A CRITICAL REVIEW OF THE LITERATURE ON ELECTRONIC RECORDS MANAGEMENT IN THE ESARBICA REGION

Segomotso Masegonyana Keakopa
Department of Library and Information Studies, University of Botswana
E-mail: Keakopas@mopipi.ub.bw

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Abstract

This article provides a critical review of existing articles addressing the management of electronic records in the Eastern and Southern African Regional Branch of the International Council on Archives (ESARBICA) region. The article argues that while the literature in developed countries has come up with practical solutions to the management electronic records, this has remained theoretical in most developing countries. In particular, the article argues that the literature in the ESARBICA region has not provided sufficient guidance that could help practitioners deal with the management of electronic records in this developing region. Further, the article concludes that academics in the area of archives and records management need to generate challenging debates based on critical thinking that can help practitioners come up with practical solutions to the management of electronic records in the region.

Key words: Archives, Electronic records, ESARBICA,

Introduction

A review of the general literature on the management of electronic records places emphasis on the need to find practical solutions for managing records generated in the electronic environment. Further, in the same literature there is recognition of the need for connectivity between traditional archival practices and modern recordkeeping. Concerns addressed in this literature are related to the challenges of

adapting to computerised systems, namely the importance of electronic records and the need for their management; long-term preservation; theories explaining the life of records; records control and arrangement; introducing metadata requirements; developing standards for best practice, professional training; and the importance of coordination and networking. An examination of this literature further reveals that since the 1990s, renowned authors[1]in the field of archives and records management have written widely on the impact of the new technology on archival management and recordkeeping. According to Kelvin Smith (2003), a lot has been written in this area, making it difficult for archivists and records managers to pick their way through.

Research in the management of electronic records has received a lot of attention in the developed countries with investigations focusing on practical solutions to the management of records. A number of research activities mainly in Europe, Australia, the USA and Canada have come up with projects aimed at addressing the challenges of managing electronic records and most of these have been successfully implemented. In particular, the Document Life-Cycle Management (DLM) Forum[2] in the European Union; the Electronic Records in Office Systems (EROS) and the National Digital Archive of Datasets (NDAD)[3] in the United Kingdom; the Victorian Electronic Records Strategy (VERS) and the Strategic Partnerships with Industry-Research and Training (SPIRT)[4] in Australia; University of Pittsburgh project in the USA; University of British Columbia (UBC) project and the International Research on Permanent Authentic Records in Electronic Systems (InterPARES 1 and 2)[5] project in Canada are good examples of the most detailed and advanced projects for the management of electronic records in developed countries to address the challenges of managing electronic records. In identifying and developing sets of requirements for electronic recordkeeping, the research projects have placed emphasis on the following areas: networking and coordination among professionals and other stakeholders, establishing functional requirements, developing training programmes and addressing long-term preservation of electronic records.

However, in the ESARBICA region much focus as highlighted in the available literature has been limited to the impact of Information Communication Technologies (ICTs)[6] on recordkeeping without any clear

strategies on the practical solutions to the management of electronic records. In the ESARBICA region alone, a number of meetings[7] and conferences[8] have been held on the challenges of managing electronic records. In fact, a number of papers presented during the ESARBICA conference in Mozambique (2003) and Tanzania (2007) focused on the ICTs and recordkeeping practices; electronic mail management and generally electronic records management. These papers mainly focused on presenting findings of individual research activities.

Overview of the general literature on the challenges of managing electronic records

While it has emerged that the use of ICT has in some ways eased the work of archivists and records managers, dependence on it has at the same time created problems. As a result, professionals in this area have been preoccupied with debates on the challenges of managing electronic records and trying to find answers to how best they can use the technology, at the same time minimising problems associated with it. As has been widely discussed in the literature, examples of some of the problems associated with the impact of technology on recordkeeping that are still unresolved include: (a) technological obsolescence and long-term preservation; (b) concerns of authenticity and reliability, (c) accessibility and lack of privacy.

Technological obsolescence and long-term preservation

The use of ICT has without doubt changed the format of records from physical entities (paper records) to 'intangible things' (electronic records), (J. Hofman 1999). According to Hofman, this new format of records has necessitated rules and procedures to ensure their long-term preservation. Electronic records depend on technology and exist under software control and use of hardware. However, the rapid rate of technological change means that the hardware and the software have to be upgraded constantly to ensure continuing accessibility. As (Oz 1998: 21) has observed:

> A computer that is considered fast now will be an outdated machine in 18 months. A software that is considered innovative now will be surpassed by a better programme in two years.

