

## Archives Facelift: an Aeon of Transformation

*MAJELLA MARJORIE TAN MARQUEZ*

Deputy Director II, The Sabah State Archives, Chief Minister's Department, Km 4, Penampang Road, Locked Bag 2017, 88999, Kota Kinabalu, Sabah, MALAYSIA  
e-mail: majella.marquez@sabah.gov.my

### Archives Facelift: an Aeon Of Transformation

#### *ABSTRACT*

To be in line with this year's theme, this article entitled Archives Facelift: An Aeon of Transformation is divided into three parts. Part One introduces briefly in a nutshell the role of the archives and the occurrence of media in various forms since the 19th Century and how (re)searchers of various disciplines were formed to deal with contemporary issues pertaining to the authenticity, copyright, appraisal and preservation of electronic records and technological obsolescence of the hardware and software needed to retrieve information. Part Two provides an overview of the development of Sabah records dated since 19th Century and went on to elucidate the role of the State Archives in preserving paper records, audio-visual records and digital records. In conclusion of Part Three, it enumerates recommendation for innovation in an age of change.

### Il lifting degli archivi: un eone di trasformazione

#### *SINTESI*

Per essere in linea con il tema di quest'anno, questo articolo intitolato Il lifting degli archivi: un eone di trasformazione è diviso in tre parti. La parte prima introduce brevemente il ruolo degli archivi e l'occorrenza dei media in varie forme a partire dal XIX secolo e come i (ri)cercatori di varie discipline si formavano per trattare le problematiche contemporanee legate all'autenticità, al diritto d'autore, alla valutazione ed alla conservazione dei documenti digitali ed all'obsolescenza tecnologica del hardware e del software necessario al reperimento dell'informazione. La parte seconda fornisce uno sguardo generale sullo sviluppo dei documenti dello stato di Sabah datati a partire dal secolo XIX e continua chiarendo il ruolo dell'Archivio di Stato nella conservazione di documenti cartacei, audiovisivi e digitali. Per concludere, la parte terza enumera dei suggerimenti per l'innovazione in un'epoca di cambiamento.

### Preobrazba arhivov: obdobje sprememb

#### *IZVLEČEK*

V skladu z letošnjo temo je pričujoči članek razdeljen na tri dele. Prvi del najprej na kratko predstavlja vlogo arhivov in pojav različnih oblik medijev v 19. stoletju. Nato se posveča vprašanju, kako so se oblikovali in izobraževali raziskovalci različnih disciplin, da so bili usposobljeni za reševanje aktualna vprašanj, ki se nanašajo na avtentičnost, avtorske pravice, valorizacijo in ohranjanje elektronskih zapisov in tehnološko zastarelost strojne in programske opreme, ki je potrebna za iskanje in pridobivanje informacij. Drugi del vsebuje pregled razvoja gradiva »Sabah« od 19. stoletja dalje in opis vloge Državnega arhiva pri ohranjanju papirnatega gradiva, avdiovizualnih in digitalnih zapisov. V tretjem delu pa navaja priporočil, ki bi jih kazalo upoštevati v času sprememb.

### Pembaharuan Arkib: Menuju Era Transformasi

#### *ABSTRAK*

Selaras dengan tema pada tahun ini, artikel ini yang bertajuk Pembaharuan Arkib: Menuju Era Transformasi dibahagikan kepada tiga bahagian. Bahagian Pertama memperkenalkan secara ringkas peranan arkib dan kewujudan media dalam pelbagai jenis bentuk sejak abad 19 dan pembentukan penyelidik dalam pelbagai bidang untuk mengatasi isu-isu semasa tentang ketulenan, hak cipta, penilaian dan pemeliharaan rekod-rekod elektronik dan keusangan perkakasan dan perisian teknologi untuk mendapatkan kembali informasi yang diperlukan. Bahagian Dua memberi gambaran tentang perkembangan pewujudan rekod sejak abad 19 dan seterusnya memberi penerangan tentang pemeliharaan rekod kertas, rekod audio-visual dan rekod elektronik di Arkib Negeri Sabah. Akhirnya Bahagian Tiga, menyenaraikan rekomendasi inovasi dalam era transformasi.

