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Promises and challenges: digital libraries in the global information society

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Libraries are fundamentally about knowledge and understanding, that is to say, about making available information which enables people to pursue their interests. We support personal growth, research, business and government, community services and development. Our watchwords are openness to ideas, integrity, collaboration and shared knowledge.

As librarians, we maintain and extend the information infrastructure which is integral to delivering information. Without the capacity to rapidly share discoveries and ideas, global scholarship and development founder. Without ready access to document accounts of research, it is impossible to test it, refute it when necessary, take it further when possible. The information infrastructure is a vital part of maintaining the integrity of research and scholarship and for fostering collaboration just as community and governmental information

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promote strong societies. It is our role to support both and to promote them within our nations and across rich and poor countries.

### The Millennium Declaration and the World Summit on the Information Society

In its Millennium Declaration, the United Nations system and its member countries committed the global community of peoples and nations to working towards and equitable society which will provide opportunities for all. A development agenda with clear goals was formulated and agreed in order to achieve that goal. Its aspirations in regard to information and knowledge issues and the use of ICTs have been taken up in the World Summit on the Information Society (WSIS). Among the 11 key principles "for building an inclusive Information Society" identified in the WSIS Declaration the following are especially relevant to libraries and information services: information and communication infrastructure: access to information and knowledge; media; cultural diversity and identity, linguistic diversity and local content; ethical dimensions; and international and regional cooperation.

Paragraphs 24 and 25 of the Declaration note that the ability for all to access and contribute information, ideas and knowledge is essential in an inclusive Information Society and that the "sharing and strengthening of global knowledge for development can be enhanced by removing barriers to equitable access to information for economic, social, political, health, cultural, educational, and scientific activities and by facilitating access to public domain information".

What does this mean for information infrastructure? First of all, and fundamentally, it means that we must have a rich public domain which should be easily accessible and protected from misappropriation. Paragraph 26 notes that this can be achieved by strengthening the memory institutions – libraries, information services, archives, museums, and other cultural institutions. This reflects the public good inherent in sharing knowledge and the fact that no idea, discovery or invention can be regarded solely as a private good to be tightly protected and vigorously exploited. If we are to keep alive the knowledge of the past and preserve its manifestations for the users of the present and the future, we need to operate in an environment which recognises that public good. Our work, nationally and internationally (through such vehicles as the IFLA Committee on Copyright and Other Legal Matters), to defend and extend fairness in intellectual property regimes is vital to achieving this goal.

A particular area of concern to the UN, WSIS and IFLA are the unequal distribution of wealth and the barriers to development faced by developing countries. Rigid intellectual property regimes perpetuate that inequality both in perception and in reality. Ownership of the most valued knowledge – valued that is both in terms of the market value and the respect accorded it in international discourse – lies substantially in the North, in the developed countries with the strongest economies. This not only reinforces the wealth of the North by securing usage rentals from the South but also diminishes the value of the knowledge of the South, especially knowledge recorded in the languages which are not used in international discourse and also traditional knowledge and the knowledge of Indigenous peoples. For example, the concentration of the best regarded scholarly publishing in the North, and indeed a few countries of the North, perpetuates this disadvantage by returning revenues to the North and reinforcing the belief that the most valued scholarship is that recognised through their publications. Unless we address that neo colonialist model which is vigorously preserved in

global research and scholarship, we continue to marginalise those outside the centres and satellites of the North.

IFLA notes that the Federation and its members "are committed to addressing the digital divide and the information inequality that results from it. A continuing but relatively modest investment in international collaboration between library and information organisations and IFLA's Advancement of Librarianship Program (ALP) would significantly improve access to information across societies" (IFLA and Byrne 2004). But we should not wait for 'pennies from heaven: we can do much through our libraries and our collaborative arrangements, through the choices we make and particularly our support for open access.

## Innovation agendas and eResearch initiatives

Since my time is limited, I shall take a specific field, the one in which I work, the scholarly information infrastructure.

Many nations are promoting innovation agendas and eResearch or eScience because they are seen to be crucial avenues to arriving at sophisticated knowledge economies which promise prosperity to their citizens. From Malaysia to Finland, such national programs shift economic emphasis from extractive industries, agricultural production and manufacturing to the knowledge that can offer better returns from those traditional activities and open the door to new activities. These opportunities were recognised in the WSIS Declaration when it stated that research and development, technology transfer, manufacturing and utilisation of ICT products and services are crucial for promoting capacity building and global participation in the Information Society (Paragraph 33). This is especially important for developing countries and those with economies in transition (Paragraph 34). Some nations are, naturally, better positioned than others because of their historical advantages but even they realise the need to build capacity.

Through this emphasis, libraries and information services now face a new frontier and new opportunities to be in the forefront of strengthening and extending the scholarly information infrastructure in partnership with the academy. The new priorities mean that the scope of that infrastructure extends beyond the domains traditionally supported by academic and research libraries and their accepted boundaries. Its development depends increasingly on fostering effective partnerships among libraries, with the academy and with other players.

