

Some Issues Facing Technological University Libraries: an IATUL Perspective

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Introduction

The International Association of Technological University Libraries (IATUL) ¹ was founded in Europe in 1955 and from small beginnings has grown to almost 250 members from 45 countries. It is a vibrant and growing association which provides a network of international contacts for the directors of libraries in technological universities.

IATUL four membership categories:

- Ordinary Membership, which is available to institutions that provide courses in science, technology or engineering to at least Masters level.
- Associate Membership is available to organisations that want to be associated with IATUL, such as national libraries.
- Honorary Membership is for retired members who have provided significant services to the association, usually as a member of the Board.
- Sustaining Membership is for commercial organisations that wish to be members of IATUL and attend the annual conferences.

IATUL is managed by a Board, all of whom are voluntary and are library directors from eight countries. There is some paid support which includes the development and management of the IATUL web site (www.iatul.org) and this is based in the Library of the Queensland University of Technology in Brisbane, Australia. Because of this mainly voluntary effort, IATUL has a low subscription rate of US\$100 per year, which means that we have many members from central and eastern Europe. Our subscriptions are managed by the Library of the Delft University of Technology, The Netherlands.

IATUL is an active association which encourages communications and networking between its members and has an active mailing list which connects all members. This leads to discussions between the membership and requests for information, together with regular communication from the Board to the membership on issues of interest.

IATUL Conferences

One of the major activities of IATUL is to organise an annual conference and these are characterised by their friendly and supportive atmosphere. They have covered the following themes:

2002 Partnerships and Consortia (USA)
2001 New methods of Scholarly Publication
(The Netherlands)
2000 Building Virtual Communities (Australia)

The next conference will be in Krakow at the Krakow University of Technology from 31st May to 3rd June on the theme of 'Library Management in a Changing Environment'. IATUL conference registration fees are also kept low, as much of the cost of the conference is met by commercial sponsors who wish to be associated with IATUL and to receive publicity from this association. The conference usually takes place in a university and it is possible therefore for delegates to stay in cheaper university accommodation as well as hotels, and this also enables the total cost of the conference to remain low for delegates. IATUL conferences have a strong social programme and this is a very good way to build up international contacts and friendships.

IATUL Travel Scholarships

This year, IATUL introduced a number of travel scholarships which were made available to delegates from developing countries who had not previously attended an IATUL conference and needed some funds to assist their travel. This scheme, which did not pay all the costs of the delegate, was very successful and enabled delegates to attend and to present papers and posters at the USA conference from Cuba, Kenya, Uzbekistan, Botswana, Vietnam and The Philippines. It is hoped to continue and expand this scheme for the 2003 conference in Turkey.

International Issues

I would like to look at some of the issues that have been covered in the recent IATUL conferences as I think that they give a flavour of the type of issues that libraries in universities are now dealing with throughout the world. Before the advent of the Internet and in particular the world wide web, there was a significant gap between the agendas of libraries in the developed world and those in the developing world. This was because the ability of a library to support teaching and in particular high quality research in their institutions was measured by the strength of its physical collections of books and journals. However, developments in electronic publishing and the ready availability of the full-text of scholarly journals, subject of course to economic constraints, has now created the potential for an equal environment. Libraries are now faced with the same challenges of how they deliver this material to their users, how they provide access to it through their online catalogues or web pages, and how they support new models of student learning

¹ www.iatul.org

with electronic publications in the face of such competing services as Google. The areas that I would like to look at are Teaching and Learning, Scholarly Publishing, Digital Preservation, and Library Management.

Teaching and Learning

Papers at IATUL conferences have addressed the issues of how the library will fit with the new learning paradigm and the development of Virtual Learning Environments, based on WebCT or Blackboard. There are a number of opportunities for libraries to work with their institutions to ensure that the library is embedded into these new developments. This requires a proactive attitude for the library. These changes to teaching and learning raise questions as to the role of the library in the institution and its integration into the learning process, and questions as to the physical development of the library building. Many institutions have responded to these changes by moving their library from being a passive collection of print materials and a passive learning space into a Learning Resource Centre, focussed on actively supporting student learning by the services that it provides, such as group study spaces, PC provision and even library cafes.

