SELECTING COMMERCIAL DATABASES TO SUIT YOUR CLIENT'S NEEDS - THE CURRENT SITUATION FOR AFRICA

DAVID SWANEPOEL
Onderstepoort Veterinary Institute Library,
Onderstepoort, SA

ABSTRACT

The paper starts with a short overview of the history of the use of bibliographic references at the Onderstepoort Veterinary Institute (OVI). Abstracting and indexing journals as well as the South African Documentation Centre for Agriculture are mentioned.

The second part describes certain selection criteria such as available budget, availability and powerfulness of hardware, quality and comprehensiveness of information, user interface, frequency of updating, and physical format.

Lastly the appropriateness of CD-ROM in particular, for the current situation in Africa, as well as the latest developments in this field are discussed.

1. HISTORICAL OVERVIEW OF REFERENCE USE AT THE ONDERSTEPOORT VETERINARY INSTITUTE (OVI)

Although an oversimplified model, the main purpose, or final result of the output, of a research library like the Onderstepoort Veterinary Institute (OVI) is to identify appropriate literature references and then to provide the full text of a journal article, book etc. Due to the currency needed in research, journal articles are the most appropriate.

On analysing the OVI collection it appears that it was possible to obtain a great percentage of information by purchasing and exchanges in the early days. Bibliographic control by indexing and abstracting journals seems to have taken off only in the 1930's, when the *Index Veterinarius* and *Veterinary Bulletin* (both 1931), were launched. More specialised indices like the *Index-catalogue* of *Medical & Veterinary Zoology* existed before that date, however.

These journals were in constant use until the eighties. This system became increasingly difficult to use, however, due to the increase in literature on the one hand, and the lack of time of researchers on the other. Dwindling budgets led to the appointment of fewer staff. Also, while abstract journals always helped you to access information you do not obtain in full text form, it becomes less and less possible for the librarian to control the available information and to channel a comprehensive coverage of it, to the library user. You have to ensure that they receive everything they need, but also to filter out what they do not need.

The creation of SADAL, a documentation centre for agricultural information by the state Department of Agriculture, was a great step forward. (The acronym stands for South African Documentation Centre for Agriculture/Landbou. Landbou is the Afrikaans word for agriculture, and as the first 3 significant words of the acronym are virtually the same in Afrikaans, a combination of letters was used to create something pronounceable.)

SADAL, however, provided only three databases, i.e. CAB abstracts, FSTA and VITIS, the latter totally useless for the OVI. Magnetic tapes were obtained and profiles run against STAIRS. The latter is an old, well proven and powerful search engine, but user-unfriendly. For a long time the only way to access SADAL was to complete a form, send it to the departmental head office and wait for a printout. When networks became available, it was possible to access the databases directly, although it was not possible to do quality searches if you did not know the search engine properly. A condition was set that end-user searches were not to be permitted, and were

not recommendable anyway. When the OVI and other research institutes of the department "privatised" and formed the Agricultural Research Council, this privilege was no longer available.

However, although the OVI is in the service of the agricultural industry, it is basically a medical institute. We furthermore specialise in veterinary diseases, and the research we do is basically at a microbiological, chemical and molecular level. We still subscribed, at that stage, to some printed abstract journals, at a high cost.

We therefore looked into the following aspects:

(a) Are our abstract journals available in electronic form?
(b) Are the titles we subscribe to still the most appropriate?
(c) Above all, will the transfer to electronic means be appropriate in terms of our resources?

The OVI library never had the luxury of a supporting Research & Development facility for information services. The approach taken was therefore mostly one of trial and error.

CD-ROM was found to be the most appropriate technology for our circumstances. Due to the lack of a user-friendly and above all internationally extending network, it was decided to use online only through secondary vendors, which have a good infrastructure and skilled search experts. This, however, should only be used for databases we consider as fringe subjects (4) (5).

In the next section criteria will be discussed as described in the literature, that appeared at the time CD-ROM became important, as well as recent insights.

