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ION-Laser

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In terms of overall automation of libraries in the UK, we are fortunate. All university libraries are automated and most if not all make use of the JANET network. Almost all (more than 80% +) of public libraries are automated, but none make use of JANET, although there is some use of LANS, and of course the automated house keeping systems in many, do provide links to the major branches of public libraries.

Approximately 50% of all UK Public Libraries access the LASER VISCOUNT network for bibliographic searching and interlending messaging with a direct line via ARTTel to BLDSC, and some are using the same software and hardware to order books via EDI.

Another feature of the UK scene is the superb services offered by the BLDSC in particular for interlending. However around 90% of the BLDSC traffic is for journals.

LASER's main business is in monographs however, although we do provide access to the BLDSC Serials database, the majority of LASER's users and members are from the public library sector, the VISCOUNT database contains over 3 million bibliographic monograph records and some 30 million locations.

As I mentioned earlier, university libraries are well catered for in network terms having access to JANET and therefore access to the OPAC's of university libraries.

Public Libraries are not as well served however, and their only true networked service at present is VISCOUNT. LASER believes that a networked service for information provision is one we must pursue. The bulk of the UK monographs stock, including over 1 million non MARC items, and c.30 million locations, are however on the VISCOUNT system. As well as the substantial number of public library authorities, other specialist type libraries use the system. These include the BBC, the Department of Trade and Industry and the Law Commission.

Referring again to the national scene in the UK. There have been over the

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last year or so some significant developments which directly or indirectly affect libraries in all sectors, and the broader information policies, and the more local strategies which will emerge from the different sectors.

For instance earlier this year we saw the publication of the *Follett Report* (1). A review of Library and related provision in Higher Education in the UK. The impetus of the Review was the concern over implications of recent growth in undergraduate student numbers for library services on which so much teaching and learning depends. Included in the review was the disproportionate increases in the price of periodicals and specialist books.

This has given the sector the impetus to look at a range of strategic issues and related funding requirements to pull all universities up to a particular standard and to build an appropriate infrastructure for access rather than holdings.

There is the proposed Department of National Heritage Commission for libraries (2), which would form a focal point for public libraries on broader cross sectoral strategic issues.

The Consultation phase on this is over, and of the 165 responses, the great majority were in favour of such a Commission being established. A formal announcement should be made before the summer recess and the Commission should be in operation by January 1995.

There is the Department of National Heritage Review of Public Libraries taking place now and current public library services provided by local authorities in England and Wales will be examined along with the working of the 1964 Public Libraries and Museums Act, and of course the changing environment within which libraries have to operate, and of course the review of Local Goverment, which could result in massive changes in the County Library sector if the resulting unitary authorities are created.

In a speech given on the 30th September 1993 at the Public Library Authorities Conference (3) in Torquay by Ian Sproat, Under Secretary of State for the Department of National Heritage, many of these activities were mentioned. Referring to networking he stated "the library materials and services on the public library VISCOUNT and academic JANET networks provide a huge resource. The two networks, however, are not connected at service level. The development of SUPERJANET - using CD-ROM technology to transmit images alongside text - can only make the gap worse. We in DNH are contributing to a pilot project which will link five library authorities to the JANET network via the VISCOUNT system. This will enable us to judge which services and recources, available on and via the JANET network, are most useful to public libraries and their users. We will also be better placed to determine what public libraries can offer to the academic community via JANET. The creation of high speed networks over the next decade will be one of the keys to economic prosperity and we intend that libraries which are our responsibility can take full advantage of the new structure. We also intend to promote the

maximum co-operation and compatibility between networks, so that resources are used as efficiently as possible to benefit users".

Public libraries are not the likely beneficiaries of Follet type review or money; not already able to access a top sliced JANET service they are suffering from planning blight brought about by the scurry of activity in reviews etc. I have mentioned above.

What, you may ask has all this to do with LIBER, LASER or this paper. Well everything or just about!

LASER has a key role in interlending, networking and public libraries. It believes that it must enable public libraries to again access to the information super highways at a cost effective and simple way. It believes wholeheartedly in an access policy for UK public libraries and it believes in a European wide networked solution to information provision.

