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Knowledge Navigation and Library Services: International Cooperation

***The Cybrary and the Consortium: Mutual benefits.  
University of Queensland Cybrary  
and the  
Queensland University Libraries Office of Cooperation***

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## **Introduction**

The University of Queensland Cybrary has been a member of the QULOC consortium since its inception in 1991. The ten year period has been one of extensive and rapid change in libraries, in response to factors such as advances in information and communications technologies, developments in teaching and learning, changes in the nature and distribution of the student population, and also challenging fiscal situations. The Cybrary is itself a response to this convergence of challenges, reflecting as it does the paradigm shift in concept of a library as a physical place where scholars and students went to gain access to recorded knowledge using bibliographic records to guide them to rows of shelves of printed materials, to the cybrary as a gateway for clients located anywhere to access electronic resources everywhere and at any time. Likewise, librarians have metamorphosed. While the Librarians guarded collections and assisted users, Cybrarians are navigators and guides. For the libraries of QULOC, membership of the consortium has been of great benefit in this time of transition.

QULOC defines itself as a cohesive and collaborative organization, which initiates and supports cooperative world class solutions to information resource needs of university libraries in its member institutions. Its purpose is, by means of advocacy and action, and against background values of Information sharing , Reciprocity , Diversity , Informality and Collegiality to:

- Provide a framework for shared planning, appropriate partnerships and the promotion of cooperative activities among university libraries in Queensland and northern New South Wales.
- Secure an information infrastructure to support the teaching, learning and research needs of member institutions and underpin knowledge-based economic development in Queensland and northern New South Wales.
- Ensure efficient access for clients to information resources, including those available under cooperative agreements among member institutions.

- Leverage activities of member institutions through sharing knowledge, expertise and leading edge activities of member institutions.

This framework has meant that many problems shared have been problems halved, and opportunities grasped have been successes with extensive applications. Staff of the libraries at all levels have collaborated and cooperated, worked together and trained together, to the mutual benefit of the libraries, the universities and the individuals concerned.

In this context, the University of Queensland Library has flourished, no less than the other member libraries. This paper now proceeds by considering the development of the UQ Library into the Cybrary, followed by an explanation of the QULOC structure and functions.

### **University of Queensland Cybrary Profile**

The University of Queensland Cybrary combines both physical space and cyberspace in the delivery of both real and virtual information resources. The Cybrary delivers customer focused innovative information products, services and programs of the highest quality that are integrated with, and central to, the University's teaching, learning and research activities. The Cybrary facilitates excellence in teaching, creates an appropriate learning and research environment, anticipates and responds to student learning and research needs, contributes to positive graduate outcomes and provides the information infrastructure necessary for leading edge research activity. The Cybrary is committed to excellence, and to principles of equity and integrity. The Library depends on teamwork and personal responsibility, encourages flexibility and innovation, promotes open communication, recognises the importance of staff development, and emphasises accountability.

*We link people with information, enabling the University of Queensland to achieve excellence in teaching, learning and research.*

The Cybrary has over 2,000,000 items in its collections , including 23,000 videos, 18,000 journals (of which 9,000 are available online) 129,000 e-books, almost 500 databases, over 5,500 pages on its website, and 1,000 computers. Loans are 1.5 million per annum. 3.5 million items are shelved each year. 3,000,000 entries to the Library's branches were recorded at the turnstiles in 2000 and the Cybrary's web-site has averaged 1.2 million uses per month.

The Cybrary's clients include all 30,000 students of the University, approximately 20% of whom are postgraduates, 4,500 academic and general staff, clients from groups with which the University has formal links, such as the Cooperative Research Centres, and staff of the major teaching hospitals as well as the wider community.

The University's campuses are all served in some way by the Cybrary. Increasingly, students are enrolling remotely from the major campuses. Clients access services in the library branches, from office, laboratory, home or other locations. Providing

client-focused quality services is the Cybrary's driving force. Regular surveys and focus groups ensure an understanding of client needs and suggestion boxes in both electronic and physical form provide important customer feedback.

The principle behind the structure of the Cybrary is the distributed nature of its service delivery, combined with centralised planning and policy development. The branch libraries (a total of 13) include the Social Sciences and Humanities Library, the Dorothy Hill Physical Sciences and Engineering Library and the Biological Sciences Library and the UQ Gatton Library and Centenary Learning Centre. Also included are the University Archives. The University Cybrary also manages several libraries in teaching hospitals. Underpinning the direct service delivery components are the units whose services are primarily based on indirect delivery, although some sections do provide direct services to clients. These units comprise the Library's Technology Service, Corporate Services, and Information Access and Delivery Service. The Library Technology Service is responsible for the delivery of student computing help and training services across the University through the AskIT service, the Electronic Information Centre and some Self-directed Learning Centres.