In agreement with Oz, Bearman (1994:21), Shepherd (1994: 44) and the ICA (2005:57) posit that because of generations of software and hardware, the length of obsolescence is less than five years. Even if some may argue that there are new products which may offer a new solution, these would offer not more than five generations compatibility with earlier systems. The arguments in the literature seem to imply that electronic records, that can be accessed using one software programme now, may fail to be accessed in the future because the programme may be outdated and no new one is available on the market. This raises the need for constant migration[9] of records with continuing value across change in software, hardware and media to ensure that the records remain accessible for as long as they are needed.

It has been widely acknowledged in the literature available that the long-term preservation of electronic records is still problematic, and a number of writers have made attempts to offer possible approaches for the preservation of electronic records over time. A good example of one of these solutions includes emulation[10]; the strength of which Jeff Rothenberg has tried to demonstrate as a true solution to long-term preservation of electronic records (Rothenberg 1999). The author has however in his arguments failed to focus his argument on how this would be applied within the context of electronic records. While emulation may have been demonstrated to be a practical solution in some contexts (ICA 2005: 54) (for example in libraries and computing industries to prolong the life of legacy systems[11]), it still needs to be tested in the environment of electronic records. Further, emulation appears not to have been supported by any specific archival institution. This makes Rothenberg's argument weak in its model's application to electronic records. As such, his theoretical contribution is not as strong as it might be and perhaps the model needs a more convincing justification. As argued by Bearman (1999), Rothenberg has only shown his ignorance of the literature on the migration strategy and may encourage potentially dangerous wishful thinking. The strength of Rothenberg's argument, however, is that it has created a challenge for more research on how his proposed model might work or if indeed it has a future for the long-term preservation of electronic records.

Debates on long-term preservation of electronic records are continuing, and practical research projects in developed countries as summarised in the introductory section have investigated this issue in the hope of coming up with a lasting solution. Meanwhile, it would appear that data migration is a preferred approach, in spite of its limitations. This is because the approach is widely understood and supported by many archival institutions, many of whom have built experience on it. Without doubt, migration remains a popular preservation method among recordkeeping theorists and practitioners.

Concerns of records authenticity and reliability

The authenticity and reliability of electronic records are often questioned because of possible changes to content or structure. Authenticity can be defined as the ability of the records to be reliable over time and act as evidence of organisational transactions. Reliability on the other hand, refers to a record's authority and trustworthiness, and this is tied to the ability of a record to stand for a fact it is about (Hunter 2000: 34). A number of authors, among them Hofman (1996) and MacNeil (2000), have argued that that there are no guarantees of authenticity and reliability in the electronic environment, as records can be deleted or changed at any time. It is, therefore, important that electronic records are managed to ensure that they remain authentic and reliable as evidence. Perhaps in the paper environment, one can say that this is more straightforward, as records are physical objects, and this makes identification of their characteristics easier than it is in the virtual world.

The records provide evidence of actions, but the computer systems may fail to capture the necessary information about the context of the creation and the use of records. For example, in an e-mail system problems arise when e-mails are forwarded. This is because the e-mails may be edited as they are forwarded and in the process, their validity as records may be altered. Authorship of e-mails also poses a problem. It is possible that someone else may write a message under someone else's login (with or without their permission) (Skelton 2000: 62). This necessitates an examination of the aspects that ensure that records remain authentic in the electronic environment. Contributions by Hunter, Hofman and MacNeil in exploring ideas on the importance

of addressing challenges posed by electronic systems on the authenticity and reliability of electronic records are important in guiding future research. The available literature, however, indicates that requirements that ensure the creation of authentic and reliable records in the electronic environment have been developed. Ongoing research in this area by the University of British Columbia and its collaborators is a significant development. To ensure the authenticity of electronic records, organisations should implement and document policies and procedures that control the creation, receipt, transmission, and maintenance and disposition of records, and ensure that records are protected against unauthorised addition, deletion, alteration and use (ICA 2005: 5).

Access to electronic records and concerns of privacy

The use of computers has enabled organisations to create databases that now handle huge amounts of data on-line, which is made accessible remotely. This has raised concerns that if the information is not properly managed, it may be made available too easily, resulting in lack of protection for the citizen's individual rights. Further, the vast amount of information maintained about individuals by both government and private organisations threatens their privacy. Computers allow fast and inexpensive communication of information and the collection and storage of large amounts of data (Oz 1998: 10). At the same time, these capabilities allow individuals and organisations to access information. Freedom to access this information may lead to violation of privacy. All necessary measures such as use of passwords and appropriate legislation will have to be put into effect to ensure that the information is secure, because loose control and extended use raise concerns about the protection of the individual's rights to privacy.