How has it, or is it doing this?

Well first of all there is VISCOUNT

LASER developed the VISCOUNT service in order to support interlending of materials between libraries. Its objectives are:

- to produce a shared database of the resources of libraries in the UK
- to develop a network offering interlibrary lending (ILL), item and location identification, inter-library messaging, inter-personal messaging, information services, union catalogue maintenance and record supply services
- to achieve interconnection with other networks in the UK, in Europe and North America by means of promoting Open Systems Interconnection (OSI) - and now Internet.
- to improve the efficiency of library services, and the availability of library materials and information to the public.

Database

There are some three million records on the VISCOUNT computer system and around 30 million locations, representing the 70 million volumes held in member libraries. The database is a Union Catalogue of bibliographic records, all of which are held in a single file available for online interrogation.

Development

The VISCOUNT database and network have developed from the long established United Kingdom interlending infrastructure which comprises Library Region and the British Library Document Supply Centre (BLDSC). The original

initiative for creation of the database and development of the network came from LASER (The London and South Eastern Library Region) which pioneered the automation of locations or holdings for direct interlending between libraries. In conjunction with the *British National Bibliography* (BNB), LASER converted, firstly BNB from 1950-1968 and then, the LASER retrospective post 1901 union catalogue entries into machine readable form (MARC).

However whilst it continues to serve the local authorities which have financed and managed it so successfully over the years, LASER is aware that it must function from a wider client and service base, in order to respond to its users' needs and the prevailing economic and political climate. Our new association with the University of London, co-operation with academic libraries via JANET (Joint Academic Network), and with other Regions through the VISCOUNT service, responding to the challenges of Europe and the single market via Project ION, the adoption of standards, and modern computing equipment - all point to a bright and flourishing future for LASER.

There is currently much discussion in the UK about the need for co-ordination of library and information resources, the impediments within our infrastructures, the vehicles which might need to be created to achieve it and the role which networking and communications technology might play in its implementation.

This brings me onto Project ION.

Project ION

Project ION is an interlending open systems interconnection (OSI) network pilot/demonstration project between LASER, Pica (in the Netherlands) and PEB (the interlibrary loan system of the French Ministry of Education).

The overall objectives were:

- to achieve interconnection between three computerized library networks in the UK, the Netherlands and France
- to improve the efficiency of international interlending services
- to demonstrate the capabilities of OSI communication.

This was the first pilot/demonstration project in the world to implement the internationally agreed ISO (international organization for standardization) protocols for interlibrary messaging (ILL protocols) and for searching databases of protocol. This has been achieved by the development of three front- and processor systems which have been integrated with the AEG MODCOMP computer at LASER, the TANDEM/DEC configuration at Pica and the IBM Computer at the French network centre, SUNIST.

The project, which began in 1990 was in three phases:

- Specification
- Procurement and development.

User evaluation and future market and product exploitation

The project was designed as a precursor project to the Draft Plan of Action for Libraries which has developed into the Libraries Programme of the European Commission. ION pre-dates but subscribes to Action Line II of the programme - for projects to further the international linking of systems. Funding for the project was available under the European Commission's IMPACT 1 programme because it was considered important to start building up a body of experience, understanding and know-how in the defining, setting up and managing of co-operative projects of this nature. The project reflects the European Commission's desire to develop a strong European information services market. The Commission was also concerned that, in addition to the backbone of an international interlending network which would result from the interconnection of the three networks there should be other spin-offs. In particular, the availability of an interlending front-end processor machine with appropriate documentation, which would enable library systems or networks other than the three participants to integrate the OSI capability with their proprietary systems.

ION - Gateway to Europe

Project ION is an interlibrary Open Systems network. To libraries and their users it means:

- On line access to international bibliographic and locations databases
- Potentially 'unlocking' the wealth of information held by European libraries
- On line search and location of items across Europe
- International interlending service between UK, Netherlands and France.