2. SELECTION CRITERIA AND APPROACHES

There are too many criteria to discuss all in the scope of this paper (9), (13), (17), 25). In my personal view, the following six are the most important.

(a) Available budget
(b) Availability and powerfulness of hardware
(c) Quality and comprehensiveness of information
(d) User interface
(e) Frequency of updating
(f) Format

(a) Available budget

It is nice, when planning new facilities, to set ambitious objectives. This is not necessarily a wrong approach, as you may do yourself short and end up with a system of lower usefulness than you could have actually afforded. However, it is in almost all such cases necessary to revise your initial idealistic objectives. Your ideal system may not be affordable, but you may also come to the conclusion that you have over-specified and that you do not need all that. According to the Theory of Constraints (10), you may have to address specific problems as they arise. This can be done later by upgrading, or use of alternative resources outside your own institution.

(b) Hardware

This is narrowly associated with the above. However, to work with ancient hardware can be extremely frustrating and disappointing. Modern technology becomes more and more hungry for memory and processor speed. If you are buying for the first time, go at least for Intel 486. I have heard rumours, but have no written proof, that certain vendors in the developed countries are trying to get rid of XT and AT stock by selling them cheaply to developing countries. If I may translate an Afrikaans proverb directly, a cheap buy may in the end be an expensive buy.

While most librarians can familiarise themselves easily with software, I yet have to meet one claiming him or herself to be a fully competent hardware expert. The solution is to work closely with your own computer experts, where available, and/or with knowledgeable vendors after evaluating them thoroughly.

(c) **Quality and comprehensiveness of information**

This is probably the most important aspect with an online service where you usually pay per record. You also have to think about what you may not have retrieved, what could have influenced the quality of the work of your patron.

In the case of CD-ROM you buy a collection of references. You have to establish what you buy. If you are, as in our case, moving from print to electronic format you may take the warning of Large (14), into consideration: "In general it can be said that the most effective way of answering such questions about online and CD-ROM sources is to check, if available, their printed equivalents. Care should be taken, however, to establish that the two formats really do present identical information".

For example, we subscribed to two print titles of Cambridge Scientific Abstracts. We established that some of the references, as well as other topics we work on, were included in their Life Sciences Collection (TM). However, this product usually delivered a disappointing low amount of relevant hits, and a lot of which could be found on Medline and CAB as well.

We recently established what the actual coverage is, as we did some time before with CABI's products.

For CAS we do not have precise percentages, but CABI supplied the following information under the headings of abstract journal, as well as language:

VETCD covers information from the following journals:

Veterinary Bulletin	100%
Index Veterinarius	100%
Helminthological Abstracts	about 50%
Protozoological Abstracts	about 50%
Review of Medical and Veterinary Entomology	about 50%
Review of Medical and Veterinary Mycology	about 50%
Animal Breeding Abstracts	5-10%
Nutrition Abstracts and Reviews Series B: Livestock feeds and feeding	5-10%
Dairy Science Abstracts	5-10%

The proportion of records on VETCD (1972-1991) by language is:

English	66%
Non-English	34%

The non-English proportions are:

German	25%
Russian	20%
French	14%
Spanish	7%
Italian	5%
Polish	4%
Japanese	4%
Portuguese	3%
Chinese	3%
Dutch	2%

As a result of that, we still subscribe to three of the CAB "original" print titles, two in print form, and one in diskette form, from there run on Procite software. With respect to Cambridge data, we experimented with their Internet journal service, and recently learned that some of the "original" titles are now also published by NISC. It is therefore advisable to look out for alternative publishers and even to submit requests to the database owner in this regard. If you are the only person requesting a particular product, or a particular customised subset, you may not succeed, but if the suppliers recognise a trend, they may bring out such a product.

Some vendors do indeed provide highly specified subsets of data, run against profiles, on diskette. To this data a substantial amount of value is added, but you also then only receive a small amount of data, i.e. no more than a Current Awareness Service. With that you can create a retrospective database yourself; but with far fewer available references. In my view you can rather buy a more comprehensive subset of a full product, and from there the librarian should add value him/herself by manipulating, selecting and distributing the

information locally. This requires a thorough knowledge of the mission and objectives of the organisation and the work of your patrons. I try to keep myself updated by studying a list of our registered research projects, conducting surveys and arranging meetings with patrons, attending project report meetings, reading annual reports, etc.