Other models of learning, such as the Digital or Virtual Classroom, are developing. The Digital Classroom might contain the study guides and examples of work by previous students, with extensive links to other relevant web sites, a shared bulletin board and extensive email communication. The teaching is not done by the conventional method of presenting information directly to the student. It is more a question of responding to information from the individual student as they actively learn, or responding to discussions between the group of students on the course and building the learning by active participation of the students.

So what is the role of the library and the librarian in supporting this type of learning? The role of the library changes from one of knowing the collections, to one of knowing the learner. The library must meet their needs for information directly by creating electronic environments or portals that link them seamlessly to the information that they need. It is argued that librarians should no longer just be custodians of information resources, but should be communicators of information, knowledge consultants and knowledge brokers on behalf of our information clients. Therefore, the understanding and management of the information needs of students becomes more important than the supply of the information to them. Higher levels of adding value can be achieved by libraries through filtering and quality selection of information, repackaging of information for more effective use, and monitoring the authenticity and the integrity of the information. It follows from this analysis that libraries should therefore realign their services directly to support e-learning and librarians should understand the learning and teaching processes more than they do at present in order to support tomorrow's students more effectively.

One of the key issues in this changing environment is the need to equip students with the necessary information literacy skills to navigate the new learning landscape and

to make sure that information and computer skills development is embedded in their learning activities.

Scholarly Publication

Whatever the budgets of libraries, they are never enough and particularly with the regular annual increases in price of scholarly journals particularly those covering science, technology and medicine. If libraries are restricted in the journals that they can subscribe to then their users are restricted in the information that they can have access to and this does not help the generation of new research and knowledge, which leads to economic and social development. As you will all know, there has also been a move towards the consolidation of journal publishers and a move towards the 'Big Deal'. The Big Deal² allows access to the full output of a publisher for a single price, but requires a commitment for a number of years. This offer is usually attractive to libraries but it can have the effect in threatening the existence of smaller publishers, as libraries will usually have to enter into agreeing not to lower the value of their existing print journals from that publisher during the period of the agreement. In return for access to the full output of the publisher, libraries are therefore expected to maintain the level of the publisher's revenues (or profits), with an annual price inflation that usually approaches 10%. This is now a problem for libraries in all countries, regardless of the size of their budgets, and is an example of where the Internet now presents all libraries with a common agenda. This growing power of some commercial publishers has led to a move towards opening up the scholarly literature to researchers by reviewing the traditional methods of scholarly publishing. The present model is based on the free donation of scholarly information by authors, usually employed in universities, to commercial publishers. Universities, in the form of their libraries, then have to buy back this material once it has been published in a scholarly journal. One way of breaking the present system is to use the Internet to allow free and unrestricted access to scholarly information, and there are a number of initiatives working to build this new scholarly information environment.

This is leading to the wider development of the Open Archive Initiative (OAI) which has developed software for hosting scholarly articles and for providing the necessary metadata, which describes the content of the article, to search engines so that it can be discovered and used. The Open Access model is one whereby the cost of publishing are no longer met by the library at the end of the process but by the author (of their funder) at the beginning of the process. One of the driving forces behind the OAI is the Budapest Open Access Initiative, funded by the Soros Foundation, and it worth quoting the vision:

"An old tradition and a new technology have

² Ball, David. Beware publishers bearing gifts. Why the Big Deal is a bad deal for universities. Paper presented at 2003 IATUL Conference. <http://www.iatul.org/conference/proceedings/vol13/>

converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the Internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds. Removing access barriers to this literature will accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge.” Budapest Open Access Initiative³

Another initiative, which has its origins in the USA but which is now expanding into Europe, is SPARC (The Scholarly Publishing and Academic Resources Coalition),⁴ which is now a world-wide alliance of libraries, research institutions, and organisations which encourage competition in the scholarly communications market. The aim of SPARC is to raise awareness of the problems of scholarly communication, to promote actions that will generate alternatives and to demonstrate success. SPARC is therefore committed to raising awareness among librarians, but more importantly among authors through leaflets and workshops of the alternative models of publishing; encouraging the development of institutional OAI repositories of journal articles written by the members of that institution⁵; providing information on alternatives to expensive commercial journals; developing new business models by supporting the Budapest Open Access Initiative; and encouraging libraries to switch to the new low-cost journals, such as those published by the Public Library of Science.