Perhaps, from the legal point of view, one would be right to argue that privacy in the EU appears to be highly regarded. There are strict laws in Europe governing personal information, recognising the need to conform to privacy and other legal requirements. As observed by Shepherd and Yeo (2003: 10), many European countries have comprehensive data legislation. In particular, the Data Protection Act of 1998 in the UK protects personal data relating to individual persons. The data must be used only for fair and lawful purposes, be relevant

and adequate for those purposes and must be protected against unauthorised use. Electronic records pose a great challenge, and governments have to put in place mechanisms for security and access control to prevent potential abuse of electronic public record systems. These legislations are still lacking in many countries in the ESARBICA region.

The problems experienced in the management of electronic records will continue to grow as technology changes. As the arguments in this section have shown, these problems will require archivists and records managers to come up with new solutions to meet the immediate and future needs of managing electronic records. As developing countries and the ESARBICA region in particular undertake computerisation of essential archives and records management services, they will have to deal with these problems and challenges.

The general literature review on the challenges of managing electronic records seems focused only on developed countries, failing to take into consideration concerns in developing countries and how these could be assisted. The literature, however, provides a useful framework for critically reviewing the literature on the management of electronic records in developing countries, particularly in the ESARBICA region.

Overview of research activities in developing countries

Evidence shows that much research in developing countries is characterised by isolated research activities and lack of collaboration (Uzun 2002: 22). Several studies addressing the management of electronic records in developing countries have been published, though unfortunately, these have not provided appropriate solutions in the context of a developing country. The management of electronic records in most developing countries, where there is still a lack of professionals with skills to manage electronic records remains a challenge (ICA 2003). The vast majority of publications and other research activities on the management of electronic records have been from developed countries in the form of consultancy missions. For example, efforts by the International Records Management Trust (IRMT) have been aimed at assisting developing countries in improving paper-based recordkeeping systems in parallel or prior to the

establishment of electronic recordkeeping systems[12] IRMT projects in developing countries and ESARBICA in particular have helped establish integrated records management systems for controlling public sector records. As part of its future plans (2005-2010), the IRMT is planning to develop web-based training materials for professionals in eastern and southern Africa. This will include revising versions of existing manuals to take into account continuous changes in the electronic environment, developing new training modules in an e-learning format and developing case studies by staff and students of participating universities of east and southern Africa and archival institutions in the ESARBICA region.[13] African universities (University of Botswana, Moi University, Kenya and University of Witwatersrand, SA) are working with the IRMT and its network of UK professionals to develop the training materials. Annual working meetings have been held to plan and draft the modules. These modules will be piloted, formally introduced and upgraded as necessary.

The IRMT projects have been successful in bringing together a global network of institutions to tackle problems in the management of electronic records. Like the DLM-Forum, IRMT has placed emphasis on the need and importance of cooperation and partnerships in tackling the challenges of managing electronic records. This has helped in ensuring that public records are efficiently managed to ensure accountability, good governance and transparency. IRMT has remained in touch with practical realities in developing countries. It has been able to put in place the kind of foundation that will go a long way in helping countries in the southern African region to come up with policies, training programmes and other strategies for the management of electronic records.

In most countries in the developing region solutions to the management of electronic records could take longer as these countries appear to have no or limited information and technology architecture and no serious thought of the electronic recordkeeping aspects. Developments could take time in developing countries, as most are just starting to take up the challenges of computerisation and the management of electronic records. However, as Barry argues, that this is happening in an environment where it would appear most developing countries have been or are computerising inefficient manual recordkeeping systems (Barry 1997). In spite of the limitations

and challenges, developing countries cannot in any way escape the technological challenge. Barry's arguments are important, as they provide a succinct picture of the situation as it is in the developing world. It also advises on computerisation strategies that may offer learning experiences to developing countries and which would, in the process, help them avoid repeating mistakes that others elsewhere may have made. Further, Barry emphasises the need for careful planning before undertaking any project to avoid improperly implemented projects.

Without doubt, developing countries face huge challenges in managing electronic records yet few studies have been conducted on this. Experiences from developed countries, although useful in some context, may not be easily adaptable in the context of a developing country. As such, these may not be considered sufficient or appropriate records management solutions for developing nations. Even though the different countries in the region may have national and institutional differences, experiences from one country may be applicable in another, hence the need to cooperate and share information on common problems. This is because some of these countries have similar levels of development and some cultural similarities. Although the literature from developing countries it still scarce, there is evidence that it is growing and will continue to do so, as better programmes for managing records are found.