A recent jewel in the quest for criteria for evaluating information products, is the article by Klobas (12). This article emphasises the principle of fitness for purpose. Written by a management study expert, it touches on organisational behaviour, and theoretical models which I cannot go into in this paper. I will just summarise by using Klobas' abstract, slightly edited: "The accuracy, currency, relevance and ease of use of electronic information resources can be measured to provide an indication of the resource's 'product quality'. The link between product quality and electronic information resource use is, however, relatively weak. This is because product quality is only one of several influences on use. Use is better explained as a function of 'fitness for purpose': the extent to which the information resource is of appropriate quality for the situation in which it is to be used. Potential users' perceptions of fitness for purpose are formed by convenience and, most significantly, the extent to which potential users believe using the resource will benefit them."

While fitness for purpose should be central in all selecting processes, there are many other criteria which can be used to select a database (2). At some stage you should also decide if a database is still relevant, or should be cancelled. The principles regarding journal selection which Vicki Croft discusses elsewhere in these Proceedings, can also be taken into consideration.

Lee and Bredderman (15) made an in-depth evaluative appraisal of CABI's VET CD and Beast-CD products. It included a journal code analysis and a document type, language and publication year analysis. While you need a disk on trial and some dedication to conduct such a thorough study, an approach like that may evantually save a lot of money.

A traditional method for evaluating publications, including electronic, is to read independent reviews on them. However, even that should be treated with caution. A review of CABI products which appeared in the *New Zealand Veterinary Journal* (16) not only contained dated information, but statements that were incorrect. Members of the Internet discussion group Vetlib-L: Veterinary Medicine Library issues and information, often obtain opinions from existing subscribers of products before ordering. If you don't have this facility, you can ask the vendor for a list of current subscribers, and write to them. The latter method of course can include all the criteria, not only the one under this heading.

(d) **User interface**

I have been long enough in the field to have started out with command-driven interfaces, like the old Washington Library Network interface, the SA bibliographic network Sabinet used, and STAIRS. In my masochistic mind that was the edge of new technology. Maybe it was at that time, but now I have to work daily with a series of software programmes, working on a variety of principles. The software you choose, and especially if you want to permit your end-user to use it, must be extremely user-friendly. Yet it must be sophisticated enough to provide powerful retrieval facilities. You therefore have to choose one with various modes, novice, intermediate and advanced. Facilities like thesauri greatly enhance your searching.

Another reason why you need powerful hardware, is that the software, while becoming increasingly sophisticated, also tend to become fatware, i.e. needing more disk space and memory. For example "SilverPlatter is aware of the sizeable population that uses low end machines. Therefore, they will continue to support PC-SPIRS with limited enhancements so that it can operate on these low end machines. Because the Windows platform can support more powerful features, SilverPlatter is able to add more sophisticated enhancements to its WinSPIRS software" (18).

(e) **Frequency of updating**

Printed abstract journals are issued almost as often as the primary full-text journals. Electronic counterparts on disk do not necessarily have the same frequency. The weekly updates of *Current Contents* is the ideal, especially if you have a low amount of full-text subscriptions and use a document delivery approach instead. It is, however, expensive. Monthly to quarterly updates may be a good compromise. Economical enough for the publisher to produce, current enough for the librarian to keep his/her patrons updated.

During the 1992 ICAHIS conference (International Conference of Animal Health Information Specialists), participants on visit to CABI urged them to produce the VET-CD and Beast-CD subsets more frequently than annually. The reply was that it would endanger the sales of printed abstract journals, and that more market research should be done. Shortly afterwards, however, quarterly updates became available. Once again, I want to emphasise that communication between publisher and client is important.

(f) **Format**

As I pointed out, online was not a viable alternative for the OVI in the late 80's and early 90's. The telecommunicating aspects were too difficult to manage. It also seemed that the user interfaces were not as friendly as nowadays. Times are changing, however.

