

**Was it a bird? – Was it a plane?
Making sense of Victorian Rural Libraries Online 1998-
2004**

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SUMMARY

In October 1998, VICNET (a division of the State Library of Victoria) and the Country Public Libraries Group of Victoria Inc. made a submission for funding from the Networking the Nation program. The submission was for a telecommunications project involving all 19 public library services in the rural area of Victoria which comprise 130 individual library branches. The application outlined the state of rural telecommunications in 1998, with a special emphasis on the problems of reliability and sustainability, and spoke of the special position of the rural public library as a source of important on-line information for the community.

By May 1999 a grant of \$3,479,407 was approved and the Rural Libraries Online project began. Taking a broad action research methodology, the project team focused on:

- researching and auditing the rural situation in some detail;
- intensive consultations and negotiations with the separate 19 library services;
- proposing a pre-tested technical solution from a pilot project (an asymmetrical connectivity solution with satellite download and terrestrial back-channel).

After the relevant tendering and supply processes were completed, this satellite bandwidth solution was in fact applied state-wide by late 2000, bringing "Phase One" of the original submission to a successful conclusion.

The technical approach proffered in the grant application is placed in the context of the technical and service delivery environment of the late 1990s. (A period of growing demand for on-line services often in a public access environment; demand not matched with the resource or skills base necessary to meet the demand.) The research and developmental work undertaken with the library services had resulted by late 2000 in a very detailed understanding of the technical and organisational capacity of each of the 19 project clients. The project team applied this knowledge to the particularities of each library service, with consequent changes to the detail of the network design.

Phase Two of the project involved the design of wide area networks for the library services based on the geographical surveys required for either microwave or spread spectrum radio links – the final technologies of choice. Again a pilot project was planned and costed and designed for delivery in the same area as the previous pilot for the satellite delivery system.

In fact, difficulties with the second pilot project led to a rethink of the implementation of the wide area networks. Much more emphasis was given to the role of each library service in establishing its own wide area network. As designs for this phase progressed, priorities had to be established among the 130 libraries to maximise the cost-effectiveness of the infrastructure. These priorities were established with the project Steering Committee and the project participants themselves.

Higher priority links were targeted first, and the library service involved had to negotiate with owners, planning authorities and any other intermediary parties and sign contracts or give commitment to ongoing expenditures before any project activities could commence. If the microwave or radio link in question did not achieve all these requirements, the money allocated would cascade down to the next link in the list of priorities. This method of moving forward avoided the delays and obstacles that the second, proposed, pilot had uncovered.

Details of this staged approach to the project delivery are given, and issues arising from the implementation of such an extensive project discussed. The issues are both particular in relating to individual library services, and also broader in scope involving the whole

library community and sometimes the local government sector where of course public libraries reside.

The issues discussed are principally:

- environmental and political, arising from the multiplicity of stakeholders;
- technical as the changing environment and the unfolding of the project time-frame themselves interact;
- managerial, such as coping with a small team, coping with the unexpected and with delay;
- co-operation issues, arising from the difficulties of engaging library services in assisting and contributing staff efforts to the development of their own networks;
- and environmental, arising from the very nature and priorities of the rural libraries as service delivery agencies.

In conclusion this paper details and points to the achievements of the Rural Libraries Online project in establishing:-

- satellite access to the internet in rural Victoria;
- in providing a flexible mix of networking infrastructure to assist the library services;
- and in providing a stable, sustainable and useful jumping off point for a range of further networking and related technical infrastructure projects in the Victorian rural library sector.

These activities and the sum of the project achievements have been an important factor in assisting rural public libraries to their current position as providers of public access to the internet. The outcomes of the project have been both small and large in scale, and to some extent cannot yet be fully assessed. Other funding opportunities have been offered to the sector to extend the usefulness of the project and even for other infrastructure, and a revolution is still underway in the view rural public libraries have of their potential in the process of community capacity building.

BACKGROUND TO THE PROJECT

The world of Victorian librarianship was an early adopter of the internet, with a joint project between RMIT University and the State Library of Victoria starting as early as 1994 – this project was the very early stages of VICNET. Having sprung into being in a library environment, VICNET maintained an interest in the availability and use of the internet in libraries, and championed government moves to provide infrastructure to expand the opportunities for public access. In conjunction with VicLink (the peak public library body in Victoria) VICNET ran two key projects increasing the availability of public access through public libraries. These were the:

- Online Public Access Initiative funded by the then Department of Communications & the Arts; and
- Networking for All Victorians, which was funded by the Victorian State Government.