## INTRODUCTION

It is an evident phenomenon that majority of the Archival institutions all over the world, possess threads full of valuable and irreplaceable historical contents constituting its respective country's identity and heritage. For centuries, most of this historical and evidential information are recorded in paper and parchment based medium. It is maintained in their original form focusing on the application of archival science disciplines. The longevity of these paper based textual records has gradually been uplifted to ascertain continued long term access.

However, with the advent of information and communication technology in the early 20th Century, information appeared in new forms of medium other than paper- in films, microfilms, microfiche, video tapes, sound recordings, magnetic tapes, floppy disks and digital records (CDs and DVDs). This new media devices along with the computerized and digital technology revolution has shown an exponential growth in distributed information. This has enabled the proliferation and wide-spread development of electronic records around the world - in the public and private sectors and individuals as well. The de facto record has indeed become electronic.

The application of these changing technologies have impacted dramatic changes and new approaches to the way records management is implemented and to the technology used to manage them. The focus of records life cycle or paper records continuum management has eventually shifted boundaries from the management of physical record to the creation of record-keeping strategies and processes for the life cycle management of records within an electronic information system. (IRMT). This requires a new infrastructure that enables the handling, processing, maintenance and preservation of electronic records including digital formats. How do these new systems that have generated various and new dilemmas integrate into records management and archival preservation disciplines?

Recognizing this new realities due to unavoidable trends of globalization, many imperative needs and challenges especially related to the authenticity, appraisal and preservation of electronic records including overcoming technological obsolescence of hardware and software, has emerged and needs to be confronted and dealt with. The seriousness of these issues has met with an avant-garde recognition in several international research projects.

Various international research team of varied disciplinary perspectives amongst them comprising the UNESCO, the International Council on Archives(ICA) Committee on Archival Legal Matters and Committee on Electronic Records, the International Research on Permanent Authentic Records in Electronic Systems (InterPARES)Project team headed and directed by Dr Luciana Duranti and the International Records Management Trust (IRMT) team headed by the founder of the Trust, Dr. Anne Thurston have forged alliances in addressing these international contemporary issues.

Through these innovative moves, most of the archival institutions especially the Sabah State Archives has taken another leap to delve deeper into this trivial issues refocusing its role, development and future taking into account the international research findings of the above teams. A very demanding and an enhanced role for the archives and archivists in preserving the nation's heritage in an aeon of transformation.

## THE STATE ARCHIVES IN KALEIDOSCOPE

### Background of Sabah Records

According to *Datuk James P. Ongkili*<sup>1</sup>, little was recorded on Sabah's history from the beginning until the 19<sup>th</sup> Century. There was no community, no overall administration, no state economy, no state government; only mountains, jungles, rivers, the surrounding seas, and isolated villages scattered in the interior plains and the fertile hinterlands, at the river mouths and the coastal areas. The villages were the early inhabitants and pioneered atrocities to defend their rights and security of over more than 29,000 square miles of equatorial land.

How events were recorded at that spur moment of time or whether it has ever been recorded in

1. Datuk James P. Ongkili was Sabah's Deputy Chief Minister and Minister of Industrial Development during the BERJAYA government, 1976-1983.

whatever form of media is questionable and indeed an interested search topic to undertake. It is however assumed that the usage of paper medium was introduced in 1870s and even grew rapidly when the British gained foothold on Sabah from 1881 until Sabah gained its independence on 31<sup>st</sup> August 1963. However between 1<sup>st</sup> January 1942 to 1946, the Imperial Japanese Army invaded and occupied Sabah.

After the Imperial Japanese Army surrendered in 1946, Sabah was placed under the British Military Administration for a brief interim period. In mid 1946, the Secretariat in Sandakan was transferred to Jesselton. L.W. John Jones<sup>2</sup>, said that being the first civilian official to reach Sandakan after the war, "To anyone, who, like me, actually saw Sandakan then, it is only surprising that anything at all in the Secretariat building survived"<sup>3</sup>.

Vun Hon Kyong<sup>4</sup> however, went on to mention that Sandakan, the seat of government then, had become a complete wreck after the bombing of the Allies. The Secretariat was left in a mess. It was bombed and the records were affected. Official files and documents had been left standing in the heat and the rain. Seventy-five per cent were damaged beyond redemption. Many of the papers were stuck together. A lot of records could have been salvaged but the governments primary concern was to get the administrative machinery going again. Eventually what remained were some despatches, British North Borneo Heralds, Gazettes and files which was shipped and stored at the Jesselton secretariat building<sup>5</sup> in accordance to Brigadier General C.F.C. Macaskie's directive to search, acquire and preserve North Borneo archives including those of Brunei and Sarawak records. Hardly any records of the Imperial Japanese Army were found nor transferred to the State Archives. It may probably be preserved at the Nippon National Archives.