The ION service includes:

- Interlibrary loans
- Loan requesting
- Answer - material requested is unavailable
- Shipped - material requested is available and shipment is initiated

- Messaging service - free form text
- Searching and retrieval
- Initialise a search of an international database
- Present - retrieving information from an international database
- Accomodating differences in national MARC formats
- Use of UNIMARC between international systems
- Providing transparent user access to different search designs in the systems of the ION participants
- Positive identification of material for the international ILL service.

ION is very different to LASER's VISCOUNT development which is a centralized database shared by some other UK library regions. VISCOUNT reflects a commonality of system and function, whose origins lie in the proprietary computing and networking development of LASER.

ION however, reflects the need to network between different computer networks in order to provide the same climate for resource sharing as that provided by a centralized database.

Many of the lessons and experiences of ION will be reflected in LASER's future developments in the UK. One of the major objectives of European funded pilot/demonstration projects is to stimulate national developments as well as provide international networking insfrastructures.

At present the UK national scene is characterised by a number of problems and barriers. These include:

- Resources systems and networks are fragmented and cannot interoperate, and the action of some regions is exacerbating this.
- It is difficult to fund major network developments in public libraries.
- There is a poor environment for product development for library networking and interconnection.
- Implementing the standards necessary for inter-systems networking implies high prduct development costs.
- The development of application software, services and integrated library functions is under-developed on ophysical networks such as JANET.
- There is no agreement on the use of ISO, pre ISO and/or proprietary solutions for achieving interconnectivity of systems.
- There has been little direct consideration of OSI within policy

deliberations relating to co-ordination and co-operation.

Action is needed on several fronts to address certain key areas:

- the strategic issues associated with networking and standards
- the technical issues, definition of technical strategies, development of product requirements and their dependencies
- sources of funding (internal, co-operativce, UK Government or European Commission programmes)
- identification of the options, costs, desirable network models and current impediments to open systems development between major 'players', service providers, automated systems and networks for:
  - interlibrary lending
  - bibliographic record transfer
  - information identification, requesting, supplying and transfer
  - inter-system messaging
  - messaging applied to other library functions
  - document delivery
  - EDI, EDIFACT and the book trade
  - assessment of the products currently available for implementations and product development necessary to achieve the service and communications requirements identified at strategic level.

ION is now in the user evaluation stage, and although the project formally ended on July 1st the live system is being used by some 28 UK libraries, and 16 each in France and the Netherlands, and will continue until the end of 1994.

During that time itis essential that if the service is to continue a business case must be established.

However at a recent ION Management Team meeting the view was expressed that the Project had been too long, and to some extent had been 'overtaken by events'. In particular in the environment of reseach networks the Internet is the dominant network technology. Also that commercialisation of network products in the OSI environment has been a major factor in the failure of the OSI approach. However the ION SR software with existing Z39.50 implementation could be achieved with the right amount of effort.

The project has been successful. The defined functional requirements for ILL have been met. The implemented ILL services serve their purpose. The defined

functional requirements for SR have been met. The product has proved to be stable and robust.

The user phase has been very successful and as well as achieving success the project has highlighted the benefits of extending European Access. All 3 countries have been made aware of what is available in the other ocuntries and have received excellent results in success rates. Some average of 25-30 % of requests receive a positive response - bearing in mind there are the dregs and the difficult things.

The future for the service depends upon the business case; the costs; the take up of the software by other countries and perhaps the role of the BLDSC in the UK.

ION has however provided LASER with invaluable experience in evaluating the options for future service developments. LASER currently has a number of practical initiatives underway.

Very briefly these include:

1. The London Link Project:

   London Link is a pilot project for linking four different library automation systems, from four London public library authorities to VISCOUNT. This project is primarily concerned with enhancing the ability of users to trace the physical availability of material down to copy and branch locations and to place reservations for that material by another's library system.

   It would also enhance the interoperability of services and materials to users. This development could have obvious applications across Europe, where most library automation suppliers either already have or are developing markets.

2. A multi-functional workstation to support 'one-stop' networked library services is being developed. This would include PC, CD-ROM, downloading of bibliographic messages and other information and facilities for accepting and transmitting electronic document delivery.

3. The links between VISCOUNT, ION, JANET and the academic communities in the UK and via IXI, in Europe, are being explored.