Such opportunities do not need to be exclusively technology driven but they are certainly going to be technology enabled. Examples extend from joint services such as online reference and collaborative lending to consortial acquisition of content, digital theses and repository initiatives. While in some disciplines, research 'among the stacks' in the library remains essential, for many the library is with the researchers wherever they may be. Its ubiquity is such that some fear that the library may become invisible as our hard-won services merge into the global digital landscape in which students do what students have always done and take the easiest path when they turn to Google for a quick information hit. There is an issue here but it is not a matter of our becoming irrelevant but rather a need for clear branding, for representing ourselves as the 'shining path' which will return the best results for the least effort as students desire.

#### New areas

However, all of these initiatives are doing what we have been doing better. There are other areas which we have largely ignored in recent decades. The new technologies give us good opportunities to enhance research and scholarship by returning to some of our roots in value adding, to revisit some of the activities which we have declined to undertake in the pursuit of efficiency. Our domain has been seen as the place in which descriptions of the fruits of research and scholarship lie in repose ready to be used to support learning and new discoveries. Outside this domain lie other aspects of the 'scholarly information infrastructure', including the informal communications of researchers and scholars and the actual records of research, the research data. Their richness both for the subject of the original inquiry and for the meta-study of research patterns and cultural modes has been neglected. With the resources made available by governments to support eResearch, we now have opportunities to help curate these rich resources.

# **Open access**

As we are all aware, the scholarly publishing syndrome which came to be called the 'serials crisis' arose from the recognition that scholarly publications could be profitable, even very profitable, not just a way of communicating among scholars. Seemingly never ending annual price increases led to successive waves of cancellations of subscriptions. The transfer to digital publication brought some relief in that many libraries could substantially stabilise the total cost of subscriptions by buying aggregations, often through consortia, but at the cost of reduced selectivity and loss of the capacity to provide extramural access as well as serious concerns about how to fulfil our responsibility for long term preservation. But the business models adopted by the 'high-toll' publishers were designed to maintain their income streams, indeed to maintain ever increasing income streams.

Then the open access movement emerged as a possible saviour and has been an extraordinarily successful disturbing innovation. It demands free of charge, freely available, digital access to the scholarly literature. It postulates that this may be achieved by publication in peer reviewed open access journals – the 'golden road' to open access – or by placing copies of articles in institutional or disciplinary repositories.

A key but substantially unremarked additional benefit of the open access movement is that it is exposing scholarly publication from regions of the world which would not previously have been so readily available for the interest and scrutiny of the global scholarly community. It is assisting scholarship to free itself of the neo-colonialist political economy through which only journals published in the traditional centres of publication in Northern Europe and the United States could be regarded as high quality and status. This model reinforced the commercial power of the dominant publishers but also the hegemony of the 'Northern' academy, largely quashing the voices of the 'South'. The open access models are weakening those tendencies by making the locus of publication less important and thereby enabling journals, and the articles they publish, to be evaluated simply on the quality of their content rather than any assumed validation conferred by place or publisher.

These publishing models are all attractive in that they make scholarly information available without charge to the user and in that they are beginning to demonstrate both their economic sustainability and growing acceptability to the global academy. Nevertheless, at this stage they represent only a tiny proportion of the number of scholarly journals in publication. The use of institutional or disciplinary repositories provides an alternative approach through which each article – or a close variant of it – will be available without restriction and without charge across the Internet.

But the realities are more challenging. The first, and perhaps most serious, concern is that this strategy reinforces the scholarly hegemony of the 'North' because it delivers access easily to those with reliable, reasonable bandwidth Internet connections and up to date hardware and software. Those with restricted and unreliable bandwidth or poor infrastructure will find their access limited. Those without Internet services will have no access. On the supply side, it favours those who can easily set up and maintain a repository and discriminates against those who lack the finances, skills or infrastructure to do so. Other concerns include the neglect of many of the good features of the traditional scholarly publishing model. The lack of standards for repositories represents a great freedom but also restricts their utility for discovery. Unlike library catalogues and bibliographic databases, they lack consistent metadata schemas and guidelines. This makes them difficult to search consistently and certainly in a consortial fashion, especially in a multilingual context. Again, it is likely that this deficiency will act to reinforce Northern scholarly hegemony.

Consequently, IFLA has stated its support for open access but in the context of broader strategies as summarised in the IFLA Statement on Open Access to Scholarly Literature and Research Documentation (IFLA 2003). This statement sets out an agenda for improving access to scholarly information and thereby promoting global equity and development.

In this address I have focussed on the area in which I work, the provision and operation of the scholarly information infrastructure, and have highlighted some opportunities and challenges. This field is important for all because all of us need the outcomes of relevant research and we all need researchers to study the questions of importance to our communities.

But it is not, of course, the only area of interest to IFLA. Our Federation must be concerned with information from all and we must apply the lessons of the scholarly domain to the development and operation of digital libraries in all contexts. Through this we will be able to take advantage of the technologies to deliver benefits for people throughout the world.

## References

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