Developments in eastern and southern Africa

Very little literature has been published on the management of electronic records in the eastern and southern African region. As rightly observed by Anne Thurston, there has been a dearth of professional literature in Africa as a whole (Thurston 1996: 188). In the ESARBICA region, a few archivists and records managers have written individual papers on the concerns of computerisation in archives and record-keeping. These papers, however, have neither adequately addressed the challenges of managing electronic records, nor suggested practical solutions for managing such records. Moreover, many do not specifically address the issues in the context of an African environment. The limited literature in the region may be a result of the slow pace of computerisation in government agencies in the region. In fact it has been observed that the change process in electronic communications

has been very slow in Africa (Cook 2000: 39). This may also be a result of low turnout of literature from those concerned, due to the high costs of conference participation. Research needs resources which are not always as abundant in developing contexts as they are in developed ones.

Unlike literature from the developed countries which is systematic and focused on various key issues in management of electronic records, literature from the ESARBICA region is varied, general and unsystematic. In other words, there are no clear themes on the management of electronic records that could be derived. The focus of this section will not be thematic but will cover the various general concerns on the challenges of managing electronic records in the ESARBICA region.

Concerns and challenges of computerisation in recordkeeping

The ESARBICA conference, held in Botswana in 1991, marked an important development in the archives and records management profession in the region. Bringing together professionals from a wide range of disciplines, the conference for the first time seriously addressed the challenges of the new information technologies to the archives profession in the region. Taking into account Africa's internal problems, worries and its context of underdevelopment, a number of presentations focused on the need for archivists to change and keep abreast with the advances in science and technology.

During the conference, Peter Mazikana briefly highlighted the problems that ESARBICA faced and singled out difficulties in handling information technology. He posited that, although the technology has made an impact on the archives profession, the profession's mandate remains largely unaltered, (Mazikana 1991: 175-177). In detail, Mazikana raised the concerns and frustrations of coping with new developments and the serious worry that not much has been done in the region to face the challenge of involvement in the management of records in government agencies. The issues discussed in his presentation continue to be debated in regional conferences in the region held every two years since 1969, but no practical solutions have as yet been suggested. The article is, therefore, important in raising

awareness of the need to take the necessary measures to deal with the impact of the new technologies on the profession.

It has become clear from the literature that many different departments, especially in government, are computerising their processes without a clear idea of which hardware and software to use. However, a detailed analysis of the existing systems should be made first to be able to identify the best computerisation options (Moahi 1991: 182-186). Moahi's contribution is important in providing the necessary logistics of a computerisation programme, which can help archival institutions and records management units that are in the process of computerising their services. Kemoni, Wamukuya and Kiplang'at (2003: 41) have in fact summarised the technical problems facing the region as: non-utilisation of information technology, difficulties in identifying appropriate hardware and software together with costs of purchasing these, inadequate training in use of information technology, and protection of data from unauthorised access.

In an article on automation and digitisation of archives and libraries, Mutiti provided an overview in which she argued that the great advances made in the use of information technology have changed the way information is stored and retrieved (Mutiti 2002). The article further argues that this has brought challenges, especially of managing information, regardless of media. The article starts by giving definitions, benefits and uses of automation and digitisation and in doing this, takes a general approach. It further makes reference to a general assessment on the use of the technological infrastructure and needs in the ESARBICA region that the author made in her 2002 survey. The article is very general in approach and fails to focus on developmental issues in the region. Even though the article makes an attempt to identify major problems of automation and digitisation, it does not discuss this in the context of the region.

Masisi Lekaukau, perhaps one of the pioneers of the archival profession in the ESARBICA region, has shared her personal experiences in an article entitled "Serving the administrator: the archivist in the new millennium" (Lekaukau 2000: 119-123). Based on the rich ideas stemming from the author's experience over 20 years as a government archivist, the article argues that technological developments have allowed information to move rapidly across the globe enabling

easy access. Consequently, the author cautions the profession to be wary of the effect that this challenge may pose to the profession and emphasises the need for archivists and records managers to take the necessary measures to ensure that information is secure. It is, however, gratifying to note that all the reviewed articles seem concerned with the same problem and seem to be aware of the risks and challenges. Lekaukau (2000) argues that whatever solutions are provided, archivists and records managers have to bear in mind the fact that administrators want to be assured that the records, regardless of their format, will always be made available when needed for decision-making and accountability. Interestingly, she looks back at past developments and challenges and calls upon archivists to change their approach, and develop new skills and appropriate tools for the management of records in the electronic environment.

