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**Knowledge for development a case study of
SARDC's Virtual Library for Southern Africa**

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Abstract

The paper explains the process that led to the development of the Virtual Library for Southern Africa, the contents, technical set up, challenges and opportunities. It highlights the potential role of the Virtual Library in the development process of the Southern African Development Community (SADC). The Southern African Research and Documentation Centre (SARDC) acknowledges that the region needs strong regional knowledge centres that fully understand the regional historical context, and share a development agenda and vision for the future. The Virtual Library is one way in which SARDC contributes towards regional development agendas.

Introduction

The Virtual Library for Southern Africa is a gateway for free access to reliable and accurate information about the southern African region. In line with this year's theme of the IFLA Information Technology Section, *Second Life for Libraries: User driven library services*, SARDC has seized the opportunities presented by Information Communication Technologies (ICTs) to give its library systems access to a new life by responding to user needs for Knowledge for Development.

SARDC is an independent regional information resource centre whose vision is to enhance the effectiveness of key development processes in the region through the collection, production and dissemination of information, and enabling the capacity to generate and use information. The founding patron was Mwalimu Julius Nyerere, President of the United Republic of Tanzania.

Genesis of the Virtual Library

SARDC is involved in the collection, analysis and dissemination of information about the Southern African Development Community (SADC) region, in partnership with a number of other organisations and institutions including the SADC secretariat and sectors, university departments, media, parliaments and NGOs.

SARDC was formally established 20 years ago, in 1987, with offices in Harare and Maputo. This was in response to an expressed need within the then Front Line States for cross-border access to information with a regional perspective. SARDC first established its Documentation Unit and began to collect and circulate information about the region, within southern Africa and beyond.

SARDC's mission is to improve the base of knowledge about regional economic, political, cultural and social developments and their implication by making information accessible to governments, policy makers, NGOs, the private sector, regional and international organisations, development agencies, parliaments and the media.

The origins of the Virtual Library for Southern Africa dates back to the very earliest days of internet access in southern Africa, when SARDC established the first non-commercial electronic bulletin board north of the Limpopo. Located at the SARDC offices, the Micro-computer Access for Non Government Organisations (MANGO), was a center of both domestic and international computer networking in the region. Established in 1989, this was the first such network in southern Africa, outside of South Africa. Three times a day a connection was made to the international gateway at WorkNet in Johannesburg, where electronic conference and personal mail was exchanged.

MANGO was used as the "boss" or "node" for a computer mail service established for the local non-commercial sector in Zimbabwe, with users in Mozambique and Malawi. MANGO used FidoNet technology to transfer electronic mail messages. This technology proved beneficial for African countries at that time because it was effective for use with poor telephone lines.

SARDC has continued to provide services and expand ICT applications in the region.

Librarians' Changing Role

The role of the librarian for centuries has been to provide information but librarians now have the opportunity to use modern tools to provide quicker, more sophisticated, user-friendly service. This is in response to the changing demands of users for a more efficient service as more and more information is generated and distributed in electronic format.

This changing scenario calls upon the librarian to take up a new dimension of collaboration with computer and information technology scientists in the design and maintenance of information science systems.

The rise of the electronic era is an opportunity to elevate the role of the librarian, bringing in a new breed of librarians often referred to as *cyber librarians*. These are librarians who operate solely in an electronic environment.

There was initially a concern that the Internet was the death of the librarian's career and relevance. However, librarians who have always had a history of adapting to technology have come up with such initiatives as the Virtual Library to match user demands. This is indeed a "new life" for libraries.

Why the Virtual Library?

The establishment of the Virtual Library for Southern Africa was driven by the need to improve South-South as well as South-North linkages. Knowledge networking takes account of building and strengthening these linkages, and building skills to enable knowledge sharing in a global space. The South is not as visible as the North in terms of content, design skills and smart access on the World Wide Web. So users often prefer to access the Northern sites which may be prettier and easier to navigate but do not contain Southern information, thus ever-widening the so-called "digital divide".

The inaccessibility of information on, about and from the South and the increasingly high costs of publishing and distribution prompted SARDC to make knowledge resources freely accessible and as efficient as possible, through the Virtual Library for Southern Africa, using appropriate technology.

