Is Africa Semper Aliquod Novi?

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The State Library
I chose to paraphrase Pliny's famous remark about there always being something new out of Africa as a title for this brief overview of information technologies in Southern Africa, because I would like to illustrate that we on the Southern point of Africa are not as isolated as we or the rest of the world sometimes imagine. I will also try to show that we are also there when it comes to something new.

HISTORICAL OVERVIEW

In the early 1960's the first use was made of electronic computers for library applications here in the USA. As early as 1964 the first article appeared in Afrikaans in our own professional journal entitled, "The Computer and the Library" and started with the question "Is automation possible?". By the middle of the sixties the first computerization projects in Southern African libraries started with the universities taking the lead.

The University of Port Elizabeth started with the production of catalogue cards using flexowriters (paper punch tape) in 1967. University of South Africa's (the University for distance education) issue system in 1968, Rand Afrikaans University's catalogue system in 1968, and CSIR's experimental administration system in 1969.

In the field of national bibliographic control the SANB (South African National Bibliography) deserves mention as one of the earliest national bibliographies to be produced using computer technology. This was the result of a unique cooperative arrangement between the State Library and the Zentralstelle fur maschinelle Dokumentation in Frankfurt am Main. The State Library's UNICAT, a Union catalogue arranged by ISBN and published on COH, was one of the world's earliest computer produced union catalogues.

So much for the history, let us look now at the present status of the implementation of information technologies in S.A. For the preparation of this overview, I am indebted to papers by Mr. D. Fokker and Miss W. Paterson-Jones and to information supplied by libraries for publication in the Directory of S.A. Libraries.

PRESENT SITUATION

It is important that I mention the establishment of the South African Bibliographic and Information Network (SABINET) in 1983. SABINET was established to provide computerized bibliographic infrastructure for Southern African Libraries. Decisions were taken at that time that both major union catalogues - Joint Catalogue of Monographs in Southern African libraries and Periodicals in Southern African Libraries - should be compiled and maintained making use of SABINET computer facilities. This would facilitate on-line access by members and enable libraries to dispatch interlending requests directly to holding libraries. An electronic mail/interlending module was envisaged but has not as yet materialized.

SABINET's decision to make use of the WLN system seemed to be the director's the right and proper decision and in 1983 may certainly have been so. The system was implemented expeditiously and by 1984 the Joint Catalogue was active.
Unfortunately the constraints and realities of the South African situation led to a decision by SABINET to develop an own South African networking package. The reasons leading to this are briefly:

1) the desirability, indeed necessity for the national network to be able to accept bibliographic records in SAMARC format;

2) the inability of the WLN system to cope with the multilingual nature of the publications of Southern Africa.

South Africa, as pointed out in my introduction uses two official languages and all official and many other publications appear in both either separately or together. In addition nine other languages are in general use, each placing their particular demands on the abilities of a system to cope with the diacritics and character set of that language. SANB for instance maintains bilingual authority files not possible on WLN.

Work was progressing well on the new system until November 1990 when a decision was taken in the light of financial constraints to drop this system. The system to run in an IBM-type environment written in Natural Adabas although offering all we could ask would require too much processing time and had become simply too expensive to run (when compared with more modern UNIX type systems). The limited number of SABINET members (40 full members; 60 associate members) are all facing severe financial cutbacks. Most of these full members are subsidized heavily by government funding, a government whose priorities are changing radically to larger support of primary and less for tertiary education.

SABINET has since decided to purchase its own computer (previously a bureau was used) and to invest in a system known as ERUDITE. This system was produced locally and can cope with the peculiar demands of our multilingual environment.

1. Library functions computerized

Computerized functions that receive priority are essentially the housekeeping ones of cataloguing, acquisitions, and circulation. Of concern is that relatively few libraries are offering online public access catalogues to users.

2. The use of microcomputers

The use of microcomputers in libraries has taken off in Southern Africa with more than 80-% of the libraries surveyed making use of PC. Use is made of PCs for various functions. One function which has started to gain momentum is the use of PCs for Interlending Administration. A number of libraries have introduced systems or are considering such. The State Library has made a package available which can be used in full conjunction with the manual system currently prescribed.

3. Networks

The use of networks by South African Libraries has not shown dramatic increases in recent years. Libraries make use of SABINET for online searching and some downloading of data is recorded. This may show great increases after 1992 when the SAMARC system is introduced and it would become possible to retrieve a record compatible to most libraries's own in-house systems. The use of Local Area Networks is also gaining ground.


