information between libraries in Europe- Reports on experiment evaluation.

Expected duration 30 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Télé Systèmes	F	C
	Ministère de l'Education Nationale	F	P
	INIST	F	P
	Centrum voor Bibliotheekautomat. PICA	NL	P
	British Library Document Supply Center	UK	P
	Universitätsbibliothek Hannover und Technische Informations Bibliothek	D	P
	FCCN	P	A

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Status Operative Commencement Date: 18 January 1993
Main deliverables produced:
- User requirements analysis R
- EDIL Relay requirements Specification R
Attained objectives: the project has stuck to the original planning
and is now finalising the design phase of the EDIL relay system.

Date 30 October 1993

SR Origin Communication Kernel

SOCKER

Keywords: workstation; OSI; SR; OPAC; networking

Proposal No: 1050

Theme Retrieval function - Interconnected OPACs (Theme:9)

Project description The main objectives of the SOCKER project are:

- to test the viability of the ISO SR standard through actual development
- to implement the client side of SR within 3 environments (CD-ROM workstation, library system, network access point)
- to disseminate the expertise by active pilots in the EC countries
- to act as a testbed for existing target implementations (ION, SRnet)

The project will use existing ISO development software to implement SR on standard platforms. The project will first examine the options chosen in the cooperating target systems and will develop a kernel which will be ported on the 3 different environments, and then be adapted to the local interfaces. The project will focus on the problems related to the use of international networks, related to the query language translation, and will provide input to the standardization process by reporting on the results of the initial study phase and of the dissemination stage. 2 pilot phases are foreseen: a closed pilot especially at the sites using one of the participants' environment, and an open pilot where the workstation implementation will be extensively tested, if possible at sites located in Southern countries.

Technical approach The project has taken a classical approach for the development of software. After a study phase of the SR standard and the user requirements, the project will design and implement the different systems. The originality is in the development of a common kernel which will be used by the 3 participants to integrate in their environment. The testing stage will be carried out within an operational context. Technology used will be ISODE for the communication software and UNIX as standard development platform. Both X25 and TCP/IP will be the basic communication protocols.

Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none"> * Foster implementation of ISO standards in libraries * Spread expertise on OSI in Europe * Prepare basis for uniform access to library catalogues, by having one workstation accessing multiple targets. * Encourage the use of distributed library resources 		
Impact and expected results	<p>Impact - improve active participation to standards making in Europe Results - SOCKER end-products freely available for dissemination and demonstration purposes, user survey on pilot operation, input/participation to standardization bodies.</p>		
Expected duration	36 months		
Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	UNI-C	DK	C
	Information Management & Engineering Ltd	UK	P
	Forskningsbibliotekernes edb-Kontor	DK	P
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Status	<p>Operative Commencement Date: 15 December 1992 Main deliverables produced:</p> <ul style="list-style-type: none"> - Recommendations to Kernel R - Requirements for the Kernel C - CD-ROM target analysis R <p>Attained objectives: the project has progressed according to plan and has now finalised the first phase.</p>		

Date 30 October 1993

Library Information enquiry and Referral Network

LIRN

Keywords: OSI; X.500; directory; thesaurus

Proposal No: 2014

Theme	X.500 Directories (Theme: 12)
Project description	<p>The project will develop an electronic enquiry and referral service for European libraries based on the ISO 9594/CCITT X.500 Directory standard. The concepts and feasibility of the service will be defined and evaluated during a pilot operation using business as a subject topic.</p> <p>The project will develop a pilot enquiry and referral service between 3 library communities in Portugal, UK and Belgium. The services and architecture of LIRN will be studied and defined. Information regarding the subject of business will be held in a distributed data base and this will be based on the X.500 Directory standard.</p>
Technical approach	<p>The project is structured in 3 phases: it will start by a definition phase where the relevance of using X.500, the technology and the techniques for thesaurus development and collection of data will be studied; phase 2 will cover implementation, installation of the systems in Portugal, the United Kingdom and Belgium, and the interconnection using EuropaNET; during phase 3, the system and service provided by LIRN will be evaluated with the involvement of a selected community of business users at each of the 3 sites.</p>
Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none">* Experiment the use of X.500 directories for libraries* Validate the use of standards for international interconnection* Foster the expertise in communication standards by putting together experts in telecommunications, libraries and business partners.
Impact and expected results	<p>Impact - improve on the level of service to end-users</p> <p>Results</p> <ul style="list-style-type: none">- feasibility and specifications of the LIRN applications- prototype software for the pilot service in 3 countries- methodology for the development of a thesaurus- laying grounds for the use of X.500 for other services than pure white pages
Expected duration	24 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	LASER	UK	C
	Business Information Network	UK	P
	Université Libre de Bruxelles	BE	P
	University of Aveiro	PO	P
	Level-7	UK	A
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Status	In final stages of negotiation		

Date

30 October 1993

European SR-Z39.50 Gateway

EUROPAGATE

Keywords: OSI; gateway; SR; Z39.50;

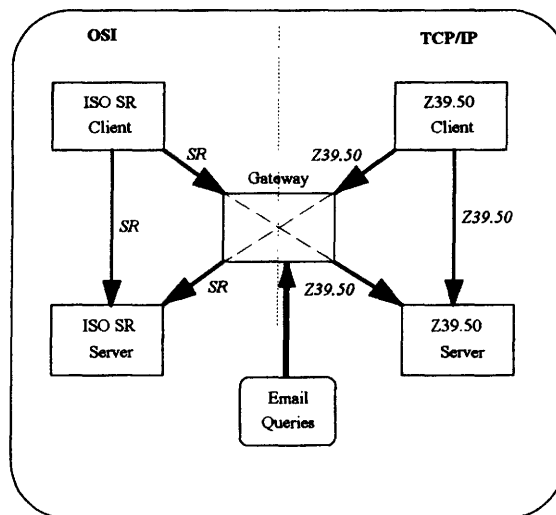
Proposal No: 2062

Theme Retrieval function - Interconnected OPACS (Theme 9)

Project description This project aims to build and operate a pilot service through which users can access ANSI Z39.50 and ISO SR servers which provide on-line access to catalogues. Users' requests will be handled over widely available data networks (e.g. public X.25, IXI and TCP/IP-based networks) using existing clients which incorporate the ANSI and ISO standards. Requests will also be processed via e-mail. The cost recovery element of providing the service will be investigated to evaluate the feasibility of offering a permanent service.

The project will build as far as possible on the results of the Irish Telematique project, and on results elsewhere. Existing software packages will be integrated to deliver the desired service.

