

**Pierre Malan,
A National Union Catalog for Shared Cataloging and Resource
Sharing by Southern African Libraries**

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Chapter 19

A National Union Catalog for Shared Cataloging and Resource Sharing by Southern African Libraries

Pierre Malan

1 The Founding of SABINET

In 1979, the South African National Library Advisory Council (NLAC) initiated a national project to investigate the feasibility of establishing a library network and national union catalog, the South African Library Network (SALNET). The groundwork for this project, also known as the Computerized Cataloging Network Project (CCNP) was laid by the former MARC Working Group of the NLAC, which already started feasibility studies as early as 1970.¹ The MARC working group was also responsible for the development of SAMARC (South African MARC) based on UNIMARC at that time,² which set a standard that would have a great impact on future developments.

Recommendations made by NLAC indicated that there was consensus among libraries in South Africa for the establishment of SALNET. The main purpose of the establishment of the network would be to facilitate

¹ M. C. Boshoff and H. F. Bester, *South African Library Network (SALNET), Functions and Network Architecture*, 1980.

² National Library Advisory Council, Committee for Computerized Cataloging Network, Working Group for Bibliographic Standards, *SAMARC* (Pretoria: NLAC, 1980).

resource sharing among South African libraries, mainly by allowing shared cataloging and an inter-library loan mailbox service.

Certain principles were established for the creation of the network. These principles were not only very significant at that time, but are still applicable today. It also turned out to be the case that significant problems emerged when there were deviations from these principles. These principles were:

1. The system should be as simple as possible within the framework of a networked central library system;
2. Participation in the network should be cost-effective for libraries;
3. The purpose of the system should be to serve the user and not only the librarian;
4. The autonomy of local library systems and computer centers should always be taken into account;
5. The system should lend itself to the creation of a central database with high integrity; and
6. The central database should provide good coverage of materials in participating libraries.

The recommendations were presented to the Department of National Education by NLAC and were accepted by Government in 1981. SABINET (originally referred to as SALNET) was officially constituted on February 28, 1983,³ when forty-six libraries and information centers made a ten-year commitment to establish the network.

2 The Start of Computerization

Before the South African Bibliographic and Information Network (SABINET) was founded, an extensive study had been conducted, and the SABINET project team had decided to use the program package of the

³ F. W. Coetzee, *Historical Overview, South African Bibliographic and Information Network, Annual Report 1984 to 1985*.

Washington Library Network (WLN), later also known as the Western Library Network, from the United States on an interim basis for the SABINET system. The WLN programs, including their bibliographic database, were installed and accessible in South Africa as of September 24, 1983.

SABINET contracted with a service bureau, Automated Business Systems (ABS), for the provision of computer facilities, and access to the services was through an established national government IBM SNA network called GOVNET.

The State Library (now the National Library of South Africa) was the first member to be linked to SABINET, followed shortly after by the South African Bureau of Standards and UNISA (University of South Africa). By March 31, 1984, 13 members were linked to SABINET. The only service available was an inquiry function on the 2.7 million record database housed on the WLN system. Within the months that followed, many more members were connected to the network, Library of Congress records were being batch-loaded into the catalog, and the functionality was extended to online cataloging.

Since the decision to use SAMARC as a bibliographic standard had already been taken prior to 1980, it was urgent not only to have the interim WLN system as compatible as possible with SAMARC, but also to develop a full-blown SAMARC system for South Africa. To this end, by March 1985, an interface (SABIMARC) was developed on top of the WLN system, which allowed SAMARC tagging with the existing USMARC punctuation. At the same time, SABINET issued an invitation to tender for the development of a unique SAMARC system to conform to all expectations for a South African union catalog. By the middle of 1995, the board of SABINET had appointed the chosen company to develop and implement the yet-to-be-developed SAMARC system.

The SABINET Managing Director informed the members that the activities planned until the end of 1987⁴ would include:

⁴ F. W. Coetzee, *Planned Activities 1985 to 1987, South African Bibliographic and Information Network Annual Report 1984 to 1985*.