The Virtual Library for Southern Africa is a "work in progress" which increasingly provides access to information and knowledge that is relevant to regional and international goals such as those of the SADC, African Union and the United Nations Millennium Development Goals.

The SADC Heads of State and Government adopted *The SADC Declaration on Information and Communications Technology* in August 2001. The declaration states that ICT, if harnessed, can contribute significantly to the economic development of countries and facilitate the provision of a better life for citizens. It further acknowledges that effective information communication is best achieved under an environment characterised by knowledge management among other processes. It also recognises that ICT is fast, reliable, efficient and easy way of communication and information exchange.

The SADC strategic plan for the development of southern Africa, the Regional Indicative Strategic Development Plan (RISDP), also recognises the importance of information as a resource and a tool for development. This blueprint presents as one of its goals to ensure that SADC is “building a self-sustaining process with the positioning of the community as an effective participant in the information and knowledge-based society...” (RISDP, 2003).

The RISDP identifies an urgent need for SADC Member States to adjust to the new digital environment such as the virtual library in order to maximise the opportunities availed by globalisation and minimise the risks associated with it.

What is a Virtual Library?

A Virtual Library is an **organised collection of information resources or information services that are searchable and accessible in full text and exist solely in electronic form via the Internet or CD-ROM**. The Virtual Library provides easy and affordable access around the clock from various locations.

The term, Virtual Library, is often used interchangeably with others such as electronic library, digital library and “library without walls”.

The purpose of the Virtual Library is to provide a central remote access place that links to a variety of key information and knowledge relevant to the SADC region such as publications, books, journals, magazines, newspapers and services traditionally offered by libraries and other information sources.

Virtual Library for Southern Africa

Content of the Virtual Library for Southern Africa is generated in collaboration with national partners in the 14 SADC countries and is based on reliable national data sources, hence its accuracy and reliability. The Virtual Library is pivotal in removing the physical barrier to information access and reaches a wide audience

The Virtual Library has two components, **the searchable full text publications and the databases**. SARDC benefited from the United Nations Educational, Scientific and Cultural Organization (UNESCO) database management information systems software called the *Computerized Documentation Systems/ Integrated Set of Information Systems* (CDS/ISIS). GENISISWeb software also freely distributed by UNESCO was used to develop the user interface for the virtual library.

Searchable Full Text Publications

The full text publications facility seeks to advance the scope of development research by providing free access to key developmental information including books, news features, newsletters and fact sheets. The publications contain regional information and knowledge, and policy analysis on a diverse range of topics such as economic development, regional integration, environment and water issues, gender analysis, ICTs, human development and sustainable democracy within the SADC region. As it grows, it increasingly offers a one-stop access point to publications on southern Africa.

SARDC full text information is well researched and verified, and the statistical data is drawn from the region. Users can access the information from anywhere and at anytime with no restrictions attached to its accessibility. This is an effort to ensure everyone who needs this information has access through Internet services, and that Internet access to information and knowledge from the South is strengthened.

The publications that are available online are also available in hard copy in the SARDC physical library, and from national partners. Most of the books and periodicals are published in English and Portuguese, with some in French, and the latter languages are the fastest growing in terms of visitors to the Virtual Library. This has enabled an increase in the availability and accessibility of the material published by SARDC and its national partners.

Books online

Currently, full text publications comprise of SARDC titles only, but this will be gradually expanded to include other publications as capacity increases. Some of the titles that are accessible in full text include the popular *Beyond Inequalities* series that chronicles the development of gender equality in most SADC countries, the *Mozambique National Human Development Reports* and specialist books such as *Defining and Mainstreaming Environmental Sustainability in Water Resources Management in Southern Africa*, environment outlooks and some in Summary such as *State of the Environment Zambezi Basin 2000*.

Newsletters and News Features online

SARDC offers an up-to-date weekly service of background information on current regional developments through the *Southern African News Features*, which is also distributed via e-mail. It contains news stories and documentation, primarily addressed to decision-makers, the media and researchers in southern Africa. The news service offers a reliable source of regional information and analysis on southern Africa. The articles and documents are freely reproduced in media and elsewhere, with attribution.

Regional news magazines that are available as searchable full text are *SADC Today*, *The Zambezi*, and *The GAD Exchange*.