Outcomes from these two projects were significant factors in the preparatory work for Rural Libraries Online.

- The two projects focussed attention on the potential of the internet as an information service and resource which meshed well with the information delivery role of the public library network;
- The Victorian public library network gained experience in working with VICNET on technology projects;
- A number of key individual library service managers became advocates within the sector for further public access resources, and became aware of the issues surrounding sustainable access.

During the later 1990s as public access to on-line resources increased, the importance of the quality and speed of upstream connections and the performance and capacity of internet service providers became new preoccupations for public libraries. The public appreciated these new services, and was unforgiving when they were unsatisfactory or unavailable. The realisation that bandwidth was becoming a new de facto utility, like electricity or mains water, was the impetus for further collaboration between VICNET, Country Public Library Group (CPLG) and Multimedia Victoria resulting in the Geelong/Corangamite pilot project. This pilot project was a single element in a broad portfolio of projects based in the on-line information world for public libraries funded by Multimedia Victoria and called Libraries Online.

The evaluation of the Libraries Online project portfolio summarises the Geelong/Corangamite pilot project as follows:

...”The Geelong/ Corangamite pilot project aimed to test satellite delivery of internet traffic to library services, by developing and implementing a network design with major nodes in Melbourne. Geelong (Geelong Regional Library Corporation) and Colac and Camperdown (Corangamite Regional Library Corporation).

Internet traffic flows out from the three pilot libraries via connection to the AAPT frame relay network to VICNET in Melbourne and out to the rest of the internet through VICNET’s upstream internet connections. Return traffic flows back to the libraries via the satellite links to Geelong, Colac and from Colac to Camperdown via an ISDN link. Corangamite uses the Telstra local redirect service to enable local call access from each of its branch locations to either of the Colac and Camperdown nodes. This design was intended to take advantage of cheaper satellite bandwidth and minimise more costly terrestrial data communication links...”

The pilot moved to operational status in March 1999, and in total was funded to just under \$300,000 by the Multimedia Victoria program. As the pilot was essentially a proof of concept project, moving to operational status in effect declared it “a success”. Geelong

and Corangamite were chosen as pilot sites, partly for their relative proximity to Melbourne making project set-up and potential trouble shooting more cost-effective, and partly because there was not a great deal of in-house exposure to networking technologies. There were a number of learnings related to these factors:

- The technical issues did not form the principal task;
- Education and formation of the expectations of the recipient library services were crucial;
- Neither the Libraries Online nor the Rural Libraries Online project team had been recruited at this stage, and much of the valuable information gleaned remained within the technical department of VICNET which carried out the pilot project.

THE RURAL LIBRARY ICT ENVIRONMENT IN 1998/9

Rural Libraries Online covered the whole rural portion of the state as defined by the Victorian Grants Commission. Within that area public library services were delivered by 19 library services, organised both as regional library corporations (covering several municipalities) and single municipality services. These 19 organisations delivered library services to the public via 47 rural municipalities, 130 static library branches and a multiplicity of mobile library stops (these were not included in the scope of the project as in 1998/9 the technical problems were considered too complex and likely solutions too expensive).

Within this setting library staff all share the same cluster of demographic characteristics. Generally adult individuals are long term employees who have worked in the area and often the same organisation for a considerable length of time. There may be limited opportunities for other employment, for training or any other professional and personal development. Resources are limited and so is the knowledge and skills base, particularly in the ICT area. Although these characteristics are shared throughout the rural sector in Victoria (and were especially predominant in the later 1990s when the project was formulated) there was a spectrum/population curve along which the 19 library services fitted.

In 1998 when the application for Rural Libraries Online was lodged with the NTN Secretariat, the majority of rural public libraries had a connection to the internet. (Corangamite was the single exception - one of the reasons for inclusion in the Geelong/Corangamite pilot project) During the early part of 1999 the Online Projects team ran a small Libraries Online project which connected the last 33 branch libraries across the state to the internet using a dial-up connection. From this point onwards it could be said with confidence that there was a basic level of connectivity at each branch library in the rural public library sector.