3 NEW DEVELOPMENTS AND THE CURRENT SITUATION IN AFRICA

With recent developments like SilverPlatter's Electronic Reference Library (ERL), it is now possible to have a blend of CD-ROM, with all its advantages, and online searching, with the emphasis on networking to end-users, without the high cost of a CD-ROM network hardware installation (22), (23), 24). It was also announced at the Third S.A. Online Meeting held in June 1995 that the pay-per-user principle will be going into a test phase as from September 1995. ISI announced that it had also concluded a contract with SilverPlatter to market *Current Contents* via ERL.

If you prefer online, one-stop interface and payment systems like South Africa's CSIR

Worldnet Gateway have been available for some time.

With a single station CD-ROM workstation, you can get quite far. Newa, in the workshop on Survival Strategies in African University Libraries (20), describes the successful implementation of CD-ROM at the University of Dar-es-Salaam. This was also echoed by Tsebe (26). In fact, all of the participants but one at that workshop owned CD-ROM facilities despite a widespread lack of funding. However, it is disconcerting that international databases are in use and that little information on and from Africa is found on them. Nkhata (19) makes the following point for CD-ROM in developing countries.

> "The use of CD-ROM technology in developing countries as a suitable technology for the distribution of information should be very much encouraged. However, a corresponding improvement in the quality of information distributed should be seriously considered. In this respect, it is obvious that a concerted effort by both the developed and developing countries is required. Otherwise, CD-ROM will remain a technology for the wide distribution of information throughout the world, but its effectiveness in developing countries will be severely limited by the low representation of information from them."

Online is not a viable option in Africa, even when a good telecommunication infrastructure exists. We are just too far from where the information resides. Although the Internet is making everything easier, according to Esterhuysen (8), it is not well established in Africa, with several countries without any link at all.

These problems are however addressed outside the commercial field. Refer to P.K. Sinha's paper elsewhere in this volume.

In the Survival Strategy Workshop, the scarcity of funding is often mentioned. In fact the title of the symposium is already an indication of a problem.

Patrikios (21) mentioned that CD-ROM enables a library to subscribe to fewer journals, although Newa (20) mentioned a resulting problem of increased document delivery requests. That has to be satisfied with already a small amount of full-text subscriptions.

In the case of new literature, the address field in a record can be very handy. Although we always use the S.A. Interlending system as a first option, supplemented by international document delivery services, we also found that a reprint request has a high success rate. For a small amount of postage your patron receives a high quality printed sheet, with illustrations in the original quality and it does not always take longer.

We also have used our CD-ROM databases as a ready reference tool: if you want to know the full title of an acronym, like that of an organisation, you may retrieve it in the address field. We have recently bought an updated version of World of Learning, but before that we also obtained organisations' addresses from our CD-ROM products. If I need the spelling of a technical word, the CD-ROM may be used supplementary to technical medical dictionaries, which are quite expensive to update frequently. On occasion I have to familiarise myself with subjects and their relationships, away from a bibliographical search, and used the thesauri. A journal index database may therefore even be of use to cataloguers and classifiers, if you do not own the expensive CD-MARC tools of the Library of Congress. In the case of a highly specialised library like ours, it is actually not quite feasible to buy all that.

A few studies have been conducted about the use of CD-ROM databases in sustainable development i.e. by the CTA (7), Unesco (6) and CABI (3). Of these the OVI participated in two, Unesco and CABI. I cannot go into the detail of each. Since the problems of Africa (and other developing regions) are different from those of the developed world, these surveys are to be welcomed very much.

REFERENCES

1. BOON, J.A. 1992. Information and development towards an understanding of the relationship. *South African Journal of Library and Information Science* 60 (2), 63-74.

2. BROOKS, K. 1980. A comparison of the coverage of agricultural and forestry literature on Agricola, Biosis, CAB and Scisearch. *Database 3*. 38-49.

3. CAB International. 1995. Evaluation of the CAB International's CD-ROM databases on sustainable development in Africa. Wallingford, UK: CABI.