1. Establishment of efficient maintenance services for all implemented functions on the WLN system;
2. Support of the SABIMARC interface and enhancement of the quality of this interface even further; and
3. Progress with the phased development and implementation of the full feature SAMARC bibliographic system. (The full implementation was scheduled for a three-year period.)

Two years after the establishment of SABINET, after just succeeding in putting a working solution in place, the announcement was made that the development and implementation of the SAMARC union catalog system would be completed in only three years. The importance of achieving this goal was underscored by the fact that the implementation and further maintenance of the SABIMARC interface excluded SABINET from implementing any further WLN software upgrades.

3 Local Development of the SAMARC Union Catalog System

Datatrust, a local software development house to which the tender was awarded, started the development of the SAMARC system during the second half of 1985. A year after the start of the development of the system, the development team requested that an additional investigation outside the scope of the original project needed to be undertaken, to allow for the detailed investigation and specification of the SAMARC system requirements. This already indicated that there were severe shortcomings in the original specifications on which the project was based.

During the second year of the development, it was reported that approximately 50% of SABINET personnel time was dedicated to the SAMARC system project. Staff involvement ranged from detailed analysis to development of further specifications, programmer support and testing.⁵ Although according to original planning, certain modules were to have

⁵ I. van Niekerk, *Departmental Report: Information Services, South African Bibliographic and Information Network Annual Report 1987 to 1988*.

been available for client implementation at this stage, all were still in various stages of development and testing. Even at this stage, indications were that the project was poorly managed and starting to fall behind schedule.

Indications of very serious difficulties with the project started to surface in the 1988/89 financial year, when it was reported in the SABINET annual report that

1. the development of the new SAMARC system was still dominating all activities of SABINET;
2. that progress was seriously hampered by the resignation of various key staff members; and
3. that delays were incurred with the introduction of database conversion programs, "a task which proved to be more extensive than foreseen during the initial planning stages of the project," according to a report.

At this stage, the newly appointed Managing Director of SABINET, Gerhard Kemp, started to view the status and progress of this inherited project very critically. The following information surfaced after various actions were put in place in an effort to steer the project back on course:

1. It became evident that the project was poorly managed. The software development company involved in the development was too scared of losing the contract or of seeing it end prematurely. This made the company withhold information about the true status and achievability of the project. Furthermore, staff inside SABINET also withheld damning information, knowing that the failure of the project would have an unfavorable impact on their employment. The truth about the poor status of the development only surfaced after the appointment of a new project manager who had nothing to lose in exposing the truth.
2. A further warning sign came from the computer bureau where the WLN system was hosted and on whose platforms the development of the new system was taking place. The bureau indicated that the mere testing of the new system used so much more computing capacity than the existing live WLN system that it would not be in a position to host the new development in a production environment due to lack of capacity.

3. With all information eventually exposed, the SABINET management calculated the cost of completing the development. The calculation showed that to merely complete the developments that were currently under way to a point of usability would cost no less than R 3 million.⁶ This figure excluded the tremendous costs that would be involved in finding the necessary computer mainframe infrastructure that would be necessary to cope with the demands of the software application.

The above revelations finally brought home the realization that it was not wise to continue with the systems development. This decision was very unpopular with SABINET staff, and perhaps also among some in the SA library community.

After a thorough investigation done by external consultants during the second half of 1990, all concerns relating to the continuation of the development of a unique SAMARC-based system were confirmed. During November 1990, the Pythia Project (as the system was later called) was finally scrapped. Sadly, this development, with a direct cost to SABINET of nearly \$2.7 million and a total cost of \$10 million, was never to be implemented and nearly resulted in the demise of SABINET and of all prospects of having a National Union Catalog in South Africa.

4 Implementation of ERUDITE

Early in 1991, an emergency SABINET board meeting was held to decide on the future, given the final decision that the Pythia Project would not continue. The only options really open for discussion were either to continue with the WLN system, or to implement an alternative existing library automation solution which complied at least with the SAMARC standard. Although perhaps the easiest solution for SABINET would have been to continue with the WLN system, there were unfortunately many factors that argued against it. Perhaps the most important was that the system, implemented in 1984, was never upgraded because of its custom-built SAMARC interface, and was therefore falling far behind in usability

⁶ South African Rand: at the time one US dollar was approximately R2.5395.

and functionality according to 1990 standards. The system was also still based on mainframe computing technology, which was becoming increasingly expensive to operate, while cheaper alternatives such as UNIX platforms were starting to become the norm.