The Last Guys Project (as the last 33 libraries project was called) provides an interesting light on the history of rural telecommunications in libraries. Connectivity certainly existed, but very much at the home user level. The standard of dial-up connections was not particularly speedy or reliable – and most of the geographically extensive regional library corporations used a number of small ISPs to avoid STD costs (again relegating on-line services to the dial-up home user level). Connectivity issues caused a great deal of frustration and annoyance on the part of library users and staff, who were often struggling to come to terms with this new access to information resources and consequent expansion to their role.

This technology mismatch occurred at a time when access to on-line resources was beginning to take off in public libraries.

- There was a new emphasis on the need for libraries to start developing a web-site;

- and to put their library catalogue on-line;
 - Victoria's Virtual Library (<http://www.libraries.vic.gov.au>) was moving into the provision of free access to commercial databases as part of the Libraries Online projects;
 - collaborative content creation projects such as Hot Topics were just beginning;
- and in all this ferment, many rural public libraries were increasingly falling behind.

This is not the whole picture, inevitably there was also a group of early adopters in a better than average position.

- the Glenelg Regional Library Corporation had pioneered internet training classes with its library users;
- the North Central Goldfields Regional Library Corporation was an early champion of the importance of the Gulliver databases in reference services;
- and there are other examples of technology projects such as the Murraylink consortium along the Murray river.

On the whole, most rural libraries had a limited understanding of the on-line world and were focussed on practical concrete problems with little information or conceptual framework to take them beyond this stage.

An important factor in determining whether any specific library service was ahead or behind in the adoption of technology was the degree to which ICT skills were available locally. The IT specialist situation was very patchy – only Glenelg, Mildura, Upper Murray and West Gippsland had any substantial in-house ICT expertise. Technical services staff in other libraries tended to concentrate on the smooth operation of the library management system and were in fact often ex cataloguers (the powerhouse of library computerisation). Some library services had formed local alliances to gain access to greater technical expertise than they had in-house: eg Mitchell with Moreland and Murrindindi with Yarra Plenty.

IMPLEMENTATION - PLAN THEN REALITY

In the application for funding, the issues of implementation are dealt with at a conceptual level dealing with outcomes:-

“...Rural Libraries Online seeks to redress...inequality by building a long term sustainable network of infrastructure that:

- Is comprised of a flexible mix of technologies;
- Is built around local availability;
- Is cost effective, sustainable and expandable;
- Builds on local initiatives, capacity and relationships;
- Provides on-line connectivity for every rural, remote and regional branch library and to participating community public access locations.

Methodologies are covered in the same big picture style.

Victorian Rural Libraries Online will deliver the infrastructure to all rural and regional branch libraries in the state to provide:

- Online public access to local library resources;
- High quality on-line public access to the Internet;
- Online public access to other local information resources;
- Online public access to value added networked information resources;
- Online remote library access to local library resources;
- Communication potential for remote access to local library resources from the Internet....”

The original project paperwork proposed a tiered structure, based on a selection of larger libraries acting as “hub sites”. From this a three tiered network structure would be designed.

- Tier One – connectivity to and from a hub site to an internet service provider;

- Tier Two – the interface between Tier One and the library network, ie:- equipment to be sited at each of the hub sites;
- Tier Three – the network infrastructure connecting library branches to the nearest hub site within the same library service.

The project was properly constituted and staffed by July 1999, and the first task was to review the situation and undertake a connectivity audit. The project team was very small at this stage, and the project was materially assisted by being run within a larger team which was also delivering the Libraries Online bundle of projects funded by Multimedia Victoria. Rural Libraries Online and Libraries Online were able to leverage off each other in terms of knowledge and activities. For example the audit of rural connectivity was carried out by staff working across the two projects, and was later extended to include a similar audit of the metropolitan library connectivity.

With the benefit of hindsight it is clear that if any organisation smaller than VICNET as a division of the State Library of Victoria) had undertaken the Rural Libraries Online project, it would have foundered under much heavier demands of project resourcing and management than envisaged in the original application. Throughout the activity span of the project the staffing level never exceeded 2.5 eft, although as the project demanded, other staff from the VICNET technical area became involved at the project's expense. Without that degree of flexibility, the project would have been subject to greater delays as recruitment to cover those peak demand times would have slowed progress.