Technical approach



Key issues

The main technical issues to be explored are:

- * evaluate the common set of features provided by the 2 standards
- * establish a tool to allow current separate islands to communicate
- * investigate the problems of a mixed OSI TCP/IP approach

Impact and expected results Impact: allow 2 currently isolated worlds to communicate with each other, plus an Email access to interactive services

Results:

- * a tool implementing a gateway between SR and Z39.50
- * network nodes inter connecting OSI and TCP-IP applications for bibliographic access to catalogues
- * the embryo of a commercial service

Expected duration 23 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	University College Dublin	IR	C
	Danmarks Tekniske Bibliotek	DK	P
	An Chomhairle Leabharlanna	IR	P
	Consejo Superior de Investigaciones Cientificas	ES	P

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Status In final stages of negotiation

Date 30 October 1993

Electronic library image service for Europe

ELISE

Keywords: Image-banks; digital imaging; remote image delivery; ISDN

Proposal No: 1008

- Theme** New information products in libraries (e.g. optical disc, local information files, etc). (Theme:15)
- Project description** The project will model a system which will provide access to full colour image information banks held in libraries in three Member States, through the:
- design and establishment of a bank of full colour images and associated text for real-time remote access in participating libraries;
 - modelling of interconnection between participating image banks using ISDN;
 - demonstration of the pilot and communications model.
- The field of image information management in libraries has been underexploited in comparison with textual information and library automation. The availability of the technology at affordable cost, the convergence of interests in educational use of images and image-held materials, and the emerging image information market all testify to the timeliness of, and act as stimuli to, library system developments in the field of colour imagebanks. The project will investigate: the technical requirements of establishing full colour image banks in libraries; the associated storage and retrieval mechanisms; client needs and design interfaces; and the technical requirements for international interconnection of image-bank systems.
- Technical approach** On the basis principally of desk research, the project will establish the requirements relating to the imagebank, the retrieval methods and standards to be applied, and the user-interface design. These will result in system procurement which will become the basis for software development and testing against the full requirements analysis. A first prototype system will be implemented, supporting access from a single workstation environment to the single image bank. The requirements will also be matched against those already developed by one of the partners. On the basis of research into interconnection standards and issues and building on a feasibility study for incorporating additional image banks to the system, a simulation of accessing a second image bank and of the interconnection will be developed.

Key issues The main technical issues are:

- library and library client needs for storage, transmission and presentation of full colour images, and the associated technical standards (e.g. compression, colour quality and fidelity, resolution and presentation)
- associated textual descriptions and retrieval, and relevant standards;
- user-interface design and presentation
- potential requirements and technical standards (at network, transmission and database application level) for interconnection of imagebanks internationally
- feasibility of transfer of the design to other material types and image banks

Impact and expected results The impact lies in the exploitation and promotion of grass roots experience of image technology for use in libraries and the development of awareness of image products among users, thus stimulating the market.

Among the key results will be: a detailed specification of library requirements; definition of relevant, applicable technical standards; specification of retrieval database; demonstration prototype which will be exploited for commercial use by the partners and incorporated into product development planning.

Expected duration 24 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	De Montfort University	UK	C
	IBM UK Scientific Centre	UK	P
	Victoria&Albert Museum	UK	P
	Tilburg University Library	NL	P
	Bibliotheque Publique d'Information	F	A

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Status Operative Commencement Date: 1 February 1993
 Main deliverables produced:

- Image base and textual requirements specifications P
- software design specifications R
- Specification of pilot data bank R

Attained objectives:
 Phase 1 (WP 1-4) has been completed on schedule

Date 30 October 1993

Hypertext interfaces to library information systems

HYPERLIB

Keywords: hypertext; interfaces; library catalogues; VUBIS

Proposal No: 1015

Theme Extension of access and availability of bibliographic/catalogue information (Theme: 13)

Project description The project aims to improve access to the online services of a major university library by implementation of hypertext interfaces to a variety of information resources including the OPAC (online public access catalogue).

A number of groups of specific users will be identified and for each a detailed user requirement specification (URS), based on information needs in relation to use of online resources, will be formulated. The project will design and develop hypertext interfaces to suit these specifications. Issues such as language independence, the move to PC type environments for library end-users, graphic user interfaces (GUIs) versus VT100 type interfaces and standards for data markup and hypertext will be examined and evaluated.

Technical approach The library system is VUBIS-Antwerpen. SGML (standard generalised markup language) document types will be defined for the library data for markup in SGML (ISO/IEC 8879-1986) and Hytime (ISO/IEC Draft International Standard 10744). Parsers will be constructed for both PC and Unix platforms based on the SGML user group's standard SGML parser. VT100 interfaces and PC based GUIs will be constructed in ANSI C.

The interfaces will be evaluated not only in relation to the user specifications but also with respect to the cost benefit of using PCs in place of dedicated terminals.

Key issues The main technical issues to be explored are:

- evaluation of searching behaviour and information needs of a specific number of key groups of library users.
- prototyping and testing of hypertext interfaces including graphical and pictorial user interfaces for library systems.
- SGML markup of library catalogue and other records for use with hypertext.

Impact and expected results The PC based interfaces will be widely applicable given both the increase in use of PCs in place of dedicated terminals and the increase in remote users of OPACs. The interfaces should make use of library systems easier thereby increasing effectiveness of resource use. Furthermore the non-graphic interfaces developed using the VT100 subset could easily be implemented on existing systems.

Expected duration 36 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Loughborough University of Technology	UK	C
	Universitaire Instelling Antwerpen	B	P

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Status Operative Commencement Date: 1 January 1993
First deliverables (user group identification and user requirements specification (both P)) expected beginning of 1994.
The project is on schedule.

Date 30 October 1993

<p>European Books in Print</p> <p>EBP</p> <p><i>Keywords: Books-in- Print catalogues; Videotext</i></p> <p>Project No: 1025</p>

Theme	Extension of access and availability of bibliographic/catalogue information (Theme: 13)
Project description	<p>The objective of this project is to provide an alternative distribution medium for and access point to European Books in Print records through the use of existing videotext systems in Europe.</p> <p>The project will require the collaboration of European agencies which currently publish national versions of Books in Print in Italy, Spain, France and Greece. The machine-readable records of these agencies will be made available through a Videotext server based in Italy using ISBD record standards.</p> <p>Dial-up access will be available from all Member States; the proposed Videotext format is Teletel CEPT2.</p>
Technical approach	The planned database server is a Unix platform running a standard relational database engine. A generic videotext front-end will be developed which will allow user access to the database. Some technical issues need to be resolved particularly the issue of pan-European videotext connection.
Key issues	Pan-European Books in Print publication and inter-agency cooperation.
Impact and expected results	The expected result of this project is a pan-European, machine readable Books in Print database. The impact and usefulness of this type of database to librarians, publishers and the booktrade in general could be considerable. The distribution medium (videotext) is low cost and easily accessible.
Expected duration	18 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	A.R.A. Group, Ancona	IT	C
	Editrice Bibliografica, Milan	IT	P
	ELEA, Athens	GR	P
	Biblioteca Braidense	IT	P
	Biblioteca Marciana	IT	P
	Editions du Cercle de la Librairie	FR	A

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Status Restructuring of the project is in progress following staffing problems, the project will be on track mid-November and the first deliverable (restricted) presented before December 1993.