The *ESARBICA Journal* Volume 21 of 2002 is an important contribution to the management of electronic records in the region. The journal focuses on a wide range of issues that are of concern to the region including the management of electronic records. Although the whole edition of the journal is important, only three articles by Ndiyoi Mutiti, Richard Wato and Segomotso Keakopa, directly tackle the management of electronic records. These articles have revealed that the region, while well aware of the need to manage electronic records, has only dealt with the issue theoretically.

In her article, Mutiti used a survey method in 2002 to investigate computerisation projects in the ESABICA region. From the results of this survey, she reported that, despite the use of information technologies in government administration, very few institutions have initiated programmes for the management of electronic records, (Mutiti 2002: 117). As a result of this, little attention has been paid to the management of electronic records. In a brief overview, she made reference to technological infrastructure, software applications, and electronic records deposits which, she posited differ from country to country. The same observation has been made by Mazikana. In pointing the way forward, Mutiti touched on training, broadening of job descriptions to include programmes for the management of electronic records and strengthening of archival legislation. Mutiti's (2002) article is brief and only provides a simple report of computerisation activities. It lacks some detail on practical solutions for the manage-

ment of electronic records in the region. Notwithstanding this limitation, the article should be seen as an important foundation for critical research in the management of electronic records in the region.

Keakopa (2002: 23) reviewed computerisation of records management systems in the ESARBICA region. Commenting on developments in the region, since the formation of ESARBICA in 1969, she argued that regional conferences and meetings held since this period have remained focused on concerns that have mounted from the independence period. Much focus in the region, she asserted, is still on the management of paper records and traditional archival practices. The article also reflected on projects like the Umgeni Water project started in the 1990s in South Africa, which aimed at re-designing and decentralising records systems. The author gave a brief overview of efforts in developed countries such as Australia and the United States of America (USA) which have made tremendous progress in defining requirements for the management of electronic records. The article raises ethical issues which, it is argued, have complicated practices in the profession. Although the study raises a number of questions arising as a result of ethical issues, it does not offer any answers to them. It only calls for further research in the area of electronic records in the region.

Richard Wato's article, on the other hand, examined the challenges and opportunities of information technology in the general archival practices in the 21st century. The study explored general issues such as data capture, technological obsolescence, and security of electronic data which are of obvious nature in electronic records management research (Wato 2002: 125-134). The study, however, did not specifically address these issues in the context of ESARBICA.

General strategies for management of electronic records

Wamukoya (1995: 16) has argued that even though there have been dramatic changes in the economic, social and political histories of African countries, records have remained a neglected resource in this part of the world. According to Wamukoya (1995), records are important and, as such, programmes have to be put in place for their management throughout their life. In reviewing the position of records management in Africa in the 1990s, Wamukoya (1995) observed that

while some governments in the region had begun to appreciate the benefits of records management, some were still struggling to manage all phases of the life-cycle of records. With a more particular focus on electronic records, the author posited that there were then no policies, standards or procedures developed to regulate the management of electronic media. Although Wamukoya (1995) argued that there is need for an approach to address the management of information resources in Africa, he does not make any suggestion on the kind of approach he envisaged. In support of the need for policies and procedures, he argued that electronic records can no longer be equated with written documents and that the term 'record' thus embraces many forms of recorded information that include electronic records. Wamukoya seems to confirm the findings of the data collected by the author of this article in her research in Botswana and Namibia in 2003 and 2004 that the present legislation should cover electronic records, as they also form part of records. Wamukoya also briefly made mention of the problems associated with the long-term preservation of electronic records.

In a separate article, Wamukoya examined the implications and challenges in managing public sector records as evidence. In doing this, he briefly looked at the impact of technology on recordkeeping and its relationship to records (Wamukoya 2000: 28-29). He argued that archivists and records managers in the ESARBICA region tend to perceive the profession only in terms of paper records. This, as he has observed, is because they have been accustomed to the management of paper records, as this has been the main storage medium. This trend, however, is changing as more records are now generated electronically. The article is an important contribution to the literature in the region because it does not only caution about the need to change and tackle the management of electronic records, but provides ideas on how this might be done. For example, Wamukoya advises on the need for updated legislation to cover electronic records, on the re-positioning of archival institutions for a new role, on the provision of training and on the need to share experiences in the region. Some of the questions that he poses in the article still have to be answered and it appears the literature in the region has failed to adequately address the issues. Expressing his concerns, (Wamukoya 2000: 30) has asked:

> Who creates and who takes responsibility for capturing and filing the electronic records; what procedures and standards need to be observed to ensure that information in electronic media is accurate, complete, reliable and authentic; and what conditions need to be provided for electronic records to be admissible in a court of law?