Preservation of Digital Information

As more and more information is born digital and is never available in print format, the issue of the preservation of this digital material is becoming of increasing interest to both libraries and publishers. We can have ready access to printed books which were created centuries ago and the information in the book can be easily accessed and understood, even if there is a need for translation of the text. However, an electronic piece of information is at its basics a string of electronic bits which could be interpreted in a number of ways, depending on the hardware, the operating system running

³ <http://www.soros.org/openaccess/>

⁴ Friend, Fred. Creating change in Europe: SPARC Europe and Scholarly Publishing. A presentation at the 23rd IATUL Conference, Linda Hall Library, Kansas City, June 2002 (<http://www.iatul.org/conference/cvol12.html>)

⁵ Prosser, David. The next information revolution. Can institutional repositories and self-archiving transform scholarly communications? Paper presented at the 2003 IATUL Conference. <http://www.iatul.org/conference/proceedings/vol13/>

on the hardware, and other software applications. If the information technology that we use were stable, preservation would be easy, but as we know our technical obsolescence already threatens our cultural digital heritage, and will continue to do so into the future. Even in the past five years, we have seen many technologies come and go.

A paper⁶ at the Delft conference discussed the role of libraries in guaranteeing the availability of our digital heritage to future generations, and it is worth summarising some of the points made in it. There are a number of strategies that can be adopted to ensure that digital documents are available and one of the most popular and widely used is migration. Migration is defined as the conversion of the information resource into a new software and hardware platform, but this is not as easy as it might seem. There are problems with losing functionality or for example embedded links as we move from one software platform to another, we do not know how often we will need to convert so this makes financial planning difficult, and it may be impossible to convert as we may not have the necessary source code. These are problems with text, but a whole new scale of problems arise when we look at converting databases and a badly written and tested converter might destroy the whole collection by removing vital features from the database. A second major strategy is based on emulation. This strategy requires the development of applications which mimic old hardware and software environments. Information resources would be stored encapsulated with sufficient detailed information about the environment in which the application was originally designed to work. Based on this information, the digital archive would be able to pick up the information resource itself and then the emulators and applications the resource requires to be readable. This strategy needs a very accurate description of the old environment in order to be able to emulate both the hardware and the software and it requires a well-controlled co-operative environment if it is to take place on a large scale. One of the key components in preservation is to have accurate preservation metadata which describes the resource by providing subject information, copyright and usage information, pricing information and information about the hardware and software that the document needs. The paper presented at Delft gives an excellent review of international activities in this area. Digital preservation will be a very complex task with technical, organisational and legal implications. However, libraries and especially national libraries will have to be the key players in this area and they will have to accept responsibility for the preservation of digital information in the same way as they have successfully accepted responsibility for the preservation of printed information.

Library Management

Library Management is the final issue that I want to look at and it is the central theme of the 2004 IATUL

⁶ Hakala, Juha. Libraries, metadata and the preservation of electronic resources. A presentation at the 22nd IATUL Conference, Delft University of Technology, Delft June 2001 (www.iatul.org/conference/cvol11.html)

conference ⁷ and the programme includes papers on

- Strategic Management
- User-oriented Services
- Regional and National Cooperation
- Staff Management
- Performance and Financial Issues
- New Staffing Structures
- Managing both Print and E-Collections

All these are issues that most of you will be dealing with and the advantage of an organisation like IATUL where you can get an international perspective on these issues. I would therefore encourage you to find out more about IATUL, to consider joining and attending our conferences, and certainly to join us for the 2006 IATUL Conference in Portugal.

⁷ <http://www.biblos.pk.edu.pl/IATUL/>