Rapid Information Display and Dissemination in a Library Environment

RIDDLE

Keywords.- scanning; journal contents pages; OCR/ICR

Project No. 1038

Theme	Access to and/or delivery of documents (Theme: 14)
Project description	<p>The objective of this project is to study the feasibility of scanning the contents pages of technical journals with a view to including the information on the individual items in each issue in online library catalogues. The principal objective of the project is the feasibility study but it is also anticipated that some pilot/prototype development will be accomplished during the project.</p> <p>The project will look at the feasibility of integrating the text of journal articles into online catalogues and the possibility of generating the text of catalogue entries through scanning of contents pages. The results of the project will not be specific to any one library but applicable to any online library catalogue.</p>
Technical approach	<p>The consortium plans to investigate the current state-of-the-art in scanning technology. International industry and formal standards such as SGML (standard generalised markup language) ISO/IEG 8879-1986 for text markup, TIFF format for image compression and JPEG for graphics compression will be examined in this context. Having analysed the current technical possibilities for image capture recognition and storage, the integration of such data into the online catalogue will be explored and a prototype system will be developed.</p>
Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none">- The integration of scanned images into online catalogues.- The specification of a general non application specific solution to imaging problems in library online catalogues.
Impact and expected results	<p>The expected result of this project is a feasibility study report and prototype solution to the problem of including journal contents information in OPACs. Services currently existant mainly rely on keyboarding for data input; the investigation of scanning technology options and the production of a reliable solution would significantly improve efficiency in library cataloguing operations.</p>
Expected duration	18 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Longman Cartermill, Scotland	UK	C
	R.A.L., Oxfordshire	UK	P
	C.W.I., Amsterdam	NL	P

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Status The project is progressing as per schedule. Results to date include a User and Technical Requirements Analysis (deliverable 1, public) and an Assessment of the Communications and Transmission Issues (deliverable 2,public).

Operative Commencement Date: February 1993

End-user courses in information access through communication technology

EDUCATE

Keywords: End-user education; information sources; online information systems; navigational tools; Gopher; WAIS; ALEX; HYTELNET; satellite transmission

Proposal No: 2003

- Theme** New information products in libraries (e.g. optical disc, local information files, etc). (Theme:15)
- Project description** The EDUCATE project aims to produce a new type of model self-paced user education course in the selection and use of information tools. EDUCATE courses will be based on the use of modern information technology, and distributed by means of the academic communication networks. They will be short - ten hours - and multilingual. They will be designed to be transferable within European environments. They will cover two subject areas: physics and electrical and electronic engineering. The goal is to develop a cost-effective education product that can be applied in libraries which have not previously had any kind of training programme. It provides an example of the possibility to "leapfrog" course development with the aid of new technologies.
- Technical approach** EDUCATE courses will be designed for distribution by means of the academic networks. These networks will also be used to give students an opportunity for gaining hands-on experience in a real-world context by providing interactive access to online information systems, library OPACs, electronic news conferences, and electronic publications. Use will be made of file-transfer and e-mail functions and appropriate navigational tools such as Gophers, WAIS, ALEX and HYTELNET. A test will be carried out for making use of satellite transmission.
- Key issues** The main technical issues are:
- training in the use of academic networks for accessing information sources by means of navigational tools like Gopher, WAIS, ALEX and HYTELNET
 - use of academic networks for the dissemination of courseware
 - testing the feasibility of satellite transmission, e.g. for transmitting courses to areas with poor terrestrial communications.

Impact and expected results

End-users (e.g; industrial engineers and scientists) throughout Europe will benefit from this project by finding out how to select and obtain the information they need from the wide variety of information sources that are currently available. By providing education courses, libraries enable their patrons to make use of the networks and tools for information retrieval.

EDUCATE courses will be made freely available to libraries throughout Europe They are intended to serve as a model for the development of similar courses within a variety of subject disciplines.

Expected duration 36 months

Participants

<u>Organisation</u>	<u>Country</u>	<u>Role</u>
University of Limerick	IR	C
Chalmers University of Technology Library	S	P
Ecole Nationale des Ponts et Chaussées	FR	P
Imperial College of Science, Technology and Medicine	UK	P
University of Plymouth Library	UK	P
Universitat de Barcelona Library	ES	P

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Status

In final stages of negotiation

Date

30 October 1993

Speedy Retrieval of Information on the Telephone

SPRINTEL

Keywords: audiotext; information retrieval; speech synthesis; voice recognition

Proposal No: 2032

Theme	New information products in libraries (Theme: 15)
Project description	<p>The aim of the SPRINTEL project is to develop a prototype audio-text information service in a library environment.</p> <p>The project will seek to test the effectiveness of voice recognition technology in information searching in the public library environment. Four public library authorities from Belgium, Germany, Ireland and the Netherlands will cooperate to perform this research and implement the prototype service.</p> <p>The purpose of the SPRINTEL project is the general improvement of library services to the end-user. The SPRINTEL service will allow the diversion staff and other resources presently devoted to 'quick reference' enquires to other areas providing users with better 'quality' services in the library. In addition access to 'quick reference' services will be enhanced both in terms of effectiveness and cost/benefit and in terms of increasing the user base to categories of user currently not serviced, the handicapped, for example.</p> <p>The project aims to be language independent and replicable. Tools and methodologies will be developed to allow SPRINTEL type services to develop in public libraries in the E.C. This innovative exploitation of available low cost technology will ultimately enhance public access to libraries and add important value to existing public library resources.</p>
Technical approach	<p>The prototype will contain small easily accessible databases for 'quick reference' type enquiries and for 'community information'. The service and its information will be available on a 24 hour basis through normal telephone services from any phone equipped location. The databases will operate using interactive voice response based on the recognition of keywords in spoken enquiries.</p>
Key issues	<ul style="list-style-type: none">- the testing of voice recognition (VR) technology as an information retrieval tool in a library environment- development of VR tools and technologies for libraries in the EC which are vendor/system independent- development of database management tools for non-expert library staff- investigation of improvements in library services

Impact and expected results The project will result in a service providing product which is independent of language, speaker and telephone interface and which can be used by European libraries at low cost.

Expected duration 24 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Provincie Brabant	BE	C
	Dublin Public Libraries	IRL	P
	Nederlands Bibliotheek & Leektuur Centrum (Bibliofoon)	NL	P
	Stadtbücherei Lüdenscheid	DE	P
	Stentor Speech Products	BE	P

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Status In final stages of negotiation

Date 30 October 1993

Alternatives for International Document Availability

A.I.D.A.