In 1998, the UQ Library was awarded joint first place in the institutional category of the prestigious Australian Awards for University Teaching for its development and implementation of the Cybrary concept. In 2000, the Library won the same award for its AskIT Computing Help and Training Service. UQ Library is the only Library in the country to have won this Teaching Award. The University Librarian, Mrs Janine Schmidt was designated Library Manager of the Year for 1999 by her colleagues in the Australian Library and Information Association.

## **Services**

The services offered through the Cybrary support the complex and varied learning journeys that both students and staff undertake in the current educational environment. Students and staff are able to control their own research and learning to a degree not known before.

Services provided by the Cybrary focus on the specific needs of its client base and include the following:

- ◆ Provision of teaching, learning and research materials in a wide variety of formats for on-site use and loan
- ◆ Access to the global body of knowledge
- ◆ Assistance in the use of information resources
- ◆ Provision of information skills programs which lead to lifelong learning
- ◆ Provision of facilities to support effective teaching, learning and research
- ◆ Document delivery services for researchers
- ◆ Electronic up-dating services
- ◆ Publications and pamphlets outlining services including Find-its and Use-its, available in print and on the Web

- ◆ Research support and assistance
- ◆ *Ask a Cybrarian* and AskIT personalized information services.
- ◆ Provision of inservice training courses for library professionals

The effectiveness of the Cybrary in service delivery is strongly influenced by the effective implementation of information technology. A single interface to all Library collections and services is provided by the Cybrary website. The Library uses Innopac (marketed by Innovative Interfaces Inc.) as its integrated library management system. Digitisation projects involving theses, exam papers and photographs have been successfully completed.

The Cybrary concept is now regarded as an indispensable, integrated approach to meet the information demands of lifelong learning and problem based teaching. It is a powerful support for flexible learning and an enhancement to flexible teaching.

The University of Queensland Library has traditionally been an early adopter of technology. In the early 1970s online databases were searched for clients; then an electronic catalogue was introduced. When CD-ROM technology opened up the world of enduser access to electronic bibliographic databases the Library was among the first to provide its clients with these products. As a proactive electronic service provider, the Library has adopted and utilized Internet and Web technology as a vehicle to provide better service to its clients.

### **How the *Cybrary* Began -- The Way of the Web**

The University of Queensland Library is one of the largest academic libraries in Australia and the largest in Queensland. It has consistently been a provider of electronic services to students and staff - automated catalogue and lending services in the early days, then mediated online searching of remote databases, and more recently electronic database indexing services. The Library has steadily increased the databases networked and now has the highest number locally networked of any university library in Australia. It was the first in Australia to install a *Silverplatter* ERL (Electronic Reference Library) server to make information databases available from a single interface.

However, it was the advent of the Web that enabled the Library to radically expand its services. The University of Queensland Library was one of the first to mount a Web version of a library catalogue in Australia. It has continued to add other electronic services as they have become available, for example electronic journals obtained either individually or as part of "umbrella" services from specific vendors and electronic versions of textbooks and multimedia formats. Trials have been carried out on the construction of electronic reserves and the scanning of examination papers, and web pages outlining new library services were constructed as the technology changed. Increasing numbers of classes were held to explain the use of the new services to students and staff who greeted both the classes and the services enthusiastically.

## **Making the Library's Web into the *Cybrary***

During 1997, the Library realised that its web pages needed restructuring. In late 1997 a market research consultant was engaged to conduct focus groups with library users to assist in the development of an ideal approach to redesigning the Library's web site. In consideration of the focus group findings, work began on a new presentation of the Library's web pages and the *Cybrary* (<http://www.cybrary.uq.edu.au/>) was born. Essential items of communication were placed at the first level of the web pages as few students bother to develop an understanding of what is on offer throughout the site. Information categories were made as clear and concise as possible. Statements were designed to be immediately clear to the novice user and details kept as brief as possible. Layout was standardised across all pages. Given the access speed required, non-essential graphics were avoided to reduce the time taken in downloading.