On 22<sup>nd</sup> November 1957, the Chief Secretary issued a circular to all Residents, Heads of Departments, District and Assistant District Officers informing the appointment of a training officer to undertake the task of compiling central archives in the Secretariat and assisting in the planning of departmental archives. Coupled to this, pre-war records were required to be transferred directly to the North Borneo Central Archives (NBCA), Secretariat. L.W. John-Jones was the then training officer and Vun Hon Kyong was his assistant. Restoration, cataloguing and indexing of the pre-war paper based records were their priorities until 16<sup>th</sup> September 1963 when Sabah joined with Sarawak and Peninsula Malaya to form Malaysia. The training officer left for England and no one was appointed to take over archival duties. Only a part-time staff continued the cataloguing and indexing work.

In 1966, the NBCA was placed under the care of the Sabah Museum. Permission to gain access to the Archives for research purposes could only be granted by the State Secretary then. Acquisition and transfer of records to NBCA came to a standstill until 1979. As a consequence, burgeoning of government records of historical value throughout the rural and urban areas of the State of Sabah suffered a setback in the care, preservation and storage. As a result records were mismanaged to the extent of being attacked by fire, floods, rain, termites, pests and rodents and human error.

To further strengthen the government's determination in preserving public records and archives, the Sabah State Archives Department was established on 18<sup>th</sup> July 1979 under the aegis of the Chief Minister's Department. In August 1980, the State Archives Enactment was enacted and was subsequently gazetted on 1<sup>st</sup> January 1985.

Five significant sections-Records Management Section, Acquisition Section, Archives(History) Section, Conservation Section (including Microfilm and Reprography Unit) and Administration Sec-

2. L.W. John Jones served the Chartered Company for two years before the Japanese invasion. He initiated the purchase of old books on British Borneo for the Secretariat Library in 1955. In 1957, he was entrusted to manage the North Borneo Central Archives (NBCA). His publications on Demography 1951, 1960 and 1966, and an article on the "Murut Problem", 1967 are available in the Sabah Society Journals.

3. *Sabah Society Journal*, 9(1989), p. 123.

4. Vun Hon Kyong joined the civil service in 1929 and retired in 1983. He has served during the British North Borneo Chartered Company (1929-1941), the Japanese Occupation (1942-1946), the British Military Administration (1946), the British Crown Colony administration (1946-1963) and Sabah Alliance Government (1963-1967), USNO-SCA Government (1967-1976), BERJAYA (1976-1983). *Your Obedient Servant, The Civil Service Viewed From Various Perspectives*, Kota Kinabalu 1990, pp. 135-145.

5. *Ibid.* pp. 135-145.

tion was set up under the new State Archives organization structure to facilitate records management and archives administration. Recruited staff were sent to the National Archives, Malaysia, for attachment training from 1981 onwards.

Up to 1987, records management and archives activities including records appraisal and oral documentation was initiated. Records from private sectors and individuals were either received or acquired. The State Archives has also sought to acquire either by purchase or donation on archival records pertaining to Sabah's early history and development. The State Archives has successfully acquired and transferred a total of 1,046.08 metres of files<sup>6</sup>, publications, photographs, cassette tapes, microfilms, films from various ministries, departments, statutory agencies in urban and rural areas to the Archives, an activity which has been neglected for the past 23 years. Pre-war records stored at the NBCA were also transferred to the State Archives building although the infrastructure was initially catered for Sabah Museum.

In 1984, the State Archives merged with the Sabah Museum and became known as the Department of Sabah Museum and State Archives under the umbrella of the Ministry of Culture, Youth and Sports. The Keeper of Archives, a former museum officer, became the director of the department. The deputy was in-charge of the State Archives. Certain functions including a handful of archival staff were centralized at the Museum. As a result, it has impacted and hindered the progress and target achievement of the State Archives.