Keywords: Interlending and Document Supply

Proposal No: 2036

Theme	Access to and/or delivery of documents (Theme 14)
Project description	The AIDA project aims to establish Italian and Portuguese library networks in order to provide an international interlending and document supply service for Italian and Portuguese documents. In tandem the service may be used by Italian and Portuguese customers for access to foreign documents.
Technical approach	<p>The project will investigate:</p> <ul style="list-style-type: none">- the market for user document requests and library supply opportunities in Italy & Portugal- a definition of services to be provided- common standards for data communications and document identification- a working prototype
Key issues	<ul style="list-style-type: none">- demonstrator effect, by providing a basic model for ILL services in Italy and Portugal, the project will seek to demonstrate the viability of such services in a market where current services are expensive and under-used
Impact and expected results	The project will create a minimum standard set of services for Italy and Portugal. It will also improve access to European networks and IDS services for Italian and Portuguese users. In addition participation in such a project will provide a preparation for the introduction of basic international standards in ILL for the institutions involved and a possible basis or entry-level to further benefit from the results of other Community funded research.
Expected duration	18 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Studio Staff Srl	IT	C
	CIB-Bologna University	IT	P
	Biblioteca Centralizzata di Medicina e Chirurgia	IT	P
	Biblioteca Nazionale Braidense	IT	P
	Biblioteca Nazionale Marciana	IT	P
	Biblioteca Statale del Popolo	IT	P
	Biblioteca Nazionale Centrale	IT	P
	INIST	FR	P
	Biblioteca Geral da Universidade de Coimbra	PT	P
	Instituto da Biblioteca Nacional e do Livro	PT	P
	Reitoria da Universidade de Lisboa	PT	A
	Biblioteca Universitaria Joao Paulo II	PT	A

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Status In final stages of negotiation

Date

30 October 1993

Extending European information access through mobile libraries

MOBILE

Keywords: Mobile libraries; public libraries; new library services; document delivery

Proposal No: 2050

Theme	Access to and/or delivery of documents (Theme:14)
Project description	MOBILE will identify target user groups and their information needs in remote communities or other regions where public library services are currently unable to stimulate or meet demand for information. The technical feasibility of introducing a range of information and document delivery services into existing public library networks, through the full exploitation of information and communication technology, will be investigated. Prototype, multifunctional mobile library and information point will be specified, procured and introduced into three different public library environments. Field trials of the fully-equipped library vehicles of up to 18 months duration will be undertaken in these environments. They will be carefully monitored in order to evaluate the effectiveness and impact of mobile library services under the special conditions of each of the three areas.
Technical approach	MOBILE will adapt the standard project cycle approach, moving from project identification, through feasibility and preparation stages, to procurement of goods and definition of services (stage 1), implementation of services in the field trials (stage 2) and monitoring the field trials, followed by a full evaluation of impact and outcomes (stage 3). Emphasis will be placed on: <ul style="list-style-type: none">- the identification of specific and measurable target outcomes in implementation;- the design of detailed performance measures and indicators;- effective dissemination and promotion of research results.
Key issues	MOBILE will concentrate particularly on researching the following issues: <ul style="list-style-type: none">- cost-effective and affordable alternatives to static service points for information access and delivery to remote communities or to meet needs of people in less favourable social, economic, educational or physical circumstances;- developmental 'leapfrogging' - effective mobile library and information services developed in Southern European countries without the concomitant public library infrastructure to provide support;- the potential of mobile library services in promoting cross-border European information exchange and library networking.

Impact and expected results

The anticipated outcomes of the MOBILE project will include:

- an assessment of the cost-benefits of further investment in the replication of such mobile information services by other Member governments;
- the identification of appropriate products and potential risks and benefits;
- the development of tested specifications for new mobile library vehicle design and for information technology products for use in a mobile library environment;
- detailed and evaluative analyses of the outcomes of the field trials.

Expected duration 36 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Carpenter Davies Associates	UK	C
	Borders Regional Council, Selkirk	UK	P
	Veria Public Library, Veria	GR	P
	Nederlands Bibliotheek en Lektuur Centrum, The Hague	NL	P

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Status

In final stages of negotiation

Date

30 October 1993

Fast Document Ordering and Document Delivery

FASTDOC

Keywords: document delivery, networking, ISDN, X.400

Proposal No: 2076

Theme	Access to and/or delivery of documents (Theme 14)
Project description	<p>The objective of the project is to develop and test a prototype of a fast electronic document ordering and document delivery system based on an already existing digital journal image archive and in-house delivery system.</p> <p>Although the facilities for on-line searching and on-line ordering have dramatically improved over the last years, the access to the actual documents still requires a substantial amount of time. The growing significance of on-line ordering has inevitably led to an increased need for rapid provision of documents.</p> <p>The project aims to demonstrate the technical feasibility of the formation of a document delivery service in the area of chemical journals by combining on-line searching, electronic ordering and electronic delivery. The system should be fast (5 minutes from order to [fax] delivery), user friendly, reasonably priced and economically viable.</p>
Technical approach	<p>Three different ordering components will be developed: (1) via an on-line host, (2) via a remote PC and (3) via the in-house database systems; making use of public networks, the order will be transferred to a central x.400 mailbox; at the document supplier side the image archive already exists and the receiving and administration components will be developed. The third part of the system will be the delivery component that will be based on fax group III and IV and ISDN.</p> <p>Tests will be carried out in Germany, Spain and Greece with the involvement of associated partners.</p>
Key issues	<ul style="list-style-type: none">* examination of user requirements, and national infrastructures* development and integration of delivery, ordering and administrative components* copyright* user statistics
Impact and expected results	<p>The project will develop a fast document ordering and delivery system, which will be easily accessible through different channels and which will significantly reduce the delivery time of a document. The expected primary beneficiaries are the libraries and the end-users. At the end of the project a workshop will be organised.</p>

Expected duration 25 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Beilstein Institut	DE	C
	Universitat Autonoma de Barcelona	ES	P
	Univ. Politecnica de Catalunya Bibl.	ES	A
	Institut Quimic de Sarria Univ. Ramon Llull	ES	A
	Univ. de Barcelona Bibl. de Fisica i Quimica	ES	A
	Universitat Rovira i Vergili Biblioteca	ES	A
	Fachsinformationszentrum Karlsruhe	DE	P
	Conware Computer Consulting GmbH	DE	A
	University of Patras	GR	P
	Hellenic Documentation Centre	GR	A
	University Library of Crete	GR	A
	Library of Dep. of Chem. Univ. Thessaloniki	GR	A
	Library of Dep. of Chem. Univ Ioannina	GR	A

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Status In final stages of negotiation

Date

30 October 1993

Libraries without Walls: the Delivery of Library Services to Distant Users

BIBDEL

Keywords: document delivery, distant education

Proposal No: 2078

Theme	Access to and/or delivery of documents (Theme 14)
Project description	<p>The Project is designed to explore, identify and improve the availability and accessibility to the remote user of the services provided by modern library services by demonstrating that library services can be delivered to users at a distance instead of users being required to visit libraries. It recognises that many users who need to study do not have access to the library services they need.</p> <p>Information technology affords an opportunity to make service delivery both practical and cost-effective, but experience of IT utilisation by libraries is spread very unevenly across the Community. The Project brings together three very different models of provision through the medium of three universities. It will demonstrate how technology and expertise can be transferred between libraries in different states and adapted to the needs of each: it does not aim to produce a single solution for Community-wide adoption but rather a series of solutions each of which will find application in different geographical areas of different states.</p>
Technical approach	<p>The project will first investigate different elements of remote access to library services (telecomms, catalogue and database access, enquiry services, electronic documents, systems requirements etc.) and subsequently design and develop three different demonstration models. Based on this experience other issues as applicability of the models to delivery directly to the home of the user and to mobile libraries, training issues and the economics of the models will be investigated.</p>
Key issues	<ul style="list-style-type: none">* design and development of the demonstration models* management of delivery services for remote users* user and library staff training* cost-benefit and cost-effectiveness issues* the scope for cooperation between libraries in delivering services* the use of mobile libraries for delivery of services to remote users* copyright

Impact and expected results

The Project will deliver a series of reports incorporated in a toolkit of techniques on the different aspects of providing library services to distant users as to enable librarians to select the most appropriate solution for their local situation. The toolkit will include analyses of available methodologies, techniques for the application of these methodologies and summaries of benefits and weaknesses of each element. A major conference will be organised at the end of the project.

