Redefining Access to Information in the Northern Territory

Leona Jennings
Manager, Technology Development & Support
Northern Territory Library and Information Service
leona.jennings@nt.gov.au

Abstract:

While libraries in the Northern Territory have a long history of cooperative sharing of information resources, the introduction of a new library and information management platform - in tandem with initiatives by the Commonwealth and Territory governments to rollout communications infrastructure throughout the Territory - has provided new avenues for the consolidation of services and provision of information to all Territorians.

This paper describes the background, progress to date and future plans for LINNet, and considers the challenges of implementing a system that balances the needs of a consortium of 48 public, community, school, state and government agency libraries.

Introduction

The last 18 months have encompassed a period of considerable change for libraries, and the provision of library service in the Northern Territory. 1999 saw a number of important milestones:

- the implementation of a new library management system;

- the start of a number of initiatives focused around the provision of remote services including the redevelopment of the Web site, the commencement of the Networked Electronic Resources and Internet Services projects; and

- the amalgamation of the Northern Territory Library, a number of Government agency libraries and registries to create the Northern Territory Library and Information Service (NTLIS).

A time for change

After five years, two Requests for Information, two cabinet submissions and a Request for Tender, DOBIS/LIBIS was finally retired as the library management system at the heart of the Libraries in the Northern Territory Network (LINNet).

DOBIS/LIBIS was implemented in 1982 to take advantage of the NT Government mainframe computing environment. The software was mounted on the NT Government IBM 9370 mainframe and was networked with leased SNA connections, across all the major centres in the NT. DOBIS/LIBIS provided the platform for the centralised purchasing, cataloguing, end processing and information delivery services provided to public and community libraries throughout the Territory by NTLIS. The benefits for resource sharing were quickly appreciated and LINNet grew to include secondary school and college libraries, and three government department libraries. Today LINNet comprises 37 libraries.

By the early 1990s it had become apparent that DOBIS/LIBIS was unable to meet the growing demands of the consortium. Library users were becoming increasing more sophisticated in their usage and expectations of technology. The libraries were becoming increasingly intolerant of the inflexibility of the system, the unfriendliness of the interface and the lack of the functionality that had become standard in the newer generations of systems.

In 1994 the move to replace DOBIS/LIBIS intensified with the commencement of Project Dragonfly. Stakeholder requirements were gathered through a highly consultative process involving task forces comprising the varying types of libraries represented within LINNet and focus groups. An RFI was released to assess the market and establish an indicative budget. The dance to secure funding commenced but the timing was not right and the project was put on hold.

By 1996 the situation had worsened. The database had become unstable and data corruption had occurred in one location. ELiAS, the system vendor, no longer supported DOBIS/LIBIS version 1.4. In addition Version 2.1.2 CICs upon which DOBIS/LIBIS ran was to lose vendor support later that year.

In March 1996 Cabinet recognised that the library system needed to be replaced and allocated funding for the investigation of a cost effective replacement. The Planning Project sought to consolidate previous planning and update the work undertaken in 1994. A number of options were considered, including migrating DOBIS/LIBIS to Version 3, and moving to a decentralised model where each LINNet library ran it's own system. Fifteen years after the inception of LINNet, the centralised model was still considered to be the most economically viable and equitable for the Northern Territory. A restricted RFI was issued to those vendors who had responded previously in order to obtain funding. A Business Case was prepared and the subsequent Submission to Cabinet was successful. Funds for the replacement of DOBIS/LIBIS were allocated over the 1996/97 and 1998/99 financial years.

The Steering Committee, established in 1996 to oversee the Planning Project and preparation of the Business Case and Submission to Cabinet, was retained for the Library System Replacement Project. The Steering Committee comprised representatives of the major client groups including the Department of Education and the Local Government Association of the Northern Territory along with Northern Territory University, the Department of Communications and Advanced Technology, NTLIS and its parent department at the time, Housing and Local Government.

The decision was made to seek the assistance of an experienced business analyst/project manager to manage the selection and implementation processes. Libraries Alive! was selected for the task. An important element of the consultancy was to be a skills transfer – after so long on DOBIS/LIBIS NTL did not have the skills in-house for an implementation project of this complexity. Libraries Alive! was given the task of ensuring that the Library developed the skills to maintain and deliver the system.

As you would anticipate, bringing together the requirements of such a diverse group of libraries was a challenging task. The consortium consists of every type of library with the exceptions of primary school and university, and the Steering Committee had ruled primary school libraries to be within scope of the project. The Department of Education was embarking on projects to provide the infrastructure to ensure that primary schools throughout the Territory could access the NT Government WAN. As such they wished to ensure that the new system was capable of being extended to primary school libraries at a future date.