Again with hindsight it is clear that the original view expressed in the application that library staff would be able to assist the project work in their area on their network was over optimistic. The audit process revealed that with a handful of exceptions, the libraries did not have the in-house capacity necessary to support their own critical operations, let alone assist the project in implementing new communications technology.

Related to this point is the question of the in-kind support from the 19 library services which was forecast in the application budget. The majority of that support was to be gained from the activities of library technical staff or consultants giving support hours to the work on their network. As the project developed it became clear that there were questions related to this support.

- Very few of the library services had access to the type of skills that the project required – in fact for many of them, the project itself was the only source of these skills;
- The history and experience of the libraries in receiving grants or participating in projects had never before involved such detailed requirements and there was a high level of non-compliance;
- Far from providing “in-kind support”, some of the library services made requests to the project for funding for the additional hours from their consultants.

The diplomatic role of the Steering Committee and an extensive program of site visits, in-depth discussions and negotiations with each of the 19 clients proved to be the key to maintaining progress and a level of commitment to the project outcomes.

Originally the project involved VICNET and the Country Public Library Group on almost equal terms, particularly during the application writing stage. This relationship was then fixed under the terms of the Deed with the Commonwealth with the exchange of a memorandum of understanding between the Library Board of Victoria and CPLG. As the project developed and the extremely specialised technical nature of telecommunications became clearer, so the relationship had to be re-negotiated between the two parties.

Regular contact with the main project partners was maintained in two ways:

- through the meetings of the Rural Libraries Online Steering Committee which met monthly,
- and by regular attendance by the project team at Country Public Library Group meetings.

These meetings took place 5 or 6 times each year, and moved around the state so they gave another opportunity for the team to travel to rural library services. This regular contact, reporting in person and through a more formal agenda, very materially assisted the change of the relationship from one of equals to one in which knowledge and resources were unevenly distributed.

Without the perceptions of the project team acting as honest brokers in a new and very technical world the relationship would have deteriorated quite rapidly with the majority of the 19 library services. As things turned out, there were always some of the 19 who were unhappy at any given time – though fortunately never a majority! The behind the scenes work of the members of the Steering Committee in bringing the unhappy few back to the main project objectives cannot be praised highly enough. The project team and the Steering Committee made it a priority to develop a very supportive working relationship, and this relationship was crucial to navigating the changing nature of the relationships within the project and client bodies.

Unexpected issues were also relatively few, thanks to the excellent work of the Steering Committee in educating the project team and generally smoothing the way. The huge variation of capacity, focus and interest among the 19 original clients was something of an unexpected culture shock, as was the reluctance of some to acknowledge the challenges of the on-line world. The famous comment made by a library manager of the old school over an afternoon tea meeting can speak for this attitude. ‘Tell me “xxx” – this internet thing.....will it last???’.

Two unforeseen issues stand out:-

- First was the growing need to pay communications costs for part of the project in order to provide a carrot to keep as many as possible involved. Attached to this concession was the need for the library managers to take the opportunity to make provision in their budgets over two financial years for an increase in communications costs. This was undertaken very ably by some managers, and not addressed at all by others.
- Second was the delay of the second pilot project while the project team struggled to resolve issues between the relevant library corporation and the Council. This trial of bureaucracy (as it became known) was successfully prevented from bogging the project down entirely, by the decision to make the library services responsible for negotiating contracts and permissions themselves for their own networks.

The level of ICT skills available to the rural libraries is still an issue, although a number of measures have been taken by other funding bodies. The Arts Victoria money administered each year by the Library Board of Victoria contributes \$3,000 a year to each library service for the ICT training of its own choice. This scheme has been very successful, and has been instrumental in improving the computer skills and confidence of front-line staff in simple operations and in assisting the public in accessing on-line resources. Another initiative pioneered by the Mitchell Shire libraries and the Central Highlands Regional Library is to negotiate a managed service solution with a library system vendor.