Expected duration 18 months

Participants

<u>Organisation</u>	<u>Country</u>	<u>Role</u>
University of Central Lancashire	UK	C
Dublin City University	IR	P
University of the Aegean	GR	P

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Status

In final stages of negotiation

Public libraries and independent learners

P.L.A.I.L.

Keywords: Public libraries; adult independent learners; library staff training; new library services, library courseware

Proposal No: 2081

Theme	New information products in libraries (e.g. optical disc, local information files, etc). (Theme:15)
Project description	<p>P.L.A.I.L. arises from the rapidly growing customer demand (in terms of numbers, complexity and range) being experienced by public libraries throughout the European Community to provide information guidance and library materials support for independent learners. P.L.A.I.L. aims to help public libraries develop innovative and enhanced services which puts them in a position to meet this demand. More specifically, the objectives of the project are</p> <ul style="list-style-type: none">- to improve the professional expertise and to raise the level of competence of public library staff as regards its ability- to apply and exploit new technologies in a public library setting to facilitate cost effective access for customers to appropriate information and study support. <p>P.L.A.I.L. will establish replicable patterns for how innovative services can be developed for and introduced in public libraries.</p>
Technical approach	<p>The project will lay its basis by researching into the library needs of adult independent learners. It will determine what library services are required to meet those needs and investigate the possibilities of applying new technologies for both service delivery and library staff training.</p> <p>A series of key standards and competency levels will be defined, relating to, for example, the core skills of public librarians providing services to adult learners. Practical recommendations and guidelines will be derived regarding future service delivery via the utilisation of new technology, and performance indicators will be developed which would allow to assess the quality of public library services to adult independent learners.</p> <p>Pilot training material covering topics pertaining to the goals of the project will be produced and delivered, using a range of media and a variety of delivery mechanisms, including distance learning, computer based training and multimedia techniques, but also conventional seminars and workshops.</p>

Key issues The key issues may most aptly be phrased as five key questions underpinning the project:

- What are the needs of adult independent learners?
- What services are required to meet those needs?
- To what extent do these services rely on (or could be more effectively delivered through) (new) information technology?
- What are the skills and competencies required to provide these services?
- How can these skills and competencies be acquired using (new) information technology?

Impact and expected results P.L.A.I.L. will make an important contribution to the development of the public library response to the demands of adult independent learners. The research and practical experimentation planned by the partners will, at the end of the project period, provide the basis for the rapid development of public library service provision to this customer group. Major outputs will include:

- A clear statement of standards and competency levels for public librarians working within this area of activity.
- Recommendations regarding the use of (new) information technology to enable public librarians and public library services to attain such standards and levels of service.
- Guidelines on the training needs of public librarians in responding to adult independent learners.
- A major dissemination programme both within the specific countries involved in this project and across the wider European Community.

Expected duration 22 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Clwyd County Council	UK	C
	Ayuntamiento de Gijon	ES	P
	Scottish Council for Educational Technology	UK	P
	Instituto da Biblioteca Nacional e do Livro	PT	P
	Universidade Aberta	PT	P

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Status In final stages of negotiation

Date 30 October 1993

European Initiative in Library and Information in Aerospace

EURILIA

Keywords: document delivery, networking, image-banks, SR (Z39.50)

Proposal No: 2083

Theme	Access to and/or delivery of documents (Theme 14)
Project description	<p>The overall objective of the EURILIA project is to enhance the Libraries R&D and education process which underpins the aerospace sector. For this purpose a new service will be established, based on a standardised pan-European system for information access, retrieval, image browsing and document delivery. This will in turn extend the access and availability of major aerospace collections.</p> <p>It will develop effective networking links between all EURILIA participants, using a current standard open telecommunications network infrastructure. These links will be used for direct access to the OPACs of significant aerospace collections, based on a standard user interface built on the ISO SR (Z39.50) standard. Document browsing and delivery will be by conventional and standard electronic image format.</p> <p>These links will then be used to widen the pool of available aerospace records and evaluate the use of the network as a channel for the transmission of document requests and images. Software will be developed to manage these procedures. Parallel with this process, a programme of systematic record access in combination with advanced information retrieval software will be undertaken.</p>
Technical approach	The project will be based on the project Mercury concept; different networking architecture's will be investigated; EURILIA SR access to different OPAC's and an image server will be developed; the document delivery component will be will based on mail, fax group III and IV.
Key issues	<ul style="list-style-type: none">* network architecture* the PC based standard user application* image access* mail, fax group III and IV delivery* commercial aspects (including copyright)* user requirements (pre and post project audits)
Impact and expected results	The project will develop and show the feasibility of a multi-site, multi country document delivery system, with a standard user interface and including facilities for image browsing; the system will be tested in aerospace libraries, but should be applicable to other areas with a pan European impact as well. Different pricing systems will be tested in order to minimise cost and maximise benefit and viability of the service. At the end of the project a major workshop will be organised.

Expected duration 36 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	University of Limerick	IR	C
	Cranfield University	UK	P
	Technical University of Delft	NL	P
	Digital Equipment Corporation	NL	P
	Sup'Aero, ENSEA	FR	P
	Instituto Nacional de Tecnica Aeroespacial	ES	P

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Status In final stages of negotiation

Date

30 October 1993

Expansion of European Library Systems for the Visually Disadvantaged

EXLIB

Keywords: visually disadvantaged; standards; user requirements

Project No: 1037

Theme	New bibliographic record products and services applying internationally recognised standards (Theme: 17)
Project description	<p>The overall objective of EXLIB is to investigate and provide a range of user requirement specifications and standards to ensure compatible access to the European Community's information resources between normally sighted and visually disadvantaged Community citizens.</p> <p>Visually disadvantaged persons (a substantial minority in the Community of 20-25 million citizens) have severe difficulties in gaining access to information in comparison with normally sighted persons. The increasing use of digital storage of information in libraries and the dominantly visual presentation of output calls for other forms of output that are accessible to the visually disadvantaged. EXLIB will therefore examine existing technologies, systems and services including existing and near-future telematics provision for visually disadvantaged and normally sighted persons. This will lead to recommendations (i.e. standards, specifications and planning of implementation trials) upon the most appropriate means to provide enhancements of service to the target population.</p>
Technical approach	Through mainly desk-research a series of studies will be conducted in the areas of methods of information provision (Braille, large print, human/synthesis voice), access to electronic documents using existing standards (ODA, SGML), access to catalogue information (OPAC's) and provisions in the libraries. An Expert User Group will be established consisting of representatives of interest groups (users, publishers, governmental and independent organisations) in order to maximise information acquisition and dissemination, to advise EXLIB and to develop and maintain links with related work.
Key issues	<p>Technologies, systems and interfaces suitable for enhancing access and use of information</p> <p>Adaptation of telematics (harmonisation, integration with access systems)</p> <p>User requirements specifications and development of standards</p> <p>Systems and services for visually disadvantaged at all levels of library systems</p> <p>Development of pilot experiment implementation plans</p>