During this meeting, it was decided to draw up the system requirements for a new system and to issue a tender for the supply of an alternative system within a period of six weeks. Due to the sanctions still being imposed on South Africa by Western countries at that time, and with SAMARC still a very prominent requirement, it was likely that the preferred vendor would be South African. The process was completed in record time, and after requesting tenders, SABINET received proposals from three local system vendors. The contract was finally awarded to a local company for the implementation of the ERUDITE library system. The system was to be implemented on a UNIX platform, which meant substantial savings in operating costs for SABINET. The total cost of the system, hardware and implementation was less than what it would have cost to complete the development of the Pythia system.

By April 1992, the implementation of the ERUDITE system was completed and the WLN system turned off.⁷ This marked a new era for SABINET, with a user-friendly SAMARC-based system that was also accessible through networks other than the GOVNET network. In the following years, the number of users and usage of the service gradually increased. Services were further complemented by the addition of an ILL (Inter-Library Loan) module that was a joint development by SABINET staff and the owners of the ERUDITE system.

When SABINET purchased ERUDITE during 1991, the system was distributed by one of the largest computer companies in SA. However, two years later the division responsible for ERUDITE was sold and has since then changed ownership many times. This unstable ownership situation and the resulting lack of a clear strategy contributed to the fact that the systems developed very little in later years.

While compliance with SAMARC was a very strong motivator for the choice of ERUDITE in the early 1990s, it became a big stumbling block in

⁷ G. Kemp, Report from the Managing Director, *SABINET Annual Report 1991/1992*: 5.

later years, when the SA Bibliographic Standards Committee decided unanimously in 1998 on the implementation of USMARC in South Africa. With the increasing implementation of USMARC-based systems in the country, and because of the lifting of sanctions, the SAMARC-based National Union Catalog was quickly being outgrown by its USMARC-based members.

Seven years after the implementation of ERUDITE, SABINET was again confronted with many problems which necessitated the migration of the South African Union Catalog (SACat) to an alternative platform.

Problems with the ERUDITE System

The ERUDITE system on which the SACat was housed needed to be replaced for the following reasons:

1. It was functionally outdated, e.g. keyword searching was slow;
2. Its DBMS (database management system) was technologically outdated;
3. It was not Year 2000-compliant;
4. It was not USMARC-based;
5. It was not designed to handle very large databases;
6. It was resource-intensive in terms of computer hardware infrastructure, which affected the speed of the batch loading of records, thus interfering with SABINET's ability to update and maintain its databases on the network system; and
7. Because of the instability of the vendor and the vendor's lack of capacity, SABINET was left with little or no support.

Problems with the SACat

SACat struggled with a number of problems:

1. It had no authority control over names and subject headings used, which affected the quality of retrieval;
2. It had bibliographic records of differing quality, which made shared/copy cataloging and searching very difficult; sub-standard records were often those loaded via tapes from user catalogs;

3. It had many duplicates because of poor matching algorithms, so holdings could be attached to multiple records;
4. It was in SAMARC and needed to be converted to USMARC;
5. Its holdings were not always kept up-to-date by member libraries, including academic libraries; and
6. There was little or no machine validation of headings, tagging, etc.

Problems with the Inter Library Loans System

Of all the SABINET services, the Interlending Module, custom designed for South African circumstances, is the most popular one among users. However, the following problems existed:

1. It was built on ERUDITE and was therefore functionally and technologically outdated;
2. It interfaced with the SACat, and therefore inherited all the SACat problems described above;
3. It made heavy use of hardware resources;
4. It required a high level of support, since it was custom designed by Sabinet Online;
5. It did not pay for itself in terms of usage;
6. It only allowed loans mediated by librarians, and did not permit unmediated end-user lending.

