

Information for all:

access to knowledge as a basic right

Knowledge is increasingly stored in digital form and some of it is freely available through Information Technology. At the same time information covered by copyright – whether in the private or public sectors – is becoming more closely protected and costly. In this article Dr Michel Loots* argues that the kind of information necessary for the development of the least developed countries (LDCs) should be made freely available to them, and looks at ways in which it could be distributed.

Copyright rules are global but are tailored to the cultures and economic needs of industrialised countries. Despite calls to ease these rules for developing countries, the opposite is happening. Encryption, fingerprinting, watermarks and digital signatures¹ will make it easier to enforce them in developing countries. These new technologies track, monitor and control the use and redistribution of digital objects such as software, text, audio and video. It will become impossible to use protected digital files in unauthorised ways.

Most users in developing countries will not be able to pay for or subscribe to commercial licenses. But there is an enormous amount of intellectual property that belongs to governments and non-profit institutions. Much of this is as good as its commercial counterparts in fulfilling basic and even advanced information needs in LDCs, but it needs to be released and distributed in a more efficient and general way.

A widening digital gap

Libraries used to own and store books. Even without an acquisition budget a library could survive because of its books. But information is rapidly becoming unavailable in hard copy, replaced by digital versions ruled by licenses. For these licenses, the library or user has to pay a rent on a time or usage basis. Soon some libraries will not hold hard copies, but will provide access to digital information through digital licenses – as long as they pay for them. Many libraries in developing countries, with no budgets and no licenses, will have even more outdated shelves than they have now, or might simply cease to exist.

Informal unauthorised copying, as is currently practised in many developing countries, will become impossible with new copyright protection technology. This creates an immense challenge in redefining fair use and access as a basic human need in LDCs. Education, water, food and shelter are human rights. Simple, reliable access to essential information and knowledge should be a basic right as well.

The intellectual and knowledge property in governments and non-profit institutions can supply this right in part. The challenge is to define basic information and software needs and to ensure optimum access to them. One measure should be to facilitate redistribution by local multipliers, making basic information packages available to all free of charge, by copying

them onto every computer in the target group. Digital libraries can fulfil this basic promise of “information vaccination”. Public-commercial partnerships and “intellectual philanthropy” could meet the next level of basic information needs.

Access to essential information in LDCs

The first maternity hospital in Somaliland², Edna Maternity Hospital, is using old, recycled computers. Because of the cost, staff cannot use the internet on a daily basis, and they have minimal IT skills, or none at all. International volunteers and donors are helping to bridge this digital divide by providing the hospital with resources and a library, training and research facilities including IT. There are many other maternity hospitals without donor support or IT volunteers. These unaddressed training needs could be met by providing free or low cost digital collections, education toolkits, and DVDs and CDs with training videos.

Medical school libraries throughout sub-Saharan Africa have suffered massive budget cuts over the past 10 years. Many libraries, let alone individual students and lecturers, have no money to buy books, journals or computers³. Whereas a US medical library subscribes to about 5,000 journals, the Nairobi University Medical School Library, long regarded as a flagship centre in East Africa, received just 20 journals in 2000 (compared with 300 a decade earlier). In Brazzaville, Congo, the university had only 40 medical books and a dozen journals, all from before 1993, and the library in a large district hospital was a single bookshelf filled mostly with novels⁴.

There are innovative UN-private initiatives to mitigate this problem of access to journals. The WHO’s “Health Internetwork Access to Research Initiative” (HINARI) and the world’s biggest biomedical publishers allows free online access to hundreds of their journals to more than 1,000 institutions in least developed countries. Medical schools and research institutions in developing countries are given free access through the internet to 2,000 of the world’s most important medical and scientific journals⁵. The AGORA (Access to Global Online Research in Agriculture)⁶ initiative led by the Food and Agriculture Organization of the United Nations, will provide free or very low cost access to 400 journals in the agricultural, biological, environmental and social sciences.

These initiatives could be expanded to other fields and to cover all institutions in the target countries. But this depends on a degree of intellectual philanthropy on the part of commercial or semi-commercial publishers, and will be difficult to impose or regulate without touching the economic foundation of the industrialised countries: intellectual property rights and patents. So it might be better to empower the UN system to expand these intellectual philanthropy projects to a level that meets as many of the research information needs of developing countries as possible.