Given the small size of the country one is struck by the variety of systems employed. These include URICA, ERUDITE, DOBIS/LIBIS, BOOK, STYLIS and a
number of custom designed systems. The major universities and technikons in the metropolitan areas all report computerization of library activities to some degree.

Universities and technical training instructions outside these areas - with the exception of University of Bophuthatswana are still at the inception of the computerization programs. This is also the case in Botswana and Zimbabwe and Namibia's Academy.

PROBLEMS ENCOUNTERED IN THE IMPLEMENTATION OF INFORMATION TECHNOLOGIES

1. Financial

As already mentioned the financial considerations for IT are probably the single most important inhibiting factor. Financial support from government is in decline, the exchange rate is unfavorable while sanctions and the poor economic climate of Southern Africa as a whole all take their toll in depressing the development and implementation of IT in Southern Africa.

2. Location

South Africa's remoteness from centers of development must also have a retarding effect. It is simply not the same to read about developments as it is to experience and see them. South Africans have been forced to travel widely and in this way to maintain and build contacts but this provides a further drain on finances. This may or may not be a good thing. Isolation may have forced us into some very useful developments as the ERUDITE system may also have forced us to reinvent the wheel.

3. Multilingualism

As mentioned above has brought its own problems, but also the solutions. The SANB has been produced in its totality from the DOBIS/LIBIS package since 1986 making use of LIBIS output programming far in advance of any used at other DOBIS installations.

4. Human factors

Because of the relative scarcity of experienced library programmers a great deal of exchange of expertise is required and User Groups are active, but programmers are able to demand high fees/salaries and the possibility of replacement of expertise is remote.

I might here make mention of a general spirit of conservatism and resistance to change.

In conclusion, I would like to mention a number of other developments in information technologies currently available and developing in South Africa.

1. Networks

SABINET has already been mentioned but also in development are other database or communication networks. Requiring special mention is UNINET (the largest university or academic network providing the ability for researchers to dial-up specific databases maintained at other universities).

2. Bibliographic databases

The SANB provides national bibliographic control and with SABINET's SAMARC-based system the ability to download the authoritative record (with subject
headings) directly into the joint catalogue or the libraries own system.

WATERLIT - compiled and maintained by the Council for Scientific and Industrial Research is an example of an extensive database of bibliographic data and references on a specific topic of research.

3. Full text databases

Although not yet available for general use the full text database of Nasionale Pers (the database available for on-line retrieval from any library who can access it through the government network, in effect all University and Technikon libraries).

4. Numeric databases

The Central Statistical Services make an extremely comprehensive time series statistical database available for online retrieval from any library who can access it through the Government network (in effect all University and Technikon libraries).

5. The Archives database

The Archives database is similarly available as in the Terminology database. The latter is extremely useful in a multilingual environment.

6. CD-Rom

Although Cd-Rom publishing is still in its infancy in S.A. the use of CD-Rom in academic libraries is extensive. The ability to search major databases without expensive international datacommunication costs compensates for subscriptions. The Laws (statutes) of South Africa and the tax laws have been published on CD-Rom mainly for use by the legal profession. Consolidated law reports are soon to be available. The National Library is presently considering the publication of their bibliographic databases and joint catalogues on CD-Rom but the local library market is really very small.

ISAP, the Index to South African Periodicals, is compiled by a number of expert organizations, coordinated by the State Library. It will be available online on SABINET's new system but is presently available to subscribing institutions on tape for input on their own systems.

7. Other Players

Beltel. This is a system run by the Department Post and Telecommunication offering online access to commercial information and through "gateways" into the databases of information officers, e.g. banking firms, the stock exchange, etc. It is not in extensive use in libraries but has been considered as a vehicle for an electronic "Books-in-Print" by South African publishers.

Teledata. A system operated and maintained by the South African broadcasting corporation offering similar commercial information mainly to the business community.

M-Net. The newest player in the information provision field. At present this service operates a subscriber television service and will be offering news bulletins and commercial information as from 1 July 1991. We wait to see whether all their ambitious plans in the field of networks and information technologies will come to pass.

Information technologies are gaining ground in Southern Africa. They are still mainly centered in the "rich" metropolitan areas, but with the expansion of the television and telecommunications networks we have no doubt that the
more extensive adoption of these technologies is merely a matter of time. Perhaps given the most recent political developments and the lifting of sanctions the impetus will increase with an improved economic situation.

I hope you will agree that I have shown you that there is something new in Africa!

REFERENCES