## ***Cybrary* Infrastructure**

To develop the *Cybrary*, the Library has invested heavily in information technology hardware and software infrastructure. The Library has:

- linked component parts via a local network and the University's wide area network; developed its staffing resources to provide extensive informative technology expertise at the planning, implementation and support levels;
- provided Electronic Information Centres in each branch library with sophisticated training facilities, data manipulation software and multimedia support software;
- allocated significant funds to electronic resources and negotiated appropriate multi-user licenses;
- and developed standardised interfaces (eg.Z39.50) to external databases.

It has developed services with actual facilities students are likely to have in mind. Many web developments use complicated Java script, and other interfaces requiring sophisticated hardware and software to access. The Library has chosen to develop interfaces requiring only widely available hardware and software and new services have been worked up from prototypes. Projects have been undertaken in consultation with user groups where possible to ensure their relevance. Services have been developed with students' time constraints and pressures in mind and are simple and user friendly. Personal assistance is available to clients 81 hours per week.

The information technology infrastructure of the *Cybrary* comprises:

- a leading edge integrated library management system (purchased from Innovative Interfaces Inc.) with a 350 simultaneous user license running on a DEC Alpha computer
- ten file servers using Unix, Novell and Windows NT, with a total of over 200 gigabyte storage for data linked for ease of student access. One fileserver acts as the library webserver. A second supporting the ERL (Electronic Reference Library) databases provides for up to 100 simultaneous users.

- 1000 public and staff personal computers, most being high-end Pentium workstations (100mb/sec ethernet network adapters) and some with sound-card, CD-ROM drives.

### **Equitable access**

The Cybrary assists students to access information equitably and progress in higher education. The University Library provides Electronic Information Centres for student use, free of charge, in all branch libraries. Access to the Cybrary is available from lecture theatres, tutorial rooms and offices on all campuses. Dial-up use 24 hours per day, 7 days per week, 365 days per year further assures equity. The Cybrary is available for students to use at their own pace, in their own place, and in their own time. All services are available to all users.

Information skills training provided by the Library is available without charge to all students and staff. Programmes are provided in classrooms, in the Electronic Information Centres and also interactively via the Cybrary. Lifelong learning is an objective of the information skills programme. Classes are voluntary, available to all and provided at a range of times. The sessions are structured to provide a forum in which discussion and question and answer clarify students' understanding. There is a general belief that attendance by students at information skills programmes leads to effective use of the Cybrary and that effective use of the Cybrary ensures better performance by students. Postgraduates attending classes have rated their own improvement as significant. Academic staff working with library staff consistently report students who use the Cybrary's services effectively perform better than those who do not.

### **Promotion of the *Cybrary* and Student Satisfaction**

The service is promoted directly to students via a range of mechanisms including departmental liaison librarians, noticeboards, e-mail discussion lists, notices and flyers, links to and from various Home Pages within the University and outside, and information skills and student orientation programmes. The Library values student input highly and it is sought via surveys, suggestion boxes (physical and electronic) and informally in structured focus groups. It was focus group discussions in late 1997 that led to the redesign of the Library web pages and the creation of the Cybrary.

Student satisfaction is central to the activities of the Library and their response to Cybrary services has been extremely positive with very high use indicating extensive adoption of services. In 1996, there were approximately 250,000 logins per month to the catalogue. In 1997, this figure had increased by almost 100% to 473,000 logins per month. By 1998 further dramatic growth had occurred with another 100% increase to almost 1,000,000 logins per month, and in 2001 2.5 million uses per month was common. The database component of the Cybrary has experienced similar heavy use and growth. In 1996, there were approximately 85,000 logins per month and in 1997 a 50% increase resulted in figures of 123,500 logins per month. In 1998 the increase has been about 60% with approximately 200,000 logins per

month. Compared with other university libraries in Australia, the statistics supplied by the various services show that the University of Queensland Library is consistently the highest user of all databases for which consortium purchasing agreements have been arranged.

The University of Queensland Library's web site has also proved to be the most heavily used site at the University of Queensland. The new version of the University's Home Page has a direct link to the Library on all pages that are part of the site, providing further evidence of the significance of the University of Queensland Cybrary.

Where both Cybrary and traditional services are available students are choosing the flexibility of the former. The e-mail discussion list set up by the Library to provide information on the availability of new services is well subscribed and high attendance at voluntary information skills training sessions evidence a thirst for knowledge amongst the student community. Further positive response is evidenced in the number of students attending training programmes on the use of various information services. Over 50,000 people attended library information skills programmes in 2001. The ten-hour programme *Information Skills for Researchers and Postgraduates* has proven extremely popular and effective, and funds have been provided by the University for the development of an online interactive version of ISRAP. This should be available by the end of 2002.