5 SABINET and Sabinet Online

In January 1997, a new private company, Sabinet Online (Pty) Limited, was formed with the objective of addressing the changing needs of the online information community and to keep pace with the rapidly changing technology. SABINET's operational activities were sold to Sabinet Online, and a contractual agreement was entered into whereby Sabinet Online would in future provide services to SABINET and its members. SABINET, together with some of its individual members, has a controlling shareholding in Sabinet Online and still own the SACat. The objectives of

SABINET are continuing through Sabinet Online. Many tertiary institutions in South Africa became shareholders in Sabinet Online.

Sabinet Online functions in a business environment where the Internet and the World Wide Web have become the standard mode in the delivery of information. There is greater focus on product development, client support and training, and marketing. The management philosophy is to

1. Develop products and services that will ensure optimal satisfaction of clients' needs;
2. Provide shareholders with an acceptable return on investment;
3. Offer its staff opportunities for personal growth and development; and
4. Make a significant contribution to developing and raising the level of the South African community at large.

6 The Dawn of a New Era

The formation of regional library consortia and their receipt of funds from The Andrew W. Mellon Foundation for new technologically advanced library systems have placed unprecedented demands on Sabinet Online since 1997. The libraries in these consortia, having been upgraded to a more advanced technology, found themselves outgrowing the limited functionality offered by the existing SACat infrastructure and functionality.

At the time, the SACat urgently needed to be upgraded, as it was functionally and technologically outdated. In fact, it was so outdated that certain consortia were unable to use it or were not prepared to pay for the use of such an outdated service. This situation has been exacerbated by the changing needs of users who required more sophisticated solutions.

The five library consortia have, to a greater or lesser degree, discussed plans for a regional union database internally and with Sabinet Online, since any decision taken by Sabinet Online on a national solution would affect the decisions of the consortia. Preliminary discussions were held with The Andrew W. Mellon Foundation, which encouraged Sabinet Online to seek a nationally acceptable solution.

During 1997, Sabinet Online started to work on a strategy for building a national information infrastructure, which will not only complement and

interface with the various library systems of the library consortia, but will also serve the needs of the wider library community throughout Southern Africa who are not members of these consortia.

The strategy was based on the original purpose of the establishment of SABINET in 1983, which was to establish and support a national resource sharing infrastructure, fully integrated with local and regional infrastructures, by means of

1. A national union catalog of South African bibliographic records and holdings of high quality that will support shared cataloging and acquisitions and eliminate duplication of effort and costs; and
2. A national interlending and circulation system that will facilitate mediated and unmediated transactions on a local, regional and national level.

It was evident that Sabinet Online had a unique role to play in combining all library initiatives in South Africa into an integrated national information infrastructure and in ensuring a high level of resource sharing in the country. Although the country does not have enough role-players or enough combined resources for the establishment of independent regional catalogs, it was clear that the temptation to do so was always there, which could have led to the alienation of the regions from one another. It was evident that South African libraries needed to cooperate even more closely than before, since their ability to purchase new material had been severely curtailed by budget cuts, high price increases and the poor exchange rate of the Rand.

During 1998, strategies and models for cataloging and interlending were developed and discussed at regional users' meetings throughout the country, as well as separately with the library consortia. During discussions with the regional library consortia, it became evident that there was a considerable overlap in the requirements for regional union catalogs and the SACat initiative. For example, GAELIC (GAUTENG and Environs Library Consortia) was urgently seeking a software solution for its resource sharing and shared cataloging needs, but was aware that it would have great difficulty in paying for both its own regional union database as well as online access to the new national union database. There was therefore an urgent need to avoid unnecessary duplication and costs, and to optimize existing and possible future funding.

Urgent discussions were needed between Sabinet Online, the regional consortia and representatives of other key library sectors such as the national libraries and the public/provincial libraries. Such a workshop was held on September 7, 1998, with the objective of gauging the level of support for a national, rather than regional, union database. It was attended by all the regional library consortia, as well as the State Library and representatives from the Public Library sector. During this meeting, the strategic importance of a National Union Catalog for facilitating shared cataloging and inter-library loans was fully endorsed, and Sabinet Online was assigned the task of obtaining funds for the establishment of a redesigned national infrastructure and SACat.