SADC Today, published for the Southern African Development Community, is a reference source of activities and opportunities in the region and a guide for decision-makers at all levels of national and regional development.

The Zambezi is published by the Musokotwane Environment Resource Centre for Southern Africa (SARDC IMERCSA) through a partnership with SADC, The World Conservation Union, and the Zambezi River Authority, with national collaborating centres in all basin states of the Zambezi River Basin. The aim is to inform people on the state of the environment and water resources in the basin, and to promote good environmental stewardship and management of water resources in the SADC region.

The GAD Exchange is a gender and development newsletter for southern Africa produced by Women in Development Southern Africa Awareness (WIDSAA), the gender programme of SARDC. The newsletter aims to be a catalyst and information service to the region's governments, parliamentarians, NGOs and agencies, the media and the public in the formulation of policy affecting women.

Information Retrieval

The searchable full text facility enables access to a complete publication either in Portable Document Format (PDF) or Hyper Text Markup Language (HTML) format. Previous or back issues are retrievable through an archive facility. It is possible to search within an article or book, finding specific information, through the search facility. The advantage being that a user has the option of searching all publications from a single interface or searching from a specific publication.

Full text publications are searchable guided by bibliographic details, some of which include the title, author and selected keywords from the scroll down menu. Free text search is possible as well as broadening and narrowing the search as desirable.

There is also the option to combine search terms. For instance, instead of typing in “and” when combining terms, one can simply use a semi colon (;). For example, if searching for information on elections in the Democratic Republic of Congo, simply type “DRC; Elections”. It is possible to search using an event, for example, by typing in “SADC Summit 2006”, thus accessing all articles or documents containing that subject. Databases play a pivotal role in driving the full text search facility of the Virtual Library.

Databases

Databases are a major component of the Virtual Library. They are categorised by use and purpose. These are bibliographic (cataloguing), experts and contacts databases. SARDC’s databases are organised and arranged by areas of specialization, which is economic development, environment, gender and sustainable democracy.

Bibliographic Databases

Bibliographic databases are very convenient as they allow researchers to view and select SARDC’s library holdings within the comfort of their offices or homes from any location via the Internet.

Bibliographic databases provide structured information that describes, locates, or otherwise makes it easier to retrieve and use the knowledge resources housed by the SARDC Information Resource Centre (IRC). The metadata displayed in the bibliographic database include the title, author, publisher, date of publication, edition, number of pages, format, ISBN or ISSN, notes and abstract. Other bibliographic information displayed that helps a user to identify publications is the keywords and the location number.

Users can search the database using any of the above-mentioned bibliographic details. Arrangements can be made with IRC to access the physical publication. Copyright restrictions do not allow full text access to external publications without prior agreement, but links are established with other relevant websites, including SADC.

Experts and Contacts Databases

Southern Africa has a very large pool of professional expertise and technical consultants with a wide range of experience. Yet, it is often easier for a contractor in Mozambique to get to know who is available from outside the region than from Angola, Namibia or

Zimbabwe. Most donors and collaborating partners are finding it more cost-effective to use local expertise, as is private sector. National and regional institutions could also be making more use of local and regional skills, but it is very difficult to find out what skills are available within the region. Often it is difficult to get quick and accurate information about skills, references and reliability, even if a consultant can be identified by name.

The experts databases are a useful reference source of information on expertise available in southern Africa in the areas of environment, regional economic development and gender specialists. The information available in the experts' databases is helpful for users seeking consultants based in the SADC region.

The experts databases available are *Profiles of environmental experts in southern Africa*, *Southern African regional experts*; and *Profiles of gender experts in southern Africa*.

Comprehensive personal information available in the experts database shows the name of the expert, gender, contact details, nationality, country of residence, area(s) of expertise, career profile, qualification(s) and the language(s) spoken, although there are challenges in maintaining current information.

Southern Africa faces a challenge of availability of correct, up-to-date reliable information about organisations that operate in the region. Thus a section of the Virtual Library is dedicated to contacts databases. The contacts databases are directories of organizations on various sectors of the SADC region, providing access, for example, to contacts for environmental, gender and media organisations.