The University of Queensland Library is bringing 21<sup>st</sup> century learning support services to its students and staff through the University of Queensland Cybrary. It is an innovative, ongoing project - the first of its kind in Australia. With its reputation for imaginative use of information technology the University of Queensland Library is integrating its state of the art Information Technology support services with traditional services to create a "virtual library" in a "wired university". The Cybrary pushes out the boundaries of information gathering and gives students new scope for synthesising and processing the material they discover. It meets the information demands of lifelong learning and problem based teaching and is a powerful support for flexible learning and enhancement to flexible teaching.

### **The QULOC story**

The University of Queensland Library was one of the original three participants in QULOC, the Queensland University Libraries Office of Cooperation. Formerly called BULOC, the Brisbane University Libraries Office of Cooperation was established in April 1991 as a joint initiative of the three Brisbane University Libraries (Griffith University, Queensland University of Technology, and University of Queensland). The founding mission was to provide a framework for initiating and promoting cooperative ventures between member libraries and to foster collaboration between the libraries and other appropriate information organizations.

Cooperation had long existed between the three Brisbane University Libraries. But the impetus for change arrived with tighter economic conditions, the 'information explosion' effect, developments in technologies and the possibilities that these enabled, and new government policies on inter-university collaboration. In response to these demands, BULOC was launched to stimulate joint activities on a larger and more organized scale.

The success of BULOC's operations over its first two years provided the foundation on which a larger group could operate, and in May 1993 BULOC was transformed to QULOC, with six new members – Australian Catholic University, Bond University, the University of Southern Queensland, James Cook University of North Queensland, the University of Central Queensland, and from over the border the University of New England – Northern Rivers. The State Library of Queensland which has some interests in common with university libraries joined QULOC with observer status. The University of New England – Northern Rivers subsequently became the Southern Cross University, retaining membership of QULOC. The University of the Sunshine Coast joined in 1996. The University of New England (Armidale) was welcomed into QULOC in 2000 and the Northern Territory University in 2002. Membership of QULOC involves equal access to all QULOC activities and working parties, as well as an equal financial contribution to the operating costs of the organization.

At the center of QULOC is the University Librarians' Committee, initiating programs and setting priorities for the organization. A Strategic Plan 2000 – 2003 developed by the University Librarians articulates the vision, purpose and values of the organisation, and recognises the challenges and issues that characterise the tertiary information environment. A set of Actions, categorised under the four headings of shared planning and appropriate partnerships, information infrastructure, access, and sharing, then provides a framework for the activities of the various Working Parties. Performance Indicators have been developed by the Working Parties. Both the Plan and the Performance Indicators can be seen on the QULOC website, at [http://www.quloc.org.au/strategic\\_plan.htm](http://www.quloc.org.au/strategic_plan.htm).

The Working Parties and their terms of reference are as follows:

### **Cooperative Resources, Working Party**

- To promote the concept of the Distributed National Collection in the context of the QULOC libraries.
- To advise the University Librarians of areas where collecting and information access agreements could be developed and to prepare such agreements.
- To evaluate database access services and to advise University Librarians on services suitable for cooperative access.
- To prepare grant submissions for cooperative collection and information access ventures.
- To act as a forum for the exchange of information relating to collection development, collection management and information access issues.



### **Lending and Document Delivery Working Party**

- To cooperate to facilitate document delivery services, investigate and report on recent innovations.
- To monitor cooperative document delivery projects between member institutions.
- To monitor and facilitate agreed reciprocal library usage between member institutions.
- To monitor relevant circulation issues, particularly with new advances in automation.
- To monitor copyright issues in relation to document delivery and circulation services.

### **Information Skills Working Party**

- To identify client needs for core information skills
- To facilitate cooperative development and exchange of training materials, programs and liaison services
- To disseminate information on training programs and facilities
- To share strategies and methodologies for faculty liaison programs
- To identify areas of research needs and facilitate development of proposals or projects
- To share strategies for the promotion of information skills programs

### **Networking Working Party**

- To provide a forum for information exchange on matters relating to information technology in QULOC libraries.
- To identify, monitor and where appropriate refer action on information technology issues on a cooperative basis through QULOC.
- On the basis of the above, brief the University Librarians' Committee on information technology issues which are relevant to QULOC's objectives.

### **Staffing Issues Working Party**

- Briefing, and advising when appropriate, on industrial matters of common interest.
- Organisation of cooperatively run staff development and training activities.
- Facilitate the development of HRM skills within the Working Party to improve the quality of advice to the QULOC Executive
- Facilitation of staff secondments between QULOC members and TAFE.
- Sharing of staff development information, policies, training programs, modules, and concepts, and sponsoring attendance at development activities by staff from other institutions.