The audit was completed by September 1999 and final documents made available to the Steering Committee and NTN in Canberra by December 1999. The experience of auditing and reporting the findings was very salutary, and foreshadowed some of the issues recurring through out the entire project. In many instances library staff had difficulty

explaining and describing their networks which were often maintained separately for internet access and library system traffic.

At this point some more detailed discussion of the library management system (LM system) may be helpful. The library management system is the key applications platform for public library activities – all the rural libraries used their LM system for the development of a borrower database and a books etc database. This allows them to check library materials out to a borrower and check them back in again after the return of the items to the library. These databases are also the source material for the on-line catalogue and the basis for other management activities such as acquisitions, cataloguing, placing and delivering reservations, levying fines and charges and so forth.

The information exchanged is generally confined to barcode data, which renders the individual data packets small in size. The key attribute of both the materials circulation and the catalogue module is that they require real time processing. Other real time applications in banking, commerce, stock trading, defence etc, clearly demonstrate the requirement for large budgets to run such mission-critical activities. This is in stark contrast to library circulation and cataloguing operations which by comparison are orphan children. In other words the libraries could not afford large communications budgets to maintain their mission critical applications. Another related issue involved the conclusions the library staff drew from the empirically obvious requirement for real time processing – they confused the need for speed with a requirement for capacity. This led them to describe themselves as large data users/consumers and to strongly indicate to the project team the need for high bandwidth without any related understanding of the cost implications of this.

A library network was therefore made up of two parallel structures:

- Firstly, the LM system network used to exchange data between the LM system servers (usually situated at the library administration/ head quarters/ other main site) and library branches, usually in a star configuration. Links in these networks at that stage were all based on Telstra voice service products – either simple PSTN lines or 64k ISDNs. Combinations of these services, the utilisation of local call zone re-directing, close attention to the ISDN set-up and distance tariffs were all universal features of LM system networks in 1999.
- Secondly, the means of accessing the internet. It is almost impossible to make general statements about how this was achieved in 1999 as there were many variations among the 19 library services. Some small or single municipality library services participated in a whole of council arrangement (East Gippsland Shire Council and Mildura for instance). The majority of other larger regional library corporations used a number of local ISPs to avoid STD calls, and each library operated essentially like a home user, with a dial-up connection. Most of the library branches in these circumstances had a very small number of internet pcs, and if they had more than two or three then a 64k ISDN connection might be considered. The capacity of many of these local ISPs was very uncertain, particularly in smaller towns such as Swan Hill or Kerang where the only upstream bandwidth might be a single 64k ISDN back to Melbourne for all the ISP's customers in the area to share.

After the audit was over, the project team paused to reconsider operations. The audit had been designed to reveal the situation of each of the library services, the type of assistance that was required by them, the nature and capacity of other players and other useful information that would assist in framing a detailed plan for rolling out some form of wide area network.

In fact the audit revealed that the overall situation of the rural public libraries was more parlous than had been anticipated. Not only were the majority of large regional library

corporations using a number of small local ISPs to avoid STD charges, but the bandwidth available was inadequate and the serviceability not really at a suitable level for public access service delivery. A major discovery was that the levels of understanding and skills were much lower than expected. Libraries had great difficulty in many cases explaining their networks and had even more difficulty unravelling the costs associated with them. Many of the costs were bundled in the Telstra phone bills in ways they did not feel confident in dealing with. The project appeared to be the only source of assistance for many, and other information acquired through the audit was difficult to generalise from and design a one size fits all state-wide solution.

The outcome of all these factors was a variation to the Deed in December 1999 allowing the project to re-cast the budget and the reporting mechanisms more appropriately and to adopt an action research methodology. Changes to the original project proposal were also important in the light of technological change; the project proposal had considered a dial-up network of approximately 56k adequate, whereas by late 2000 broadband was obviously going to be a more satisfactory level of provision.

Moving to a more action-research approach has been one of the key factors in the developing success of the project. Through the regular reporting mechanism reports could be presented on the past six months of activity and expenditure and a work-plan and related budget for the forthcoming six months could then be proposed. This allowed the project to engage productively with what continuing work and research revealed to be an increasingly disparate group of clients across the state.