Impact and expected results The major results of the project will be a series of reports (technical, specifications, standards etc.), an implementation plan and the Expert User Group as a platform for information exchange. The expected impact will be the development of a clear understanding of the role of the European libraries and the co-operative efforts and developments which will be necessary to provide better access to the visually disadvantaged. A pilot project is foreseen at a later stage.

Expected duration 18 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Studie en Vakbibliotheek voor Visueel en anderszins Gehandicapten	NL	C
	Aphelion Management Services Ltd.	B	P
	Danmarks Blinde Bibliothek	DK	P
	Association Valentin Hauy	F	P
	University of Bradford	UK	P

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Status Project started on 1 January 1993
Main results:
- Expert User Group established (P)
- First technical report on Technologies, systems and interfaces (P)
- First technical report on Exploitation of telematics (P)

Date 30 October, 1993

MARC Optical Recognition

MORE

Keywords: OCR/ICR; retrospective conversion; .library catalogues; structure recognition; character recognition

Proposal No: 1047

Theme	New bibliographic record products and services applying internationally recognised standards (Theme:17)
Project description	<p>The project has as key goals to evaluate the feasibility of OCR/ICR as an approach to the retrospective conversion of library catalogues, in printed form, through:</p> <ul style="list-style-type: none">* development of a prototype tool;* integration of prototype into a production environment;* test and assessment of methods under real conditions <p>The retrospective conversion of library catalogues depends equally on character conversion of the data and on coding of the data's structure. Previous work has investigated OCR but with only limited automatic treatment of the structure and formatting. Taking as source records a printed national bibliography, the project aims at taking state-of-the art tools in OCR/ICR and integrating these with an ODA-based approach to structure recognition in order to generate high-quality, UNIMARC-formatted records.</p>
Technical approach	<p>Initial specifications will be developed on the basis of a normal RECON requirements document in order to guarantee the applicability of the results. Based on the analysis of the existing catalogue data, an intelligent character recognition system, including use of dictionaries, lexical analysis etc., character and structure recognition software will be integrated into a prototype tool. Software development will be in C on a UNIX platform. In the final phase of the project, this will be adapted to the production environment of a record processing service and a test conversion carried out in order to assess the feasibility, performance, costs and quality of the method.</p>
Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none">* Role and use of dictionaries, both generic and specific application derived;* Analysis and modelling of library catalogue data structures;* Integration of structure and character recognition tools

Impact and expected results

The project will permit the extension and application of existing techniques in other domains of document processing to library catalogues.

Specifications of record structure analysis and recognition. Prototype workstation for OCR/ICR and structure recognition of printed library catalogue records. Sample conversions for printed national bibliographic records. Report on feasibility and cost-effectiveness of the approach.

Expected duration

12 months

Participants

<u>Organisation</u>	<u>Country</u>	<u>Role</u>
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Centre de Recherche Informatique, Nancy	F	P
Bibliothèque Royale Albert 1er	B	P

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Status

Operative Commencement Date: 14.12.1993

Main deliverables produced:

Spécifications de la conversion rétrospective de la Bibliographie Nationale de Belgique (R)

Spécifications des fonctions à automatiser pour la conversion rétrospective de la Bibliographie Nationale de Belgique (R)

Spécifications détaillées pour les dictionnaires (R)

Reconnaissance de la structure - modèle des données (R)

Logiciels reconnaissance de caractères et de reconnaissance de structure (R)

Attained objectives: milestones 1 & 2 have been completed to schedule, with development of software for structure recognition and OCR/ICR scanning.

Date

30 October, 1993

Action Line IV: Stimulation of a European market in telematic products and services specific for libraries

Applying Telematics Technology to Improve Public Access to Audio Archives

JUKE-BOX

Keywords: bibliographic records; audio archives; workstation; networking

Proposal No: 1049

Theme	New bibliographic record products and services applying internationally recognized standards (Theme:17)
Project description	<p>The main objectives of the JUKE-BOX project are:</p> <ul style="list-style-type: none">- to extend existing library services to provide online access to audio archives- to develop a multimedia workstation to access audio records- to validate new standards for compression and communication technologies <p>The project will focus on the building of 2 systems: the user system (multimedia terminal) and the archive system (a database of digitized sound recordings interfacing with the sound archive). During the pilot stage the project will digitize more than 1000 records which are copyright clear and conduct a survey of user evaluation of the services offered at the multimedia terminal.</p>
Technical approach	<p>As a first phase, the project will conduct a comprehensive survey of the context, including identification of user groups, copyright conditions. On the technical side, the project will also make a thorough analysis of existing technologies and standards to validate the use of the modern compression techniques as developed by the MPEG and of the available high-speed networking technologies such as ISDN and research networks. Then the 2 systems (the user multimedia terminal and the archive system) will be designed and implemented according to the recommendations from the surveys. The installation, digitization and training of staff will take place at the committed libraries and in the sound archives.</p>
Key issues	<p>The main technical issues to be explored are:</p> <ul style="list-style-type: none">* Open libraries to new types of services* Development of a multimedia terminal able to provide search facilities and play sound recordings* User queries translation into sound archive systems* Evaluate MARC capabilities with respect to sound records* Investigate copyright problems

Impact and expected results Impact - European cooperation between sound archives and libraries
Results - Market analysis and user driven evaluation of the new service, multimedia terminal and archive system for new services in libraries.

Expected duration 30 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	State and University Library	DK	C
	Discoteca di Stato	IT	P
	National Sound Archive	UK	P
	Western Norway Research Centre	NW	P

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Status Operative Commencement Date: 1 February 1993
Main deliverables produced:

- World wide survey of services providing access to audiovisual archives P
- Survey of collections and catalogue provision in the participating archives P
- High capacity data networks P
- Analysis of the effects of copyright and other legislation on the proposed service P
- Business analysis of the proposed service C
- Technology and standards for digitising and compressing audio data and storage media R
- Survey of hardware and software platforms for providing on-line access to audio data R
- Presentation leaflet

Attained objectives: the project progresses according to plan, and has now completed the first phase consisting mainly of surveys and technical choices. It has also put in place a User Advisory Group whose input has been very beneficial to the project up to now.