The detailed requirements were compiled with the assistance of some consortium members, and were widely distributed to all users for comment. This was done in an effort to involve both consortium and non-consortium users. Throughout the process, it became clear that the consultation of all parties involved and efforts to ensure their commitment were of the utmost importance.

These efforts resulted in the presentation of proposals to the Foundation⁸ on October 10, 1998 and November 3, 1998 to support a strategy for national resource sharing in Southern Africa. This resulted in a two-phase project, which was initiated during 1999.

Phase 1

In the first phase, it was decided that

1. The current cataloging procedures be replaced with the OCLC Prism service, which allowed users to do original cataloging, upgrade records, download high quality bibliographic and authority records for copy/shared cataloging. These various types of records would also be downloaded and housed on the national union database;

⁸ P. F. Malan and D. L. Man, SABINET Proposal to The Andrew W. Mellon Foundation, October 1998.

2. The SACat on ERUDITE (in SAMARC) be replaced with a National Union Database of bibliographic records and holdings in USMARC and housed on a technologically advanced library system. The recommended system was the INNOPAC system by Innovative Interfaces, Inc.;
3. The new National Union Database was to contain bibliographic records of a high standard to facilitate shared cataloging through electronic data interchange. It was hoped that it would enable libraries, particularly the consortia, to eliminate duplication of cataloging, to become more efficient, and to cut costs. All original cataloging was to be done on the OCLC Prism system, and a copy of these records, as well as those copied from OCLC, would be housed on the local INNOPAC system. It was further decided that this combined and integrated service be called SabiCat.
4. It was further suggested that authority file upgrading be done on the existing database by external experts before loading the data into the new SACat.
5. It was finally suggested that bibliographic records on the old SACat be matched against the Worldcat database and upgraded to a higher quality, and that as many duplicate records as possible be removed.

Phase 2

The plan was to replace the current interlending system on the SACat with a technologically advanced interlending system. As envisaged, the system was to make provision for requesting, supplying, administrative, statistical, and financial functions for returnable items, as well as photocopies. The interlending system was to be fully integrated into the SACat database, which would be housed on the INNOPAC system to provide the cataloging model implemented during Phase 1. After much investigation and several consultation sessions with the interlending community in South Africa, it was decided that the DRSS (Distributed Resource Sharing Software) from OCLC be implemented. The software, which could be accessed via a Web-based interface, was based on the functionality of the current OCLC ILL system. Although the specific software was only running in certain test phases in certain US consortia, Sabinet Online was comfortable with the

decision to implement the software, on the basis of its positive experiences with OCLC concerning the latter's ability to deliver on its promises.

Implementation of Phase 1

The implementation of this phase of the project consisted of many aspects, ranging from hardware implementation to migration of the user community onto the new platform. The project was to be handled by a group of five staff members from Sabinet Online and the various staff members from the vendor organizations. The project was further conducted according to a project plan with certain deadlines, monitored on a regular basis by implementation meetings and followed up with feedback to users and vendors.

Although the failure of any aspect of a project of this magnitude can easily jeopardize the complete project, it became clear that certain aspects were more important than others. The following aspects were revealed as the most difficult:

1. The extraction of the SAMARC data from the old system, the conversion of the data to USMARC and the loading of the final upgraded bibliographic records into the newly implemented system; and
2. Training, which turned out to be a big problem; not only because of the many users needing to be trained within a large geographic area, but also because there were so many areas to be addressed during the training. The training consisted of teaching the users USMARC, teaching them how to use the new software in the form of the client software for connecting to INNOPAC and OCLC PRISM, and finally teaching them to adapt to a completely new workflow.

After successful implementation of the hardware and the configuration and implementation of the INNOPAC software, the process of loading the data, on which much work had been done up to that point, started in October 1999. According to data received from the vendor and calculations based

⁹ P. F. Malan, *Progress on the Implementation Project of Phase-1 of the National Union Database of Southern Africa*, November 1999: 5.

on loading statistics from other similar implementations in South Africa, the Sabinet Online implementation team calculated that the loading should take no longer than three months. Since this period fell in the rather quiet November to January period, it was ideal for the project. Based on this timeframe, users were to be trained early in February to enable them to start using the new service early in the New Year.