The project rolled out 21 satellite receiver installations around the state during 2000. Three were already *in situ* as a result of the Geelong/ Corangamite pilot project, and the other 18 were installed at the main node of each library service, with the exception of the West Gippsland Regional Library Corporation which had two major nodes at Warragul and Leongatha. By the close of 2000 all but four of these installations were operational, and the rural libraries were sharing 2Mbps of satellite bandwidth, routed differentially to each site.

During this period of intensive work (helped very significantly by the technical team at VICNET) research into two future areas of development was also underway. Firstly into the merits of various networking technologies in preparation for the network design stages ahead, and the secondly into cost/bandwidth modeling for the library services as they gradually took up the new network costs, reducing the communication cost subsidy carried by the project.

There is a theoretical choice between buying in or building infrastructure/ network services, for Rural Libraries Online the choice was made from the beginning as the libraries' budgets were unable to sustain the costs of ISDN networks in mid 1999. The task before the project was to maximise the benefit of infrastructure spending to reduce as drastically as possible the recurrent commitments of the libraries. The choice of network technologies was speedily settled by this imperative. Microwave and spread spectrum radio links were the pre-eminent candidates, and certainly were technically suited to the purpose. The general methodology of the project was to trial solutions on a small-scale basis before commencing any more extensive roll-out, and so a suitable pilot site for these atmospheric links was selected. Unfortunately the suitable pilot site turned into the unsuitable pilot site, and a number of months were lost trying to resolve and improve the situation. Eventually the project had to withdraw from this pilot which never proceeded beyond the planning and costing stage. Network design did not stop state-wide however. Surveys were carried out in early 2002 for every library service, and a series of prioritised links drawn up as a result of detailed negotiations with each of the 14 remaining library service participants.

Five library services withdrew from the project in the late stages of the financial year 2001-2002. In four of those cases it was due to the inability of the library services to commit to the on-going maintenance of the racks of equipment – a sum of \$5,960 pa plus of course other bandwidth and network costs payable to a variety of suppliers. Other solution providers for the departing library services were:-

- Telstra DSL;
- a whole of Council scheme to share a 64k ISDN back to Melbourne;
- a whole of Council tender awarded to Neighbourhood Cable;
- maintaining a ISDN daisy chain through their network;
- a mixed solution of dial-up access and DSL access.

By this stage of the project the team (which had by now very detailed knowledge of the technical operations of each participant) was dealing with the library services as very separate individuals, each with their place along that spectrum of interest, knowledge, understanding and capacity for involvement. The prioritising of links has been a very serviceable concept – if for whatever reason a particular link falls out of contention, then money originally allocated for that link cascades down to fund another link or links.

The process of prioritising links went hand in hand with further discussions relating to the libraries' role in their own network building. Library services were responsible for negotiating with any existing tower owners for access rights, co-location rights and contractual arrangements including payments. After the "pilot experience" they were also responsible for obtaining planning permits where required, from the appropriate authorities. This responsibility worked very well in conjunction with the idea of cascading funding, as any library service unable to bring their negotiating responsibilities to a conclusion, forfeited their place in the priorities, with that money passing to others.

From the start of the project other services and network technologies were available and during the life of the project product offerings became price competitive for different libraries. All the major carriers were able to offer connectivity and network solutions, and it quickly became clear that the only barrier to the use of these commercial offerings was the cost.

Telstra's ISDN service was perfectly suitable for the library world, but the dependence on distance related charges ruled more extensive use of this technology out from the start. However it is not too much to say that if Telstra's costing regime for ISDN or frame relay circuits had been favourable there would have been no real justification for the project. Interestingly enough, Telstra only offered frame relay circuits in the last stages of the project after Optus frame relay solutions had been set up in certain locations. It is of course a protocol designed for the transmission of data packets rather than voice calls, and offers potential cost savings as the more economical handling of data results in a lower rated service being feasible, with the consequent reduction in costs. Now that the Telstra ADSL service is available more widely, the option of frame-relay has been quietly retired from sight again.

The family of digital subscriber line services came to market during the last third of the project, and certain of the rural library services considered the offerings from Telstra and various re-sellers. The Rural Libraries Online project was not able to deal directly in DSL as the commitment to infrastructure building was more or less built in from the outset. The project advised libraries as to the general suitability of the DSL services in specific settings and in fact a range of providers have been used by some of the 19 where DSL offered a cost-effective solution for a particular link. Detailed assessments of the performance of networks provided by the major carriers are difficult to make, often libraries are reluctant to be specific about the cost (particularly of bundled services). Speed can be heavily impacted by other network choices involving firewalls and network security which are capable potentially (and actually) of impairing network performance.