   The JVP Project provides a pilot for evaluating the resources and services of public libraries which could be made available to the academic comminity via the JANET-VISCOUNT networks. Representative public libraries will also evaluate the services

available form the academic community.

Eight academic and six public libraries will participate in the pilot which will be of a year's duration.

Funding has been obtained from the department of National Heritage and the British Library Research and Development Department. The resources of the VISCOUNT database will also be evaluated by the academic community.

LASER will be the facilitator and co-ordinator in this project.

4. An Internet Project, Project EARL for public library information provision is currently being scoped. The objective being to explore the present state of and rationalisation for developing future networking infrastructures for the public library in the UK. To provide therefore public libraries with enhanced networking facilities, an access strategy and services, and therefore improve information provision. To make interlending and resource sharing more efficient and to support public libraries following local Government Reorganisation, and of course to enable networking with other library sectors, including special and government type libraries.

   A seminar to explore the project was held in May, and there is significant interest from major public libraries, specialist libraries and services and the Department of National Heritage and the British Library Research and Development. Further work will be carried out this year prior to a full project convening.

   ION has provided LASER with a gateway to Europe, and invaluable experience of developing standards into practical library products, tools and services.

   So being gluttons for punishment.

   In February 1994 LASER embarked on Project LIRN.

5. LIRN being the Library Information and Referral Network

   In the information field, libraries are experiencing many problems, keeping pace with the volume of information, where to obtain it and how to obtain it. As a result, libraries are finding it increasingly more difficult to play a central role in the modern information sector.

   The LIRN (Library and Information Referral Networks) project

aims to redress this situation by establishing ann embryonic European wide information enquiry and referral service based on the X.500 Directory standard.

User libraries will access the proposed service by using key subject words, in order to identify sources of information, including organisations, centres of knowledge, proprietary databases, OPACS, individuals and experts in the subject field. The capabilities of these sources of information would also be identified, eg. their capability for receiving loan requests and supply information, including e-mail address, telephone and facsimile, postal address, network connections, electronic document supply, EDIFACT, FTAM, EDI.

It is proposed that the work be conducted in three phases, covering feasibility and definition, implementation of an international demonstrator/pilot and evaluation by selected libraries.

During the definition phase the enquiry and referral services will be developed and the overall architecture for LIRN will be defined. In order to demonstrate and evaluate the concepts three subjects have been selected: business, economics and environment. A thesaurus will be developed for each subject and the associated information to be held as entries in the LIRN database.

During the implementation phase the services and information defined during the earlier period will be translated to the X.500 protocols and database structures. Directory systems will be procured and installed at the participants' sites. The concepts and use of the X.500 technology for the application will be evaluated by selected libraries in an operational environment.

The key results and deliverables of the project include the definition of the information objects and their mapping to the X.500 Directory technology, methods for connecting networks and libraries to the service and the relationship of LIRN to other library operations and developing services (such as loan requesting and supply).

The Future

No one has a crystal ball capable of accurately forecasting the future. However one can be fairly certain that networks will feature large in all types of library, allowing organisation across the world to function as a whole, networks will alter the way information is accessed and used, and will one suspects change the role of libraries.

The future for public libraries in particular needs to be one where the focus is

upon the needs of individuals and their ability to gain access to information and knowledge in a useable format, in places that are useful to them at the times they prefer.

LASER's role has always been as a facilitator and coordinator in establishing access to information. We will continue to pursue this role, via the latest technological devises in order to effectively manage and bring together the necessary styles attitudes motivations and perspectives to create the new blend of reliable information service.

LASER is small. It is entirely self financed, from its members and the services it offers.

It has almost a unique record in the UK however in the public library related field, of having attracted large amounts of research funding from the BLR&D, the CEC, the Department of National to fund the projects and developments I have outlined.

However it is up against a number of threats and big brothers - eg. the BL; also of complacency - some of the public libraries; jealousy and avarice and a total lack of vision and drive in some quarters.

LASER works under the umbrella loosely called cooperation. But the meaning of that word and the way organisations operate within it is the subject of another paper. Suffice to say that some believe cooperation only works if it is free, with no strings, no contracts, and no honour!

We live in interesting times!

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