



**Guest Editorial**  
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## **THE POTENTIAL OF CD-ROM FOR DEVELOPING COUNTRIES**

Much has been written about the potential that CD-ROM databases offer to libraries which cannot afford the routine use of online services. These articles have focused largely on reference databases. There is a far greater potential and, until now, an untapped market for CD-ROM databases which support collection development, cataloging and the production of union catalogs. This most promising new market for CD-ROM, I believe, is in the developing countries.

OCLC, RLIN, WLN and Utlas have been available, but mostly for the well-funded, affluent libraries, predominantly in the West. In the developing countries, both the cost of the online searching and the telecommunication requirements have been prohibitive. Microcomputer hardware and software has been available for a few years at an affordable price, but "dataware" was not really accessible. This has hampered library automation. LC/MARC, CANMARC, and CONSER records on magnetic tapes are blessings for those libraries which have mainframe computers, but they are not feasible options for developing countries, where access to mainframe computers is not common.

Furthermore, the set-up and maintenance of mainframe-based central cataloging and acquisition management systems requires a number of highly-skilled programmers and systems analysts, again a scarce resource. On the other hand, CD-ROM and other PC-based services would require merely DOS-literate personnel.

CD-ROM is the ideal medium for developing countries, where library technical and information services are usually very centralized due to scarce resources. National level coordination of book purchases and serials subscription is very common in these countries. The creation of union catalogs of books and periodicals is a top priority in order to make the best use of imported documents. Printed versions of union catalogs become obsolete the moment they are published, and are costly to reproduce and distribute. Many libraries would only be interested in one or two subject fields, but the production of various subsets of union catalogs is only feasible by computer.

Abstracting/indexing databases on CD-ROM are very useful for developing countries, but CD-ROM databases which support collection development and cataloging are far more relevant. Where the abstracting/indexing databases require rather frequent updating, catalog records are historical and fairly static, therefore very adequate for distribution on laserdisk. CD-ROMs do not become obsolete even if they are updated only yearly, since retrospective conversion (recon) projects call for historical records, and recon requests are

not as time-sensitive as those for creating subject bibliographies. Furthermore, what is a new acquisition for a developing country may be a publication as much as five years old, making it very likely that its bibliographic record is available even on a not-so-current CD-ROM catalog.

Even a single copy of one of the cataloging-support CD-ROM databases could bring dramatic improvement to the centralized technical services of a developing country. Bibliofile, Lasercat, Supercat, CD-CATSS and Lasersearch offer millions of bibliographic records. These databases differ in many of their features. Some of them offer a broader source by providing records not only from the Library of Congress, but also from the British Library, the National Library of Canada, and from the users of their online bibliographic utilities. Some provide an impressive choice of access points in addition to the commonly used bibliographic identifiers. One may have better record editing facilities than the others, or more flexible output features. The question is not whether to purchase (or license) these types of CD-ROM databases but which one to buy.

From the cataloging-support of CD-ROMs, a central agency (preferably within a national library) could provide list catalogs, bibliographies and/or machine readable records for all interested libraries in a given country at a very reasonable, predictable, fixed cost. Making bibliographic records in machine-readable format available to individual libraries in developing countries could foster library automation in those countries which were only spectators up to now. This could certainly improve the sharing of and access to locally available documents.

Libraries are much more likely to cooperate with a central library agency if they see its benefits almost instantly. This may be in the form of frequently updated, tailor-made subsets of union catalogs either in printed or in machine readable version.

In my experience, the registration of new acquisitions with a central library agency responsible for building union catalogs has never been a top priority on a library's agenda. They simply do not see a good return on their investment. I remember with some embarrassment the delays with which we reported our acquisitions, and I recall with great sympathy the efforts of those professionals at the Hungarian National Library who spared no efforts in trying to match the incoming bibliographic descriptions with their own records in the union card catalog. Those responsible for building a union catalog are at the mercy of cooperating libraries both in terms of timeliness and quality.

The quality of bibliographic descriptions received from cooperating libraries are far from perfect, let alone standard. It is disheartening to see qualified librarians bogged down for hours in trying to decipher bibliographic descriptions sent in without the source document. If the libraries can receive catalog cards and/or machine-readable records in return for sending the ISBN or ISSN of their new acquisitions to the union catalog agency they would rush to do so. At the same time, this input (along with some location information and numerical designation) could be simply provided by the libraries and still be sufficient and unambiguous for building the union catalog.

The ease of searching of CD-ROM catalogs and directories by multiple criteria make them an ideal tool for location information and pre-order verification services. These are again, typically centralized services in developing countries and require a lot of time, paperwork and the utmost precision to be successful. The CD-ROM version of BIP, Ulrich, or EBSCO's Serials Directory could spare 80 percent of the drudgery involved and could drastically simplify the procedures both for the requestor and the supplier of information.

It has been predicted and widely publicized by many that CD-ROM technology may be a threat for online service operators and database producers. That's true. But it is equally true that CD-ROM technology might bring new revenues from those who have never been online users, and are unlikely to afford online services in the near future. Still these

dormant users may become customers overnight if the database is made available on the appropriate medium. As a rule of thumb, CD-ROM products are perceived to be successful if they are sold in quantities over a thousand copies. Sales to developing countries might help to reach this number faster which in turn may help to decrease prices, which in turn may bring new customers, and on and on and on.

The real beneficiaries of this revolutionary technology would be the developing countries. I have witnessed a few national projects to automate library and information services that were able to find the start-up money for hardware and software but were unable to continue operations due to lack of funds for acquiring or creating dataware. CD-ROM databases with millions of LC-MARC records for \$2000; a hundred thousand of CONSER records for \$500 (i.e., half a cent a piece) represent *the* appropriate technology for developing countries.

Turn on, tune in... and do not drop out.

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## THE AUTHOR

At the time of writing this editorial, Dr. Peter Jacso was a visiting scholar at the Graduate School of Library and Information Studies of the University of Hawaii. He worked on a project related to CD-ROM databases for serials cataloging and acquisition, sponsored by the International Research Exchange Program of Princeton. He also taught continuing education courses on CD-ROM technology and applications at the University of Hawaii. At present he is a visiting professor at Rosary College, and will return to the University of Hawaii to teach in the Spring and Summer semesters of 1990. Formerly he was a visiting associate professor at Columbia University in New York in the 1988/1989 academic year. He is on leave from his position as head of the Computer Science Library and Information Center in Budapest, Hungary. He has worked as a consultant for UNIDO and UNESCO on projects of computerizing library and information services in developing countries. He is a member of the editorial advisory boards of Canadian, British, Spanish and Hungarian journals.

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