With these caveats it would appear that the DSL products are more cost competitive for some rural library services, and there is a much greater range of DSL products with higher ratings than is cost effective to consider in the ISDN product range.

BENEFITS OF THE PROJECT

From the earliest planning stages of the project, ordinary members of the public in their role as library users were considered as being its principal beneficiaries. Improving infrastructure in and of itself does not produce benefit limited to a single group – limitations to access and benefit are produced by the application of policy and procedure to the access rights of improved infrastructure. At no stage of the project have the participating councils, libraries or the project staff sought to do this. The groups which have benefited from the project outcomes to date can be most conveniently described in the following way:

Library Users

Victorian public libraries have a very high usage rate among the Victorian population. These statistics are drawn from the year 2000-2001 at the height of project activities.

Total membership: 2,415,903 (49.8% of the Victorian population)

Total number of visits to static libraries: 23,911,745.

The rural components of these statistics are:

Total rural membership: 604,395.

Total number of rural visits to static libraries (mobile libraries were outside the scope of the Rural Libraries Online project.): 5,403,166.

This large body of public library users have received the following benefits from the project. Basic access to the internet has improved at many library sites (moving from individual PC dial-up connections to local area networks) within libraries. This makes higher capacity connections feasible, faster access speeds, better upstream connectivity and allows easier and quicker access to email and basic surfing. It also allows feasible searching access to remotely hosted commercial database servers. (Currently the Gulliver consortium offers US hosted databases to users of all participating public libraries.)

Essentially most on-line activities were significantly enhanced, such as:

- remotely hosted web mail – (e.g. Hotmail or Yahoo mail, an easy way for all citizens to obtain an email address and take part in the on-line world, whether they use the internet at home or only from public access locations)
- database and other more complex searches – (e.g. EBSCOHost and Thomson-Gale products available via the Gulliver consortium, use of search engines such as Google, or just using a search feature on any large site such as a government department site)
- form filling, (again a more complex operation prone to timing out and other errors. These issues can make the use of banking or e-government sites almost impossible)
- accessing meteorological or financial information (many library users in rural areas have specialised interests and any service delivery sites involving large downloads are prone to timing out). These sites are now more accessible through this project's facilities which offer more a practicable service with better connectivity.

All these benefits of broadband have come to users at Rural Libraries Online connected sites.

Library Staff

Library staff have enjoyed the same benefits as the public, with the following additions:

- improving their on-line skills as trainers taking classes in internet and on-line skills. (This in itself is important as public libraries offer an entry point for many adults in their use of on-line information.) Training sessions are more rewarding, as a wider range of activities can be undertaken when timing out or download speeds are less of a constraint

- as reference librarians answering questions at an information desk they are undertaking mediated searches and enquiries on the behalf of the public, and need excellent search skills (these skills come with practice, and useful, cost-effective practice involves better connectivity)
- better connectivity gives libraries confidence to publicise the Gulliver on-line databases (offering better return to the public on their information materials investments)
- better connectivity encourages greater development of the fairly basic library web-sites previously available – the EBSCOHost and Thomson-Gale (and other database vendors) offer enhanced access services, which can now be gradually implemented.

The improvements in networking capacity and upstream connectivity have enabled some of the rural libraries to undertake the long overdue upgrade from green-screen based equipment to GUI interfaces. This upgrade allows them to offer web access to their catalogues. Better connectivity encourages the development of more functionality on their web-sites, such as offering remote access to Gulliver and any other databased information. Remote access has been negotiated with the current database vendors and enables public libraries users to search for information from home or office, using their library card to authenticate their access rights.

As well as the increased, demonstrated practical value of on-line information resources, there have been other spin-offs covering a range of different services which the rural libraries are now involved in:

- Stimulation of the sector now results in spin-offs such as the Networking the Nation funded mobile library project in Upper Murray, which now receives recurrent funding from the regional library service itself;
- Consideration of internet protocol telephony which will have major cost saving implications for the more sprawling rural services which incur STD call charges between library service points;
- Useful access to a range of library based information – eg databases and catalogues;
- More useable access to sites offering e-commerce, multi-media services and other higher bandwidth applications.