In 2000, the State Archives reputedly known for its chequered history finally separated from the Sabah Museum and returned under the wings of the Chief Minister's Department. Increasing manpower involving specialization in inter-disciplinary fields of records management and archives administration, chemistry and conservation science is essential in ascertaining the stability and strength of endangered archival records. Up to date, the State Archives has achieved this quest with only two state archives officers in Sabah obtaining masters degree in records management and archives administration from the University College London. Despite the constraint, the State Archives is coping with the escalated demand from the public and private sectors and individuals.

In 2007, the State Archives Enactment 1980 was repealed to pave way for a more succinct Enactment known as the Sabah State Records and Archives Enactment 2007. The kernel of the Enactment provides a better coverage on the preservation of records at the creation stage ensuring records of national, historical and evidential value are not neglected or otherwise ignored or destroyed at the earlier phases of its life-cycle. The director's role and function was increased from 8 to 25 duties, the role of public offices in the management and protection classified and unclassified state records along with the identification and establishment of places of storage, access, custody control, security and preservation of public records and archives is emphasized. Stricter penalties for the destruction and export of public records and archives is enforced.

### **Preservation of Sabah Records**

At present, there are three forms of medium that the State Archives has been entrusted to maintained for long term preservation of paper and electronic records(audio-visual and digital) per se.

#### **Paper Records**

Majority of the early records preserved at the State Archives dates back from 17<sup>th</sup> Century onwards pertaining to the administrative development of Sabah from 1881 till the present. These voluminous records are in acid paper based textual form which has very low aging resistance and thus potentially reliable to self-degradation process of which I tend to fully agree with Dr. Jozef Hanus<sup>7</sup>. When acidic paper undergoes into the process of self-degradation, the obvious factor is that paper turns yellow to brown which eventually becomes brittle. Brown spots are often found on paper too. Poor indoor quality environment may also serve as one of the contributing factor as it requires vigilant and proper monitoring and evaluation of air quality.

6. Michael CHONG, Stella MOO-TAN, Joanna KITINGAN-KISSEY, *Development of Museum and Archives in Sabah, 1963-1988*, p 352. [Sabah 25 Years Later 1963-1988](#)

7. Dr. Jozef Hanus, a certified chemical engineer, is presently the Director of Department of Archives, Ministry of Interior of the Slovak Republic.

Dr. Jozef Hanus went on to stress that the biggest problem encountered in the preservation of archives are mainly caused by the production of modern papers from 2<sup>nd</sup> half of the 19<sup>th</sup> Century up to the recent years. The new technology of paper making introduced in 1850, involved paper formation in an acidic environment and wood pulp remained the dominant raw material replacing handwoven paper. The degradation of ligno-cellulosic found in paper records posed a dilemma as a result the presence of acid prevails limiting the life span of paper. Paper records may be deacidified by conducting mass deacidification and modification of acidic paper taking into consideration the analytical methods used to evaluate the deacidification process and life prediction after the treatment, the most effective chemical processes offered and standards to develop and defined on treated materials and ink bleeding as well.

In this context, the State Archives did recommend to the State Civil Service the recruitment of qualified paper conservators to help mitigate the problem the State Archives is presently experiencing.

### **Electronic Records (Audio-Visual)**

At present, the State Archives has in its possession an estimate of 70,000 hours of audio-visual electronic recordings dating back 20<sup>th</sup> Century comprising - films, ampex, microfilms, microfiche, slides, bromide prints, video tapes, cassette tapes and photographs). These records are acquired through direct transfer from public sectors as mandated by the Sabah State Records and Archives Enactment 2007, deposit or donation by private organizations and individuals or by purchased through administrative arrangements with overseas archival institutions and other national broadcasters. Proactive video documentation of landmark places, events and project in Sabah conducted in partnership with public, private and people sectors. Most of these information resources had been converted into digital format as back-up and to protect original records from being handled frequently and thus reduces wear and tear. However, in the late 20<sup>th</sup> Century, the influx of these records show very minimal quantity due to the emergence of CDs and DVDs.

### **Electronic Records (Digital)**

The IT industry in Malaysia started way back in 1984 where the government acted as the service provider until Maxis, Jaring, Digi took over in 1993. In 1994, the National IT Council was formed. On 1<sup>st</sup> August 1996, Prime Minister Datuk Seri Dr. Mahathir Mohamad officially launched the Multimedia Super Corridor and announced that it will be spearheading the development of ICT Industry in Malaysia. Cyberlaws Computer Crimes Act 1997, Digital Signature Act 1997, Convergence Policy 1998 and Communications and Multimedia Act 1998 were enacted.