Date 30 October, 1993

Visual Arts Network for the Exchange of Cultural Knowledge

VAN EYCK

Keywords: image-banks; digital imaging; image recognition; indexing; ISDN

Projectile No: 1054

Theme	New bibliographic record products and services applying internationally recognised standards (Theme: 17)
Project description	<p>The project will develop the technical means for storing, selecting and transmitting high quality images in digital form held in the collections of three art history photographic libraries.</p> <p>This user driven project is will build upon substantial relevant experience in projects in the field of arts & technology funded under other EC programmes.</p> <p>The project is split in two phases, of which the first focuses on user and market needs, cataloguing, the feasibility of the system and the exploration and testing of image recognition techniques. In the second phase a pilot system will be developed. Currently only the first phase is funded.</p> <p>At a later stage it is foreseen that participation in the system will be extended through additional links.</p>
Technical approach	Specialists systems development support is provided by library systems suppliers. The telecommunication links to be used include ISDN and academic research telecommunication facilities. Using an advanced methodology, VAN EYCK will build prototype systems for exchange of image-based knowledge.
Key issues	<ul style="list-style-type: none">* Analysis of user & markets needs* Artist and subject identification and cataloguing, comparing existing data structures, applying standards, adapting Iconclass Browser* Telecomms design using ISDN* Image recognition research based on the existing MORELLI system, adaptation and enhancement* Copyright* Standards in the field of art image telecommunication
Impact and expected results	A report on user and market needs, the design of the first prototype (input station for image acquisition, data and image base management systems, server and consultation stations and the telecommunications system) and the planning of Phase II.
Expected duration	15 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Vasari Ltd.	UK	C
	Rijksbureau voor Kunsthistorische Documentatie	NL	P
	Witt Library	UK	P
	Trinity College	IR	P
	University of Utrecht	NL	A

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Status

Project started on 1 January 1993

Main results:

- First report on User requirements and Market forecast (C)
- First report on Technology Watch (C)
- Interim reports on artist identification (P) and subject identification (P)
- First prototype user-interface (P)

Date 30 October, 1993

Musical Information Retrieval System

MIRS

Keywords: X.400; OSI; client/server model

Project No: 1075

Theme

Tool boxes for interfacing such as: developing user interfaces, interfaces to electronically published materials; interfacing in a functionally integrated manner different application modules from different suppliers (Theme: 16)

Project description

The project aims at developing a relatively low-cost search and retrieve interface to be connected to several specialised musical bibliographic databanks, with the following capabilities:

- to allow library users to retrieve information easily from all connected databanks with a single query and a common presentation of results
- eventually to allow other similar bibliographical centres to merge data, and define integrated authority files, multilingual thesauri etc.

Large musical bibliographical databanks with different technological and bibliographical characteristics have been set up in various Member States. A co-operation network between these databanks could be started with an integrated search and retrieve system. MIRS aims at developing such a system in order to increase availability of this electronically stored information; in the first instance by interconnecting two major databanks and providing facilities for other databanks at a later stage.

In order to maximise standardisation and minimise effort, a study containing the service analysis, user requirements analysis and a state of the art survey will precede the project.

Technical approach

The preliminary study will look at existing products and technologies, especially those developed under other EC programmes, that are suitable for implementation in the MIRS system. Availability and cost and effort effectiveness will be decisive for adaptation. The system will be based on a client server model, with a PC user node, a UNIX server and initially two local databases. Queries will be converted on the server to series of commands that activate the existing seeking procedures on each of the connected databases. The results of queries will be presented to the user in a uniform format.

- Key issues**
- * State of the art service and analysis
 - * Integration of existing international catalogue standards leading to the data structure definition
 - * User and server node software design and development applying OSI and SR protocol
 - * Database node software development, interfacing between server node messages (X.400) and existing query procedures

Impact and expected results The report on service and state of the art analysis will have impact on the detailed definition of the project, in terms of use of existing products and technologies. In the project a pilot system will be developed, resulting in the operational MIRS system. The aim is to increase the number of connected databases, with musical bibliographical centres in other EC countries.

Expected duration 18 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Sele sistemi s.p.a.	IT	C
	Koninklijk Conservatorium Antwerpen	B	A
	Fondazione Giorgio Cini	IT	A
	Fondazione Ugo e Olga Levi	IT	A
	Associazione Veneta Per la Ricerca Fonti Musicali	IT	A

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Status The contract has not been signed and the project has not started because of lack of another full partner, after the original Dutch partner having left the consortium.

Date 30 October, 1993

Electronic Library SGML Applications

ELSA

Keywords: SGML; electronic library; workstation

Proposal No: 2006

- Theme** Tool boxes for interfacing such as: developing user interfaces, interfaces to electronically published materials; interfacing in a functionally integrated manner different application modules from different suppliers (Theme: 16)
- Project description** The project will produce a prototype end-user system supporting the delivery and manipulation of full text journal articles delivered from remote stores in SGML format. It will:
- develop a prototype client server system
 - evaluate its use and potential for new library services
 - provide management and usage feedback to the supplier of the documents
- With the moves towards electronic publication and distribution of documents, the traditional models of supply, distribution and use are being re-evaluated by publishers and users alike. This project will provide a test-bed for new services. The project will advance existing experience in libraries of working with downloaded documents by developing a prototype system which will allow access and manipulation of full-text articles while retaining their original form.
- Technical approach** The project will:
- research requirements of publisher and user, analyse appropriate standards and software tools to develop a standards and development profile for ELSA;
 - install a UNIX server of SGML-formatted documents, with an appropriate retrieval engine;
 - set up end-user devices for the retrieval and manipulation of document files;
 - provide local facilities on the user's workstation to print, edit and create a local store of documents which can be stored and retrieved and integrated with the user's data.

Key issues The main technical issues to be explored are:

- standards and use of appropriate DTDs
- integration into local systems and local document stores
- handling of non-textual & scientific data
- protocols for communications and delivery from server to printers and workstations
- client viewer and its specifications

Impact and expected results The project will advance the development of electronic distribution of journals by developing appropriate tools and by providing a test-bed of services and usage, generating feedback to publishers and to libraries. The prototype end-user softwares will be made freely available, subject only to any licensing requirements for third-party products. The server software will be made available under license.

Expected duration 24 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Jouve S.I.	F	C
	De Montfort University	UK	P
	Elsevier Science Publishers BV	NL	P

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Status In final stages of negotiation

Date 30 October, 1993

Bibliographic Texts Compositional Analysis

BIBLIOTECA

Keywords: Compositional Analysis, OCR/ICR, Intelligent Document Recognition, Keyword Indexing, Natural Language Processing, SGML

Proposal No:2023

Theme New bibliographic record products and services applying internationally recognised standards (Theme: 17)

Project description This project attempts to integrate work in the fields of:

- automatic retrospective conversion of library catalogues
- OCR/ICR technology
- natural language processing

to define and implement tools for intelligent recognition, analysis and transformation of information contained in a variety of library type documents. The project will devise a toolbox which will allow analysis of the field/subfield structure underlying bibliographic documents such as bibliographies, dictionary entries, indexes of scientific periodicals etc. An Intelligent Document Recognition system will be developed which will enhance existing OCR/ICR technology by better image pre-processing, segmentation and incremental feedback from analysis of the documents. A structured analysis procedure will allow the breakdown of texts into shorter units until individual informational elements are made explicit. These elements are then transferred to SGML which will enable a normalised structure model to be developed. The toolbox will be tested on indexes and references in scientific periodicals, tables of contents and bibliographic cards.