By the end of January 2000, it became clear that the loading of the data had progressed much more slowly than anticipated. This was mainly due to the size of the catalog (3.5 million bibliographic records, over 8 million item records and 1 million authority records); however, problems also arose with the hardware, which resulted in further delay. The data loading was finally completed by May 2000, at which time good progress was already made by 19 classroom-style training sessions countrywide. The classroom-style training was followed up during June with 21 training sessions that took place onsite at user institutions. During these sessions, attention was not only given to the use of the services, but also to networking and related problems. This form of individual implementation proved very successful and resulted in more than 154 libraries adopting the service by October 2001. Today there are more than 170 libraries using the service, which are collectively downloading an average of 30,000 bibliographic records for shared cataloging purposes per month.

Implementation of Phase 2

The second phase to install the ILL module began while the implementation of the first phase of the project was still in progress. Although it did not make much sense from a company and staffing point of view to have started with the project so early, there were not many options, since the old SACat on the ERUDITE platform was aging more by the day, with no further holdings updates taking place.

The project formally commenced during March 2000. This phase of the project was very different from the first phase, since over 400 libraries in South Africa participate in the ILL system, and because ILL is an interactive process among the various institutions, it was imperative for everybody to migrate to the new system at exactly the same time. The philosophy that was therefore adopted during the implementation was to

have the systems in place, to train all users in the shortest possible time, and then to set a date when everybody would start to process transactions on the new system, while the old system would be closed at that time.

Installation of the hardware and software was completed by May 2000. After the completion of installation, some users (mainly situated in the Gauteng region and who had received limited training) were given a three-week period to test the service by sending dummy requests to one another and to report any problems. It was later learned that not many users used this opportunity for testing, mainly because they were still very unfamiliar with the system and had other daily activities they were pressured to do. A very big problem, which surfaced at this early stage of implementation but was not taken into account during the planning of the project, was resistance to change. This problem would have been insignificant if the implementation team had placed more emphasis on involving libraries in the process of system choice and implementation and persuading them of the advantages of the project.

The training of the libraries began at the beginning of June 2000. During the three weeks that followed, six trainers conducted 37 training workshops of two days' duration. By the completion of the training phase, nearly 300 library staff members were trained in the seven biggest regions in South Africa.

On July 31, 2000, the ReQuest system went live and access was closed to the old ERUDITE system.¹⁰ Although the changeover was irreversible, it did not happen without problems, and the months that followed were perhaps some of the most difficult experienced in many years, since almost the entire staff was either busy assisting users to adopt the cataloging service or to solve problems on the ReQuest system, which proved to require a lot of technical expertise to run effectively.

By September 2000, the ReQuest system was starting to become well established in the South African library market, despite the fact that many functionality problems and additional requirements surfaced at a time when training was still taking place on an ongoing basis. At the time, it was

¹⁰ P. F. Malan, *Progress on the Implementation Project of Phase-1 and Phase-2 of the National Union Database Project of Southern Africa*, October 2000: 8.

decided to hold workshops on the new system with users who had already been trained to use it. The information obtained from these workshops was used to change/adapt the system to meet the users' specific requirements. The sessions and the opportunity for open discussion were welcomed by all libraries. These led to a list of requirements, which subsequently resulted in the complete redevelopment of the user interface and the incorporation of an IFM (Interlending Fee Management) system. This new user interface was finally implemented during March 2002, with much positive response from the library community.

Currently, the monthly average is 28,000 new requests on the system by more than 400 institutions with over 20,000 registered users.

7 Benefits and Cost Savings

Various studies and user experiences over the years have attested to the benefits and cost savings of shared cataloging. These benefits and savings are also fully experienced by South African libraries. The following are some benefits relevant to the South African library environment:

1. Shared cataloging, as compared to original cataloging, enhances the timeliness and productivity of technical services within the library. This not only means that books purchased are added to the online library catalog and available for circulation much faster, but it also contributes to costs savings;
2. By making use of the shared cataloging facility, library staff have access to an increased number of cataloging records, again contributing to the savings derived from not having to upgrade many records downloaded from the central shared cataloging service;
3. The use of the shared cataloging service has made library cooperation possible among libraries in the South African region. Through the availability of WorldCat, libraries now also share resources with the international library community and are part of the international cataloging fraternity; and
4. The cooperation in shared cataloging by the library community is contributing to the constant updating of library holdings on SACat,

which in turn is enhancing the sharing of resources through inter-library loans in the region. Resources are also now available online much more quickly for ILL because of shared cataloging.