It would appear that for as long as archivists and records managers in the region are not in a position to undertake their own research to provide the necessary answers to these questions, they will have to depend on solutions that have been provided elsewhere in the world. The solutions will, however, have to be used modified to suit the specific needs of the region.

Agreeing with Wamukoya's sentiments, Thurston (1996: 187) has argued that the changes in Africa have brought with them perspectives of global significance. According to Thurston (1996), the main problem that archivists and records managers have is limited communication between African professionals and active vocal professionals elsewhere in the world, and even among African professionals themselves. This has been an impediment to the profession in the continent and what this implies is that serious research in the management of electronic records in Africa has been neglected or ignored. In her 1996 review of records management initiatives in Africa, Thurston highlighted two of the most important developments, which she argued had impacted positively on records management. First were reforms in the public sector, which were important requisites for good governance and second was the realisation of the importance of computerisation in public administration. Thurston's contribution is important as it highlights development of computerisation efforts and some of the problems that have hindered such developments. Although the contribution is limited to the problems faced and the need to ensure that the computerised systems do not collapse once put in place, it is important in highlighting the need to take up the most important challenge of managing electronic records in Africa, which she argues could be done through capacity building.

Surveys of computerisation efforts at national and regional levels

A survey by Barata, Jochen Kutzner and Wamukoya (2001: 34-42) focuses on ICT development and how governments in the sub-Saharan region have responded to computerisation efforts. The resultant article starts with a general overview of ICT development in the region, further relating computerisation to recordkeeping. It then focuses on electronic recordkeeping in the Namibian government. In the overview, the authors argue that, while computerisation has led to changes in organisational strategies and operations, many developing countries still lack the necessary resources to integrate the management of paper and electronic systems. Consequently, they argue that ongoing research has to produce methodologies accessible and affordable to developing nations. The authors seem to agree with Thurston as they state that professionals need to be engaged in global discussions with an aim to find solutions on how best they could capture, manage and preserve computerised information over time. Although the article raises interesting issues on the management of electronic records the authors deliberately chose not to offer advice on how the challenges could be tackled. This appears to be a serious weakness because for the article to prompt a discussion, it should offer some kind of solution which could then be counter-balanced by other professionals.

Another contribution by Barata *at el*., (2001) which focuses on the management of financial records as a strategic resource in Namibia, has been an important contribution to the literature on the management of electronic records in the region. After investigating both the computerised and paper-based systems, the authors concluded that there were inadequacies in structural and recordkeeping systems in the management of financial records, though there were areas of strengths reported in some departments. A similar situation is found in most countries in the region, especially in Botswana and South Africa. The authors highlighted some of the problems, which they thought were responsible for poor records management practices in the country. Although the report had envisaged that the National Archives of Namibia would in 2005 be able to develop the capacity to appraise and advice on the management of electronic records in government agencies, this does not appear to have happened, as

reported in Keakopa's (2006) research findings. Their survey report has, however, come up with a number of important recommendations on a strategy that the government of Namibia might employ in its effort to manage financial records. It would, however, appear that as of 2006, these recommendations had not been taken on board. Although the report is valuable and contains important case studies, it would have been even more useful if insights on classes of records other than financial, had been provided. The contribution therefore, is limited in scope as it focuses only on financial records. Notwithstanding this limitation, the report forms an important contribution to the literature in the region. It has also made a breakthrough in investigating some of the recordkeeping practices in Namibia. It should be borne in mind that, until now, the state of all records, regardless of subject classification, has been unsatisfactory in the region.

Some of the articles on computerisation in the region tend to be limited to national efforts and as such lack a regional focus. As Thurston (1996: 188) has observed, although African professionals are aware of international developments, they tend to operate in the context of their own national realities, which explains the focus of the literature on individual national efforts. For example, Ombati (1994) focuses on an update of the status of computerisation in Kenya. The article raises problems faced in computerisation projects, and argues for the need to provide training, acquire more equipment and training of users (Ombati 1994). These problems are not unique to Kenya, as they appear to be widespread in the African continent. It is, however, encouraging to note that computerisation of finding aids at the Kenya National Archives is continuing and that more items have been entered in the database since 1999. According to Ombati, the Archives is expected to acquire more IT equipment which would go a long way in making the institution computerised.