A series of focus group meetings were held with representation of all the stakeholders including LINNet libraries and end users of urban, remote and community libraries to update and supplement the data collected by Project Dragonfly. Not surprisingly, the requirements outlined in the focus groups were sometimes contradictory, but on the whole common threads kept reappearing. Each focus group outlined the need for stronger searching capabilities, the ability to access a wider range of information sources whether bibliographic, full text, multimedia or internet based, and greater

flexibility in configuring the system. The libraries were still committed to the concept of a shared database but wanted more autonomy in establishing their own parameters, producing their own reports and determining their own workflows.

In February 1998 a Request for Tender was finally issued. After an intensive shortlisting period two vendors were invited to participate in an operational trial. The trial operated over a period of two weeks with a number of aims, including:

- the need to verify that the functionality outlined in the written tender responses was present in the systems;
- the need to gauge the usability of the systems and evaluate the requirements for training and impact on existing workflows;
- a chance to evaluate the importance of both the functionality that was present and was missing from the systems;
- an opportunity to test the ability of the systems to run on the NT government WAN; and
- an opportunity for the vendors to come to a greater understanding of the requirements of LINNet and NTL, and for the project team to learn more about the vendors.

Over 50 people participated in the trial. Participants included:
- representatives from each of the library types within LINNet;
- subject specialists for specific library modules such as reference, serials, acquisitions and document delivery staff;
- end users from public and school libraries and NTL, including parliamentarians; and
- members of the Steering Committee and project team.

All over, the evaluation processes took three months and contract negotiations a further two and a half months. At the end of August 1998 the contract with Altarama Systems Pty. Ltd. was signed. The product offering from Altarama includes a library management system (Virtua, developed by VTLS Inc.), a Z39.50 WWW search interface (the Altarama Z-Gateway) and a full text search engine (the Fulcrum Knowledge Network).

The potential of the combined product suite is enormous. By implementing the suite of complimentary Z39.50 web based information storage, retrieval and distribution tools, it is now possible to provide access to the full documentary heritage of the Territory. For the end user the actual extent of their search will be transparent. All existing data, new data and databases, whether held locally or remotely, will be able to be searched, and appear, as one collection.

Setting the Foundations

As with the majority of implementations, the path was not always smooth. There were considerable challenges facing the project team and a very tight timeline in which to overcome them. There were very real concerns over the extent of the data corruption within DOBIS/LIBIS and our ability to export and convert the data within the timeframe required. These factors led us to adopt a low risk strategy in respect to the data migration:

- Bibliographic data was sourced from ABN - this option was feasible given the high hit rate (approximately 90% of LINNet holdings appeared on the ABN database);
- The remaining data converted from DOBIS/LIBIS was kept to a minimum. Item records were converted as was patron data (which also needed to be migrated from DRA and Book Plus as two of the public library services were utilising these systems for circulation);
- Circulation transactions were not migrated. It was felt that there was considerable "dead wood" in the DOBIS/LIBIS transaction files and this was seen as an opportunity to start from scratch.
- Unfortunately we were unable to export serial holdings from DOBIS/LIBIS – the data had become corrupted to the extent that attempts to export the data brought the system down. This data was rekeyed directly into Virtua by a team of project cataloguers who are also engaged in recataloguing the 40,000 bibliographic records which we were unable to source from ABN.

Another challenging aspect of the implementation project was the rollout of appropriate IT infrastructure to support the new system. The dumb terminal/SNA environment that had served DOBIS/LIBIS so well was not compatible with the majority of the new generation of library management systems, including Virtua. In addition the Department of Education was actively engaged in moving its administrative systems and telecommunications environment towards TCP/IP and Internet/Intranet based services. This shift in orientation towards Internet based services was reflected in the public libraries who wished to take full advantage of a wider range of services offered via this platform.

The rollout of the infrastructure was managed by the Information Technology Management Services Branch of the Department of Corporate and Information Services in conjunction with NTLIS and the Department of Education. A comprehensive site survey was conducted for each LINNet library to determine communications, network and desktop requirements. The majority of the libraries have been setup with routers, ISDN lines or private pairs and are using the NT Government WAN to access the system. Some libraries access the system via the Internet using private ISPs.

Training was also an area identified early on in the process as a potential problem. A whole generation of library management systems had been and gone in between the inception of DOBIS/LIBIS and that of Virtua. The staff in LINNet libraries were surveyed to assess what preliminary training would be required prior to training in the library system. Basic training in MS Windows was identified as being required in some sites, while training in USMARC was required for all libraries.

The project team felt it was imperative that skills in the use of Virtua were distributed as widely as possible throughout the Network and not restricted to a core group of people within NTLIS. Given the remoteness of many of the libraries and their size, it was important to develop a measure of confidence and self-sufficiency within the network. Three training teams were established, incorporating staff from NTLIS and LINNet libraries. Each LINNet library was asked to nominate a trainer who was then brought to Darwin to attend a train-the-trainer course conducted by the training teams. The trainers then went back and trained the staff in their libraries.

A LINNet Support web site was developed to provide access to user documentation, training guides, templates and policy documentation. Upgrades are delivered through the support site, and an email discussion list was created to provide a vehicle for the LINNet libraries to share ideas, make suggestions about system enhancements or policy changes. NTLIS also maintains a helpdesk facility for the library system.