When Sabah.Net was introduced on 23<sup>rd</sup> September 1997, IT in the state public sector, particularly in the urban areas was in demand. The Computer Services Unit under the Ministry of Finance which was set up earlier on 1<sup>st</sup> January 1977, became known as The State Computer Services Department on 7<sup>th</sup> May 1992. It's main task was to render computerization services to all state government agencies.

On 1<sup>st</sup> February 2000, the State IT Advancement Unit established under the Chief Minister's Department was given the task to implement the State Public Sector IT Master Plan, to serve as Secretariat to the Sabah IT Council and to administer the State-wide network-Sabah.Net-within the framework of the policies. The major application running on Sabah.Net include Electronic State Government System, Education Net, Electronic Community and Electronic Commerce. In the Electronic State Government various application system was introduced. Amongst them were Ministries and Departments websites, E-Mail, current news and upcoming activities, searchable directory, E-Circular, E-Forms, E-Gazette, E-Invitation, E-Leave, E-Course, E-Permission to Attend Seminar, E-Performance, SM2 and exam online.

ICT will continue to be the foundation in efforts to increase management efficiency and service deliverance in the public sector. It is essential to meet the objectives and plans of the state government. Majority of the cabinet ministers and senior officers were each handed a laptop so as to be able to do their work anytime anywhere, wherever they may be. The whole of the ministries, departments and

district offices (except for few district offices) were supplied with local area networks that are capable of connecting to the Sabah.Net wide area network through leased line or dial-up. Progressively since 1997, all connected state government offices in Sabah have access to the Internet through the Sabah.Net Internet Gateway. In parallel progression with the digital network infrastructure, are the hosting of digital content and computer system applications. The demand for online digital content and web-based applications has also resulted in the capability of Sabah.Net to act as server farms to host online and web applications. As recent as 2009, the State Data Center operated by the State Computer Services department began its operations, primarily to provide secured data center services to the state public sector. It's services include, hosting of servers for online system applications; storage for backup media; and data and application support.

This growing intensity of record information generated by the computerized management in the current stage has largely affected the life-cycle records management theories and methodologies. Although ICT has been in Sabah decades ago efforts to undertake the management and preservation of authentic electronic records in the state public sector began with the introduction of an *Electronic Document Management System* (EDMS) in 2006 as a pilot project in five government departments- Office of the State Secretary, the State Computer Services Department, State Legislative Assembly, State IT Advancement Unit, and the Ministry of Finance<sup>8</sup>. As years went by EDMS remained dormant. In 2009, the State Archives held an introduction briefing on Electronic Records Management System (ERMS) in 2009 a recordkeeping metadata that is more structured or semi-structured for the benefit of all state public sector, but the implementation was put to KIV(keep-in-view) till to date.

Pekka Henttonen presented the idea that recordkeeping metadata through Electronic Records Management System (ERMS) application is a solution for many problems. It helps make the growing amount of multimedia data more manageable, shareable, reusable, and easily accessible in different context.

In the absence of the ERMS application in the state public sectors, it is assumed that approximately 35 petabytes (quadrillions of bytes) of data each day in the form of electronic records are created and are not save in a recordkeeping metadata. According to Matthew Prichards's findings, figures released last year by the technology analysts IDC estimate that the total of all electronically stored information, our data universe, is 1.2 billion terabytes (a terabyte being 1000 gigabytes). The digital universe has grown to 35 billion terabytes. These data if unsaved in a proper recordkeeping metadata standard is a total lost for the Archives as these electronic records are virtual and it does not go according to traditional core principles centred around the provenance, respect des fonds, original order, the three component parts of the record (structure, content and context), arrangement and description, appraisal and preservation.

Terry Cook went on to qualify that the provenance will be linked to function and activity rather than structure and place. Thus, it becomes virtual rather than physical. While the original order changes from maintaining the initial physical placement of records in the registry arrange according to classification system to the conceptual intervention of software where pieces of records are stored randomly, without physical meaning, and are then recombined intellectually or functionally, in different ways, for different purposes, in different times and places, in varying of orders, for different users.