Further, Mnjama (2003) has looked at the problems and prospects of archives and records management in Kenya in 2003, briefly making a review of electronic records. He argues that the Kenya National Archives Act's definition of public records implies that "all" electronic records are also public records and should be treated as such (Mnjama 2003). This definition would imply that privately held electronic records are also public records, a fact that will be difficult to sustain. Furthermore, Mnjama argues that although electronic records are

generated in large quantities, no programmes have been designed to manage the challenges they pose, such as their preservation and legal status. In his argument, Mnjama only reports on the negative impact of the new technologies on records management and seems not to appreciate the many opportunities that have come with the new technological developments.

With a more regional focus, Mnjama assessed the role and progress of ESARBICA in the new millennium. He cautioned that the electronic age had caught up with archival institutions and that there was a need to make efforts to manage electronic records (Mnjama 1999). Most important, however, the author suggested cooperation, networking and setting up of computerisation committees. Although this sounds like a good approach, there is no evidence that such committees have ever been set up or a follow up made on computerisation projects where they exist.

In a study which looks at the perspectives of the National Archives of Zambia in the new millennium, Mutiti noted that, having cleared the backlog of paper records, the National Archives was moving towards making use of the new technologies in the management of archives (Mutiti 1999:14). This according to Mutiti (1999), would involve a pilot project on utilisation of on-line facilities, provision of information services on the Internet through use of web-sites and creation of electronic repositories. It is, however, not clear if this was also to involve the management of 'current' and 'semi-current' records. The introduction of the use of information technology (IT) was, however, expected to facilitate access and use of available information.

In an article on 'Taking archives to the people: the web-enablement of the National Automated Archival Information Retrieval System (NAAIRS)', Rudzani Mkwarela argues that South Africa has made a major advance by utilising information technology in its outreach programme, by designing and implementing the most comprehensive on-line archival information retrieval system launched in 2001 (Makwarela 2002). Makwarela starts by tracing the background to the NAAIRS project, and argues that the project is part of the National Archives mandate to maintain a national automated archival information retrieval system. In addition, Makwarela focuses on the conceptualisation and design of the project, arguing that the user interface is

user-friendly and that the web-site has extensive explanatory information regarding use of the retrieval system. Makwarela further argues that the project has been a technological breakthrough for the National Archives as it has enabled all Internet users, whether they be research institutions, schools, community centres or homes, to have access to and be able to retrieve of archival information. This, he argues, facilitates the objectives envisaged by the Promotion of Access to Information Act in the country. Makwarela's article is an important contribution to the literature on the management of electronic records in Africa, as it discusses a project that can be seen as a major technological development in the archives profession in Africa.

Further, Verne Harris has put forward an argument on the form of a record, its legal status, and how this has been impacted on by electronic systems. Harris's argument rightly points out that governments in the region are creating records in both paper and electronic formats without any recordkeeping requirements in place to ensure the efficient management of such records. In addition to giving problems that are brought about by the legal status of records, he suggests a strategy to help cope with this (Harris 1999/2000: 3-4). Although the author explores the issue in general terms, drawing on examples from the international scene, possibilities that could provide working suggestions to the management of electronic records, he does not adequately provide details of how these could be realised in the context of ESARBICA. In addition, Pino Akotia, in discussing the management of public financial records in Ghana and the Gambia, has argued that electronic records should be recognised as legal evidence. This as he argued is in view of the fact that computerised audit records support the governance process (Akotia 2000: 167-175). The study, however, tackles one of the most important issues of electronic evidence, which has to be taken into account in any system designed to manage electronic records.

Patrick Ngulube who has particular interest in the preservation of Africa's cultural heritage, posits that the new technologies are a challenge to preservation issues in sub-Saharan Africa. The author in a number of his articles on preservation and other issues has noted that there is a need for digitisation and management of electronic records. He suggests that reformatting and digitisation of manual

records, even though costly, offer appropriate solutions (Ngulube 2002:70). He argues for the need to put in place relevant technological infrastructure. Although the author does not specifically address the management of electronic records, he provides details on the advantages and disadvantages of digitisation, and argues that at least in the region this has been confined to finding aids rather than actual archival materials.[14] The region still needs to do more in the areas of digital preservation and other electronic data formats. The author also provides a detailed list of very useful references.

Summary of the literature and way forward

The reviewed literature in the eastern and southern African region has not produced a single detailed study on the management of electronic records. Although the literature indicates that there is some evidence of interesting and informative research on the management of electronic records by some countries and individuals in the region, the contributions do not provide appropriate solutions. However limited, this literature has reflected on some of the challenges, as well as difficulties, associated with the management of electronic records. What has been written so far is an important contribution for laying the foundation and directing future research. The region still needs to come up with strategies and practical tools to help design, support and implement recordkeeping systems, hence the need for more robust and detailed studies.