## **Quality Issues Working Party**

- To constitute a body of shared expertise in relation to quality assurance in QULOC libraries.
- To advise working parties which are implementing quality assurance projects.
- To identify and evaluate instruments and/or projects which can be used by libraries interested in undertaking quality assurance programs.
- With the approval of the University Librarians, to organise activities designed to improve the practice of quality assurance in QULOC libraries.

The membership of these Working Parties is made up of one or more representatives from each of the member libraries of QULOC. Convenors of the working parties as well as their terms of reference are decided by the University Librarians' Committee and a University Librarian acts as mentor for each of the Working Parties. The Working Parties meet five times per year, at different Universities. Distant members often teleconference in to the meetings. A feature of all Working Party meetings is the institutional report section, during which much valuable information sharing takes place.

Underpinning the organization is the QULOC secretariat. Staffed by an Executive Officer on a part-time basis, the secretariat is located within the institution of the Convenor of QULOC. The convenorship rotates on a two year cycle. The current convenor is Janine Schmidt, University Librarian, University of Queensland. QULOC is a voluntary association, with no formal legal identity. Member libraries pay an annual subscription, which is set to cover the running costs of the secretariat. All QULOC functions, seminars, workshops, and training programmes are run on a cost-recovery, not profit making, basis.

In 2000, the QULOC website was restructured and extended, to provide a watershed for information about QULOC activities. It has been registered in the .org domain, to remove it from implicit identification through the URL with any one of the QULOC institutions. The Terms of Reference of the Working Parties are available on the website, as are all surveys and reports, minutes of meetings, a calendar of meetings for the year, and a news and events record.

## **Cooperative Activities**

A sample list of projects undertaken by the various Working Parties includes:

- a one day seminar on Ebooks co-hosted by the Networking and Cooperative Resources Working Parties
- a workshop for document delivery and lending services staff by the Document Delivery Working Party, to showcase various institutional developments such as QUT's Course Materials Database, and Griffith University's Electronic Resources Database;
- an EndNote Resource Service by the Information Skills Working Party to support both librarians who train EndNote users and the users themselves

(EndNote is a personal reference database now widely used in Australian universities)

- a survey of and report on experience with Patron Self-Check Units and a survey and report on experience with Network Printing contractors by the Networking Working Party;
- management skills training courses for middle managers, and customer service and professional presentation training for front line staff run by the Staffing Issues Working Party.

For some years now, QULOC has run a Reciprocal Borrowing Agreement, which allows students and staff from all participating libraries to borrow from all other libraries. This has been a most useful service for students enrolled remotely in tertiary studies, which has long been a common situation in Australia. In the last year, a national reciprocal borrowing scheme has come into existence, called University Library Australia. This scheme is sponsored by CAUL, and, once fully established, it will mean the QULOC scheme is no longer necessary. It will then be possible for QULOC to drop its scheme, as having served its purpose at the right time, and move into another area of activity.

Working Parties keep watching briefs on developing areas of need and opportunity. One such is the Virtual Reference Service. The University of Queensland Cybrary runs a digital reference service, called *Ask a Cybrarian*, for students and staff of the University, to provide assistance with using the Library, locating material for assignments or research, and finding information on topics. Other QULOC member libraries offer similar services. Members of the Information Skills Working Party share information on the nature and rate of use of these services, including monitoring patterns of usage over the day and the week. When appropriate, a collaborative 24x7 digital reference service can be introduced, with member libraries sharing the workload involved.

QULOC has been in the past but is not at present engaged in any consortial deals for the licensing of electronic resources. The various QULOC member libraries participate in CAUL (Council of Australian University Librarians ) deals as appropriate. The Cooperative Resources Working Party members use their meetings to keep abreast of comparative developments in electronic resources pricing and licensing.

## **Conclusion**

While this paper has not focussed on it, the University of Queensland is also a member of the International *Universitas 21* consortium, and the Cybrary participates in a number of activities in this context. The Cybrary also engages in collaborative activities with university libraries in developing countries, and runs a programme called *Cybrary Skills in the Tertiary Environment* which offers library professionals the opportunity to update their skills and gain work experience in the functioning Cybrary context. Clearly, as information and communications technologies continue to shrink the distance between us all, opportunities for further engagement in

collaboration and cooperation at an international level will present themselves and must be taken.

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