The three component parts of any record - its structure, content and context that is fixed on a single medium are now shattered into separate stores of data in different software programmes - a conceptual data 'object controlled by metadata which changes as its context is continually being renewed. The archival fonds similarly changes from static physical order based on rules arising from the transfer, arrangement, or accumulation of records groupings, to a virtual relationship reflecting the dynamic multiple creatorship and multiple authorship focused around function and activity that more accurately captures the contextuality of records in the modern world.

The arrangement and description will concentrate less on physical record entities and groupings, which mean nothing for electronic media and develop instead enriched contextual understandings of the multiple interrelationships and uses of the records creation milieu, as well as incorporating related system documentation and functional metadata from the records' creator into archival descriptive tools.

8. Disney Edward LAI, *Sabah State Computer Services Department*, Kota Kinabalu, 2011.

The records appraisal will continue to change from being an assessment of records to becoming a macro appraisal analysis of the creator's societal functions, programmes and activities, and citizen interaction with them, and then the selection, the most succinct records for continued preservation and access that mirrors these functions and searching for private sector or oral and visual sources to complement official institutional records, using the same functional logic. It establishes value through social theory based on the contextual narrativity of creation rather than on subject content. Appraisal will attend as carefully to the marginalized and even silenced voices as to the powerful and official texts and search for evidence of governance rather than government.

With the presence of electronic records, preservation will no longer focus on restoration, conserving and safeguarding the physical medium of record, but instead concentrating on continually migrating or emulating the concepts and interrelationships that now define virtual record and virtual fond to new software programmes.

Archives, being an institution and pillar for the custodian of archival records of the past for the present and future generation, ensure each and every iota of history under its command shows no inconsistency while constructing the history of the country or state. However, this practice will gradually change from being places only for the storage of old records that (re)searchers consult to becoming virtual archives without walls, existing on the internet to facilitate access by the public to thousands of interlinked records management systems, both those under the control of the archives and those left in the custody of their creators or other archives.

## CONCLUSION

Having elucidate the above mentioned, the State Archives Director in particular had a choice, as to whether to propose to the state government to forego the application of qualified paper conservators as well as the ongoing preservation of paper records and just have all the records digitized or to uphold it. Since there are many unresolved global issues and dilemmas faced in most archival institutions on the preservation of authentic electronic records, he concluded such proposal was unfeasible and unwarranted. Thus, the proposal was halted as it is evidently proven that paper preservation cannot be forsaken.

In order of priority, the State Archives need to conduct mass deacidification and stabilization of paper records. The Sabah State Records and Archives Enactment 2007 requires a review with the inclusion of the creation and maintenance of authentic electronic records and definition of authenticity, reliability and validity. Digital Signature Act and Electronic Commerce Legislation should be looked into and put forward. Whereas in the case of electronic records, metadata standards, a Data Protection Act is essential to strengthen the call for the identification and appropriate development of metadata standards in the State. A co-ordinating committee for the development of metadata standard and metadata education and training is essential in line with the call for e-Government and e-Commerce. The preservation and access of authentic (2012-2017) of electronic records in the short term and long term preservation storage will be addressed beginning next year 2012 subject to the establishment of a new archival building. These are the latest development and basically the future plans of the State Archives to undertake in an aeon of transformation.

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#### SUMMARY

For years, decades and centuries, the Archives known to be the pillar and custodian of our nation's legacy has also been entrusted to manage the preservation of authentic paper and electronic records which is inevitable. This changing information landscape has transformed delivery methods for archives and historical records. A new paradigm shift and a transitional facelift for the Archives and archival profession which has grown more complex. World-class experts from a wide range of disciplinary perspectives have gathered to undertake and confront five main rubric issues - authenticity, copyright, appraisal and preservation of electronic records including the obsolescence of hardware and software needed to retrieve information. A strong message is sent to the Archives to transform in an age of change into uplifting their role and undertake challenges in the preservation of authentic electronic records despite cyclical financial hardships encountered to some archival institutions. Various Acts as indicated is therefore acute and recommended in the Sabah state to further strengthen data protection. We need to see them being enacted to implement proper metadata standards in the current phase to safeguard good governance and integrity during the execution of administrative affairs. John McDonald (1998) states that, 'Without records, there can be no demonstration of accountability. Without accountability, society cannot trust in its public institutions. Archivists and records managers on the other hand need to continually enhance their profession through education and training and work together to confront with issues pertaining to the management and preservation of authentic electronic records that they hold in trust for future generations.

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