ESARBICA conferences and meetings have, without doubt, created a stable platform for presentations, discussions and development of approaches and solutions to the challenges of managing electronic records. However, it is worrying most of the resolutions of the conferences have not been implemented. Among several strategies for the way forward the following are proposed:

1. The need to launch an ESARBICA web-site for continuing networking and cooperation among members. This is possible as in Europe the DLM-Forum web-site has been launched to update members on DLM activities, including new case studies on the best ways of addressing the challenges of managing electronic records (Tyacke 2006).

2. Efforts in the developed countries have shown that cooperative relationships are important in accelerating the capacity to develop programmes for the management of electronic records. Projects by the IRMT in developing electronic records management training modules should provide a useful guide to developing countries including those in the ESARBICA region for teaching to practitioners. It is hoped that these training materials, once published, will make a contribution by changing perspectives and ensuring a new role for archivists and records managers.

3. At the SADC level, a task force should be formed to develop specifications for the management of electronic records. These specifications should be generic and should enable any organisation public or private to introduce electronic records management systems or assess the capability of such systems where they are currently in place. This will provide requirements for record capture, classification schemes, searching and retrieval, authorised access, audit trails, authenticity, retention and disposal and administrative functions. Because of the continuous and rapid technological changes, there should be ongoing efforts to revise and update any requirements developed.

4. At the national level task forces of professionals including academics, ICT industry and the archives and records professionals should be formed to chart out technical, procedural and policy issues regarding the management of electronic records, including email management.

5. More analytical review of archives and electronic records management practices in ESARBICA as the basis for creating models for the application of ICTs in archives administration and records management.

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Endnotes

1. Some of these authors include: David Bearman, Terry Cook, Michael Cook, Richard Cox, Terry Eastwood, Luciana Duranti, Hans Hofman, Gregory S Hunter, John McDonald Sue McKemmish, Frank Upward, Wallace Saffady, Patricia Wallace, Wendy Duff, Geoffrey Yeo, Elizabeth Shepherd, Verne Harris, Piers Cain, Shadrack Katuu and Alistair Tough.
2. The DLM-Forum was first conceived in 1994 following a report from the group of experts set by the European Commission to examine possibilities of coordination of archives policy and practice within the European community. It is a multi-disciplinary meeting of archivists, record creators, administrators, Industrialists and researchers with a view to fostering cooperation in the field of electronic records
3. The EROS and NDAD projects were to provide advice and guidance to records managers across central government and to secure the preservation of, and provision of access to electronic records.
4. The VERS and SPIRT projects have been aimed at developing a framework to support business, social and cultural needs for the creation and management of electronic records in a networked environment; making records accessible and sustaining environments in which electronic records can continue to function over time as evidence for governance and accountability.
5. The Pittsburgh, UBC and InterPARES projects have developed frameworks for creating metadata sets for use in domain-specific recordkeeping systems and identified the best methods and requirements for creating, handling and preserving the reliability and authenticity of electronic records during their active and semi-active life.
6. Information communication technology is generally defined as the technology that is used for accessing, gathering, manipulating and presenting or communicating information. The technology could include hardware (e.g. computers and other devices); software applications; and connectivity (e.g. access to

the Internet, local networking infrastructure, and video-conferencing.

7. A good example of such a meeting is the Data Integrity and Recordkeeping in the Digital Environments organised by the IRMT in South Africa in 2008. The meetings brought together senior government officials, Directors of National Archival Institutions to explore requirements for building reliable evidence in the electronic environment.
8. Examples of the conferences include the ESARBICA regional conferences held every two years to facilitate new strategies and approaches to recordkeeping in the electronic environment.
9. ISO 15489 defines migration as an act of moving records from one system to another, while maintaining the record's authenticity, integrity, reliability and usability.
10. Emulation refers to emulating obsolete systems on future unknown computer platforms in order to make it possible to retrieve, display and use digital documents in their original software.
11. A legacy system is used here as a technical term to refer to a computer system that has been superseded by technology and is replaced by a new generation.
12. A number of publications resulting from the consultancy work and research projects are available on the IRMT's website at http://www.irmt.org/download/documents.html#ebgp
13. P Van Garderen, 'Evidence-Based Governance in Electronic-Age: records management capacity framework', May 2003 Progress report, p 3. The unpublished report was presented to the author of this thesis during a visit to the IRMT offices on 19 May 2004.
14. Digitisation has been limited in scope, only for significant projects, except maybe in South Africa where the DISA project has made an effort to digitise as many collections as possible.