The use of the service increased rapidly after the first year of implementation. This clearly indicates the value that libraries are deriving from the service. Factors such as the implementation of better networking infrastructures and local library systems have further contributed to the increase in the use of the service.

The following statistics were recorded for the period January to November 2001 (Table 1).

Table 1. Basic Statistics

	WorldCat	SACat	Total
Records downloaded	91,674	235,725	327,399
Average searches	347,614	895,755	1,243,369
New records created	10,297		10,297

The above usage statistics indicate that 327,399 records were downloaded to local library systems during the reported period. This represents considerable savings because the only alternative would have been to create these records at the institutional level from scratch.

Since a vast number of bibliographic records were downloaded from SabiCat and therefore not cataloged by libraries, cost savings for the country must have been considerable. To determine the cost savings, see studies done in the US.¹¹ These studies conclude that the average cost,

¹¹ Dilys E. Morris, Colin B. Hobert, Lori Osmus and Gregory Wool, *Library Resources and Technical Services, Cataloging Staff Cost Revisited*, Vol. 44 (April 2000): 74–76; J. Matthews, *Information Outlook, The Value of Information in Library Catalogs* (July 2000): 5.

including systems, administration and staffing, of original cataloging of a monograph is \$44.81 (R537.72), while the cost of copy cataloging of a similar item is \$12.22 (R146.64). Comparing the cost of original cataloging against copy cataloging (using the 327,399 records downloaded through copy cataloging as in our sample), we should obtain a fair estimate of cost savings for the country over the recorded period:

Table 2. Cost Savings

	Cost per record (R)	Total records	Total cost (R)
Original cataloging	537.72	327,399	176,048,990
Copy cataloging	146.64	327,399	48,000,789
National saving			128,048,201

The above calculation indicates a saving of R 128,048,201 to the library community as a result of shared cataloging instead of original cataloging. Even if costs in South Africa (e.g. salaries) are only one-third of those in the US, where the original studies were undertaken, the savings would still amount to R 42,682,733 (R 128,048, 201/3).¹²

8 Conclusion

Although some difficulties were encountered, the two phases of the project were completed in about a two-year period. Enhancements to the SACat and supported services will continue, and so will the training of additional users. Very valuable lessons were learned not only during the nearly twenty years of Sabinet Online's existence, but also during the implementation of the new systems and services. Some

¹² Morris, Hobert et al., and Matthews.

of the most valuable observations and lessons in the South African context were:

1. Standards are very important, and adherence to standards contributes to better and more effective resource sharing. The development of the SAMARC standard, although seeming to be a good decision while South Africa was in isolation, proved to be the wrong decision, since it limited the sharing of resources with the international library community and prevented the adoption of international technologies.
2. The development of a unique SAMARC standards-based union catalog system for the South African library seemed a very good decision during the mid-1980s; however, it failed due to poor planning and project management. Nevertheless, the failure of this project contributed to the long-term survival of shared networking in South Africa. If this project had succeeded, libraries in South Africa would have been left with an apparently perfect solution. However, this solution would ultimately have been unaffordable, due to the outdated mainframe technology on which it was based.
3. The implementation of new technology platforms and international standards brought about a new era of cooperation and resource sharing among South African libraries that had never been known before in the industry. This can largely be attributed to the technology that enabled these processes and libraries, through the formation of regional consortia that organized and forced their members to cooperate more effectively.

It is clear from the usage of the service and from some simple cost comparisons based on the use of shared cataloging that the service is of tremendous value to the South African library community. Without external funding, the library community in South Africa would not have been able to enter this new era of computerization and collaboration, a position which would have had an unfavorable impact on its long-term survival.