There are also several university projects aiming to make academic journals or courses available free of charge online – for example the Open Docs project of the Open Archives initiative⁷

and the OpenCourseware⁸ initiative of the Massachusetts Institute of Technology (MIT). The OpenCourseware initiative provides about 1,000 MIT course materials free online and is inspiring other universities to do the same. This could become a model for exchanging and distributing research information for developing countries over the next five to ten years.

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Non-commercial intellectual property rights

Most non-profit or governmental organisations (including the UN) provide many of their publications free online and have copyright notifications on these documents and a copyright explanation on their sites. But these intellectual property rights

(IPR) provisions are mainly of help to end-users and not to multipliers. Very few organisations provide a clear and easy-to-apply scheme for authorising copying and redistribution. So even within the public and non-profit sector it can be very difficult to identify, obtain permission and use documents belonging to others for cross-compilations or multidisciplinary digital collections.

Many of these publications will only be available in English or a few other Western languages. Therefore national projects should be started to translate thousands of such essential free publications into local languages in universities in each country.

Ways need to be identified to make it easier to find out what information is readily available, appropriate, and affordable to different target audiences (such as hospital nurses, municipal engineers, ministries, vocational schools or the food processing and manufacturing industry). This would also help pinpoint where the priorities are for new publications in the international development community and non-profit sector, whether printed or electronic.

Free distribution of relevant, reliable and usable information

Dissemination of development and humanitarian information is an area where personal digital libraries⁹ can compensate for the failure of traditional distribution mechanisms to address local needs and get information where it is needed. Digital libraries can be accessed or downloaded over internet, via radiowaves, satellites, from a CD-ROM or DVD and copied at virtually no cost from these media onto the hard disks of an unlimited number of computers

The first step is to bring intellectual property rights relating to public information and knowledge in line with the need to access and redistribute this information without charge. Next, the quality and accuracy of such information must be assessed before it is released. High quality information should be relevant, reliable and usable. Once the right information has been

Manhica hospital, Mozambique. Collaborating test results on computers in the Malaria Research Unit.

selected, it should be combined and packaged for local, regional, sectoral or global redistribution and copying onto hard disks in the form of digital libraries.

Access to information as a “vaccine” for poverty

In this way it should be possible to achieve a universal basic “information vaccination” for all. It could be done at low cost and in a short time. Self-copyable CD-ROMS containing up to 1,500 appropriate full-text publications cost only US\$1 to reproduce. The solution consists of loading locally adapted and tailored collections of publications and other useful digital objects (text, data, video, audio, software) as a standard onto the hard disk of virtually every PC in developing countries.

As a conclusion, information and training needs in LDC can be met with high-quality materials (documents, publications, video, audio, slides, training kits, software) currently freely available in the international community. Basic IT infrastructures need to be provided, copying and redistribution rules simplified, and clearinghouses of this free information and open source software¹⁰ should help identify, coordinate and distribute this essential information to LDCs. ■

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1. WIPO, Standing Committee on Copyright and Related Rights, Current developments in the field of digital rights management, www.wipo.int/documents/en/meetings/2003/sccr/pdf/sccr_10_2.pdf August 1, 2003
 2. <http://cdnahospital.netfirms.com>
 3. INASP - International Network for the Availability of Scientific Publications, www.inasp.info/health/about.html#2, November 2003
 4. *The Promise of Digital Libraries in Developing Countries*, Ian H. Witten, Michel Loots, Maria E. Trujillo, David Bainbridge, <http://www.cs.waikato.ac.nz/~ihw/papers/01IHW-ML-MF-DB-PromiseDL.pdf>, 2001
 5. www.healthinternetnetwork.org
 6. www.aginternetwork.org/en
 7. www.openarchives.org
 8. ocw.mit.edu/index.html
 9. A digital library is a collection of digital objects (text, data, video, audio, software) with methods for access and retrieval tailored to specific users, allowing selection, organisation, and maintenance of the information. Prof Ian Witten, New Zealand Digital Library (www.nzdl.org)
 10. Open source software is software that has been developed by the worldwide Internet community and made available for the benefit of all other Internet users. It is typically available for anyone to download and use without cost (see <http://www.gnu.org/philosophy/>).