The training and support initiatives have only been partially successful. Delays in implementation were not unexpected given that the timeframes were very aggressive. Issues with data migration, infrastructure rollout and late delivery of software all contributed to there being a considerable gap between the initial training courses and the start of simultaneous operations. In addition, the libraries were not initially comfortable with the support site. It was only with the implementation of Virtua that LINNet had developed an Internet presence and the libraries were not accustomed to thinking of the Web site as the first place to look for information. This is gradually changing but has taken much longer than originally anticipated.

Starting to build

The library system is now the foundation upon which NTLIS is developing a number of services for remote and internal users. The implementation of Virtua has been the catalyst for the redevelopment of the NTLIS web site.

Increased emphasis is being placed on the development of digital collections. Within NTLIS work has commenced on the Virtual Northern Territory Collection, integrating databases of digitised images, oral histories, full text documents such as the Eric Johnston Lectures, and the Cyclone Tracy website. A collaboration with the Administrator's Office has produced a web version of the Northern Territory Chronicle, which attempts to capture, by date and brief description, events of significance in or involving the Northern Territory from 1974 to 1998.

In addition, a review of electronic information sources held by the LINNet libraries is being conducted with a view to the consolidation of assets and provision of wider access throughout and beyond the network. NTLIS has negotiated on behalf of the public libraries for licences to a range of electronic resources including World Magazine Bank, Electric Library Australasia and Business Who's Who of Australia.

A change to the plan

At the same time that the implementation of the new library management system was focusing our attention on the delivery of remote services to the public, a significant period of organisational change within the NT Public Service was turning the spotlight inwards.

In October 1998 the Treasurer announced a series of initiatives aimed towards the goal of improving the efficiency and effectiveness of the public sector (Reed). As part of the Planning for Growth initiatives the Northern Territory Library (NTL) and government agency libraries were merged to form the Northern Territory Library and Information Service.

The aims of the merger were to:
* achieve efficiencies through centralised purchasing and cataloguing;
* provide improved access to library services to the public sector as a whole and particularly to staff in regional centres;
* increase professional development opportunities;
* whilst achieving recurrent savings of $500,000 per annum from 1999/2000.

Part of the strategy for achieving these aims was to extend the newly acquired library management system to the whole library network and to establish a shared catalogue.

The aims of the two projects - the rollout of Virtua to LINNet and the extension to the Government Library and Information Service (GLIS) – were remarkably similar, increased efficiencies through the streamlining and centralising of services and improved access to information. However there are significant differences in the philosophy of library service. The GLIS libraries exist to provide service to government, and more particularly to their specific agency. Their collections are not publicly available, and indeed in some cases are extremely sensitive.

We are still working to achieve the balance between our external and internal focus. A side effect of the amalgamation of NTL and the agency libraries is the development of the NTLIS intranet site. In the same way that the internet site is becoming the primary delivery mechanism for services to the LINNet libraries and the public, the intranet site will be the cornerstone for services to Government.

At the time of writing GLIS consists of eleven libraries located within various government agencies in Darwin, Palmerston and Alice Springs. Three of the libraries are already members of the LINNet consortium, the remainder utilise their own library management systems.

Given that there was considerable work to be done in order to define and establish the model of service delivery to be provided by GLIS, the decision was made to complete the implementation of Virtua into the LINNet libraries before attempting to migrate the GLIS libraries. This was a sensible decision at the time, but we had anticipated the implementation to LINNet would take less time than it has. The delay has meant that we have lost the momentum that surrounded the original cabinet decision to

restructure, and the enthusiasm that was present at the start of the Virtua implementation project.

The first library to be migrated is the Planning and Development library, which comprises the former Treasury, Transport and Works, and Work Health Authority libraries. Work has commenced on this migration project which is anticipated to be completed by the end of January 2000.

Review

If we could start again, what would we do differently? We underestimated how wide the gap between where we had been and were we were heading actually was. Given that most of the libraries had Internet access we assumed a level of comfort with Web based services that simply didn't exist. This caused problems in getting library staff to fully utilise the support web site. It also meant that some of our subsequent services, such as the Networked Electronic Resources, were not embraced by the staff in the libraries to the degree we had imagined they would be.

Our training concept was a good one, but we should have made our expectations of the LINNet libraries clearer. In retrospect we should have postponed the training until the Infrastructure was finally rolled out and we should have insisted on a training database with our own data.

PR was another area were we could have done better. We did a good job of reporting progress in the early stages of the project, but this fell away to some degree as we became bogged down in the implementation. We needed to sell our successes as they happened, instead of waiting for the day when everything was just right.

But in spite of this we have, over the past 18 months, set the foundations for a totally new approach to delivery of library and information services within the Northern Territory.

We have come a very long way in a short period of time with few resources at our disposal. Of course it is not enough – it never will be enough.

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