Technical Set Up of the Virtual Library

The Virtual Library is created mainly using the free copyright protected database management software from UNESCO, Computerized Documentation Systems/Integrated Set of Information Systems (CDS ISIS) and made available online using GENISIS Web. The software offers several benefits that make it appropriate for information management in developing countries where organisations have limited budgets. The fact that the software is for free does not make it less important compared to proprietary software. UNESCO provides technical support that includes software updates, manuals and guides. These are available on the UNESCO website www.unesco.org/isis

There is no need for advanced computer skills in configuring the software, as any librarian with basic computer skills can design and create digital archives or library from this inexpensive software. CDS ISIS software is very flexible as it offers a facility to design databases that can be tailor made to suit special needs.

In support of the CDS ISIS development, an international e-mail discussion group is available and open to anyone who needs to learn more or has queries on how to use the software. Many countries have in place CDS ISIS User Groups that offer guidance and share ideas on the use of the software. For instance, *The Zimbabwe ISIS User Group* is a vibrant user group in southern Africa with over 100 members.

Achievements of the Virtual Library for Southern Africa

- Free instant access to reliable, accurate information on southern Africa
- Regional information available in all three SADC official language
- Increasing the volume of South knowledge accessible via Internet
- The Virtual Library is not restricted by physical boundaries
- The ability to search across and within publications
- Access to share ideas and comments through easy-to-use visitors book
- The ability to monitor usage through web hit counts.

Challenges and Opportunities

The development of the Virtual Library for Southern Africa has not been without its challenges, which fortunately have been turned into opportunities. The challenges identified are copyright restrictions, inadequate technical infrastructure, lack of funds, language barriers and acceptance of electronic information.

There is a limit as to the number of publications that can be digitised due to financial and human capacity, and copyright restrictions, so development of the knowledge base has taken longer than anticipated. At the moment, the Virtual Library consists of full text access to SARDC publications only, and other publications not produced by SARDC are restricted to bibliographic access. However, partners and other organisations have expressed keen interest in allowing searchable access to their publications, and collection building continues and will expand as financial and human capacity permits.

The use of the Virtual Library depends on the reliability of Internet Service providers. According to Lush (2000), "It relies on computers, which are expensive to buy and maintain, these also rely on electricity. Internet also relies on telephone; the cost of subscribing to Internet Service Providers may be prohibitive". However, access to Internet has improved greatly with all capital cities in Africa having Internet access.

Financial and human resources have been a major challenge in the development of the Virtual Library. It has required investment in equipment, software and human capacity. The process demands a strong and reliable setup of ICTs, including telephone, good computer networks (including server) and all legal requirements in place. It also requires well-trained and experienced personnel.

Establishing access and collection development must be planned in a cost-effective manner. Adding more documents onto the virtual library, especially when it involves retrospective digitisation of printed documents, is time and labour intensive and generally expensive. Funds permitting, SARDC would like to expand the current project much more rapidly in the next three years, and broaden the range of data sources available, while continuing to monitor and protect the accuracy and reliability of the site.

Acceptance of digital information is a common challenge in Africa. Chisenga (2006) observes that although Africa is also experiencing the digital information revolution, which has brought about new ways of generating and distributing information, there is still a large emphasis on access to the printed word. As a result, libraries in Africa have not progressed very far in making local content available electronically and the attitude

towards digital information resources has to change if virtual libraries are to flourish on the continent.

SARDC's IRC intends to seek financial resources to provide capacity-building programmes to equip other librarians in the region with expertise on ways to exploit ICT in the process of information access, dissemination and thus enhance knowledge sharing.

The Conclusion is Marketing

A library is useful only if its potential users know where to find it and how to get into it. Thus the greatest challenge facing the Virtual Library for Southern Africa is marketing and promotion, to generate awareness of its rich resources and ease of access as a reliable tool for decision-makers at all levels including private sector, as well as researchers, scholars and writers, within and outside southern Africa, and visitors to the region.

It is anticipated that the virtual library will continue to grow in content and usage, and that more people will access it as a reliable tool to make informed decisions that will strengthen economic development and poverty alleviation in the SADC region.

SARDC knowledge is easily accessible and searchable online.... so why not take a walk through the Virtual Library at www.sardc.net Knowledge for Development.

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