The key point to emphasise is that prior to the Rural Libraries Online project, there was rural access to the on-line world. But the reliability and practical usability of this access (in terms of speed, timing out, unreliable up-stream connectivity and so forth) exposed the libraries to the charge of offering barely adequate service levels at a time when home internet access was less common.

In summary, in rural areas of Victoria prior to 1999, poor telecommunications infrastructure and high access costs had led to inequitable access to on-line information of all descriptions, whether communications media (such as email) catalogues in libraries or commercial on-line databases. In the years that the Rural Libraries Online project operated, it played its part in assisting public libraries and to some extent local government in providing suitable infrastructure and in raising the issues and the standards of skills and knowledge.

LASTING LEGACY

It is customary at the conclusion of a project such as Rural Libraries Online to attempt to assess the achievements and the potential for the future that the outcomes of the project represent. Certainly the achievement of providing shared 2Mbps of satellite access to the rural public library services by 2000, and developing networks for approximately half of them are worthy of note. Five years is a very long activity span for a high-tech project delivered in a rapidly developing environment, and by the end of the project technical change had over-taken some of these earlier achievements.

During the project there were many other changes in the rural library environment. The project activities have helped to place telecommunications firmly in the spotlight. This was very obvious at two public library search conferences in April 2001 and April 2003. Technical matters and the requirements of on-line service provision featured in all the discussion and break-out sessions to an unprecedented degree. The need to maintain and improve the technical infrastructure and access to on-line resources in public libraries has become a given.

Other funding opportunities have also arisen, for instance:

Arts Victoria has granted \$400,000 per annum between 2001 and 2005 to support further developments of library network infrastructure. In December 2002 a one off special seeding grant was made by the Department of Infrastructure of \$200,000 for on-line resource purchase to be collaboratively purchased by the whole Victorian public library sector. Rural libraries are now in a position to participate and benefit from grants such as these on more equal terms with the metropolitan libraries. They not only have the infrastructure and access to some resources, but also a greater appreciation of the practical value of both.

An important element of the project has been to focus on data aggregation where ever feasible, and where aggregation has not yet been possible (for example with the Murrindindi Shire libraries), it has been hard to justify expenditure for the library data alone. State and Commonwealth Governments have provided funding for health and education networks, and both these sectors at different stages of the project seemed to be about to offer assistance with data aggregation. Such offers did not materialise from either the health or tertiary education sector, both of which have extensive rural networks. However their main priorities have been building and commissioning infrastructure for their own needs, and the development of "retail" business plans and models involving other sectors may not yet have evolved.

A more successful area of infrastructure provision has been in the development of partnerships, especially within the local government sector. Project collaboration within the Shires of East Gippsland, Mitchell and Wellington has resulted in solutions covering most if not all the major service points of the Shires – usually accomplished over two or three financial years.

In line with the emphasis from all levels of government on community capacity building, the public library world has commissioned research on what roles the public library service can play in this process. Community networking opportunities (which the rural libraries have consistently blown hot and cold over) are expected to feature as a prominent activity, and the rural libraries are well placed to become involved in this process thanks to the achievements of Rural Libraries Online.

Inevitably in a project of this scale there have been a few negative factors – mainly arising, as has already been indicated, from the real nature of the rural public library sector. Issues of commitment to change, knowledge, interest and skill levels have to be noted, along with an acknowledgement on the part of the project team of a certain naivety in failing to recognise that these were a material hindrance. Again almost inevitably, there were communications issues in spite of the general willingness on both sides to make considerable efforts. Focussing the attention of such a widely scattered group on the main deliverables of a complex technical project was a major challenge that was not met with uniform success though-out the project lifespan.

In the introduction to this report, the 19 rural library services were characterised as fitting into a spectrum of skills, understanding and physical resources – some were leaders in the field, some in the middle ground and others forming, at a distance, a rear guard. Although the project has been successful in many of its outcomes, this situation is still true. The 19

library services still fit into a spectrum and regrettably the order of appearance within the spectrum has changed very little, even though the whole group has moved to a higher level of capacity overall.

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