4. CLARK, K. 1991. A practical commentary on the selection of CD-ROM vs Online databases. *CD-ROM Professional 3*, 115-116.

5. DUBBELD, C.E. 1991. CD-ROM - a viable alternative to online searching for academic libraries? *The Electronic Library* Vol 9 (4/5) 245-250.

6. DESCHATELETS, G. and LEGAULT, M. 1994. Statistical Report: inventory of CD-ROM sites in developing countries and East European Countries. Montreal: Université de Montreal.

7. DUSINK, A. 1994. CTA's CD-ROM programme for sustainable development. *Quarterly Bulletin of the IAALD* 39 (1-2) 82-84.

8. ESTERHUYSEN, A. 1995. The role of the Internet in facilitating regional images in Southern Africa. *The Electronic Library* 13(4) 377.

9. GATTEN, J. *et al*. 1987. Purchasing CD-ROM products: considerations for a new technology. *Library Acquisitions: Practice & Theory* 11, 273-281.

10. GOLDRATT, E.. 1990. What is this thing called theory of constraints and how should it be implemented? New York: North River.

11. GRAY, D.E. 1978. An European study of veterinary computer based bibliographical information systems. *Proceedings of International Symposium on Animal Health and Disease Databanks*, December 4-6. Washington D.C.; United States Department of Agriculture, p5-9.

12. KLOBAS, J.E. 1995. Beyond information quality: fitness for purpose and electronic information research use. *Journal of Information Science*, 21(2) 95-114.

13. KOGA, J.S. 1989. A system operator's evaluation criteria for CD-ROM. *CD-ROM Librarian* 4, 22-24.

14. LARGE, A. 1989. Evaluating online and CD-ROM reference sources. *Journal of Librarianship* 21, 87-108.

15. LEE, T.P. and BREDDERMAN, P.J. 1993. The literature of veterinary and animal sciences on the CAB abstracts databases: A description and evaluative appraisal of CAB International's VETCD and BeastCD CD-ROM products. *Proceedings of the First International Conference of Animal Health Information Specialists* July 16-19, 1992, Reading, England.

16. MARSHALL, R. 1994. CD-ROM Veterinary Information Databases VETCD, BEASTCD and CAB-CD produced by Commonwealth Agriculture Bureaux International, Wallingford. *New Zealand Veterinary Journal*, Vol. 42(6), 240.

17. MILLER, D.S. 1987. Evaluating CD-ROMS: To buy or what to buy. *Database* 10, 36-42.

18. MORLEY, E. (Elizabm@silverplatter.com). Personal e-mail communication, 1995.

19. NKATHA, B.W.M. 1993. CD-ROM in developing countries: is it a technology for the distribution of information? *The Electronic Library* 11(4/5) 295-297.

20. NEWA, J.M. 1994. The sustainability of information technology innovations: CD-ROM at the University of Dar es Salaam. *Survival strategies in African university libraries: new technologies in the service of information*, Washington, D.C.: American Association for the Advancement of Science. p77-83.

21. PATRIKIOS, H.A. and LEVEY, L.A. 1994. Introduction: *Survival strategies in African university libraries: new technologies in the service of information*, Washington, D.C.: American Association for the Advancement of Science. p1-5.

22. SILVERPLATTER Information. *An introduction to SilverPlatter's ERL Technology*. Unpublished.

23. SILVERPLATTER Information and the Institute for Scientific Information (ISI) Announce Agreement for ERL-Compliant Current Contents. Press Release March 28, 1995.

24. SILVERPLATTER's Electronic Reference Library: Today's Solution, Tomorrow's Vision. *IFLA Journal* 20, 397-381.

25. STEWART, L. 1984. Evaluation criteria: Picking CD-ROMS for public use. *American Libraries*, October 738-740.

26. TSEBE, J.K. 1994. The University of the North Library: innovations to improve services. *Survival strategies in African university libraries: new technologies in the service of information*, Washington, D.C.: American Association for the Advancement of Science, p113-117.