Technical approach The project is divided into eight workpackages which encompass:

- *corpus selection and analysis*
- *intelligent document recognition (IDR)*: pre-processing functions, high level character segmentation and incremental processing will allow enhanced recognition.
- *automatic field compositional analysis*: this system is a parser generator whose output is a field parser for different classes of document.
- *context based correction*: or error detection

The output format is SGML which can facilitate conversion to other formats such as MARC. In addition testing modules and standard project management are provided for. The project will use a 'rapid prototyping' methodology for software development.

- Key issues**
- improvement of existing OCR/ICR techniques through Intelligent Document Recognition
 - devising of a flexible analysis system for semi-formatted documents
 - contextual error detection and correction techniques for IDR
 - testing
 - dissemination of results

Impact and expected results

The benefits and results of this project will include:

- creation of keyword indexes from table of contents and indexes in books
- creation of article databases from content pages in serials
- creation of citation indexes from bibliographic references
- investigation of the possibility of more advanced 'intelligent' systems for indexing and classification
- automatic transformation of card files into standard formats

Expected duration 16 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	Universidad Complutense de Madrid (Verba Logica)	ES	C
	Database Informatica	IT	P
	Matra Cap Systems	FR	P
	Biblioteca Nazionale Napoli	IT	P
	C.BIC/CISC	ES	P
	Instituto Cervantes	ES	P
	Thamus	IT	A

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Status

In final stages of negotiation

Date

30 October, 1993

Action Line IV: Stimulation of a European market in telematic products and services specific for libraries

Project INCIPIT - Bibliographic Records and Images: a CD-ROM of incunabula editions

INCIPIT

Keywords: Incunabula; CD-ROM; images; enhanced bibliographic records; image capture; bibliographical methodology for early materials

Proposal No: 2031

Theme New bibliographic record products and services applying internationally recognised standards (Theme: 17)

Project description The project will investigate the feasibility and viability of producing a CD-ROM product combining textual records with images of selected pages, extending the methodology of bibliographical description. The prototype will be based on incunable editions, but the techniques evaluated will be applicable to other library materials.

Current methods of identifying incunable editions rely on the transcription of selected passages and pages. The project will investigate using instead images taken from the material as the basis of identification and will develop appropriate guidelines on their selection and use as an enhancement to the bibliographical description. The resulting prototype will be evaluated by potential users (libraries and researchers) for usability and functionality.

Technical approach Prototype CD-ROM: The project will develop an initial set of requirements and produce a first prototype which will be improved progressively by an iterative process designed to permit the refinement of bibliographical methodology and technical image/software standards. The needs of different types of user, including libraries and researchers, will be assessed, both by survey and by evaluation of the pilot prototypes.

Image capture: Images will be captured principally from microfilm but a comparative evaluation of alternative, direct methods of image capture will also be carried out.

Bibliographical data: an existing file will be used, and the descriptions matched with the acquired images.

Key issues The main technical issues to be explored are:

- image quality and standards
- selection of images and guidelines for a standard approach
- merging with bibliographical data
- prototype functionality, market and use
- microfilm quality

Impact and expected results The project will result in improved tools for the identification and differentiation of incunable editions, together with improved tools for access to and sharing such resources. Technically, it will provide the development of a process for digitizing microfilm images on CD-ROM.

The main results will be:

- a prototype CD-ROM with associated images of ca 5,000 incunable editions
- a documented and published standard relating to the format and content of an enhanced type of textual/visual bibliographical record and to the application of the record type to early printed materials.

Expected duration 24 months

Participants	<u>Organisation</u>	<u>Country</u>	<u>Role</u>
	The British Library	UK	C
	Biblioteca Nazionale Centrale	I	P
	Bibliothèque Royale/Koninklijke	B	P
	Bibliotheek Albert 1 ^{er}		
	Instituto da Biblioteca Nacional e do Livro	P	P
	Koninklijke Bibliotheek	NL	P
	Research Publications Ltd	UK	P
	Consiglio Nazionale delle Ricerche, Italy	I	A

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Status In final stages of negotiation

Date 30 October, 1993

MECANO: Mechanism of automatic comparison of CD-ROM answers with OPACs

MECANO

Keywords: CD-ROM; OPACs; holdings; search matching; toolbox

Proposal No: 2045

- Theme** Tool boxes for interfacing such as: developing user interfaces, interfaces to electronically published materials; interfacing in a functionally integrated manner different application modules from different suppliers (Theme: 16)
- Project description** The project aims to develop a toolbox capable of matching the results of searches carried out on various CD-ROMs with the journals holdings of libraries. The feasibility of providing a dynamic link to OPACs for up-to-date status information will also be examined.
- Library users searching for journal articles use secondary database sources, mostly now available on CD-ROM; however, to locate the materials in the library holdings the user then has to carry out an additional search for each journal title in the library's OPAC. The ability to perform this second step automatically and from the same user environment as that for the CD-ROM search offers immediate benefits both to libraries and to their users. Some proprietary systems exist but there is no generalised toolbox capable of being used with different OPACs and different CD-ROMs.
- Technical approach** The project will analyse the record formats of both library catalogue data and downloaded data from the CD-ROMs and develop a common shared format, obeying as far as possible standards relevant to bibliographic data. Extraction and conversion tools will be developed for the different source files. Matching routines will then be developed not only for matching on international standard numbers but also for lexical matching on titles. The development of the user interface and functions will be based on a detailed investigation of user needs.
- The feasibility of creating a link to volatile status information on specific journal parts will be investigated and a test-bed implementation developed to demonstrate functionality.
- Key issues** The main technical issues for investigation are:
- matching criteria
 - standards for bibliographic data and for holdings
 - interaction with library database files
 - user interface and functionality

Impact and expected results

The project will produce a commercially exploitable toolbox for use by libraries and/or their system suppliers to allow transparency between CD-ROM and library catalogue searches.

The main results will be: specifications of formats of source systems and for the MECANO prototype; functional specifications of the MECANO modules and interfaces; feasibility analysis of enhanced features and interactions with local and remote library systems; MECANO prototypes implemented in each of the partner libraries; and an evaluation of the system and recommendations for future developments.

Expected duration 24 months

Participants

<u>Organisation</u>	<u>Country</u>	<u>Role</u>
Universiteit van Amsterdam, Universiteitsbibliotheek	NL	C
Koninklijke Bibliotheek	NL	P
Universita Autònoma de Barcelona, Servei de Biblioteques	E	P
Bergen University Library	N	P
Biblioteca Nazionale Universitaria di Torino	I	P
University of Patras Central Library	GR	P
Cap Gemini Innovation, Cap Volmac	NL	P

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