

Digitization Project of the Historical Archives of Macao

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The backup project of the Historical Archives of Macao (hereinafter referred to as “AH”, from the Portuguese acronym), which basically covered all the records in its collection, was completed in the 1990's. Due to the provisions in the archival legislation and the rarity in the use of digitization technology at that time, the backups were mainly made on microfilms.

Despite that microfilm is widely recognized as the most stable preservation medium that can hardly be tampered with, its usage is limited in many ways, such as:

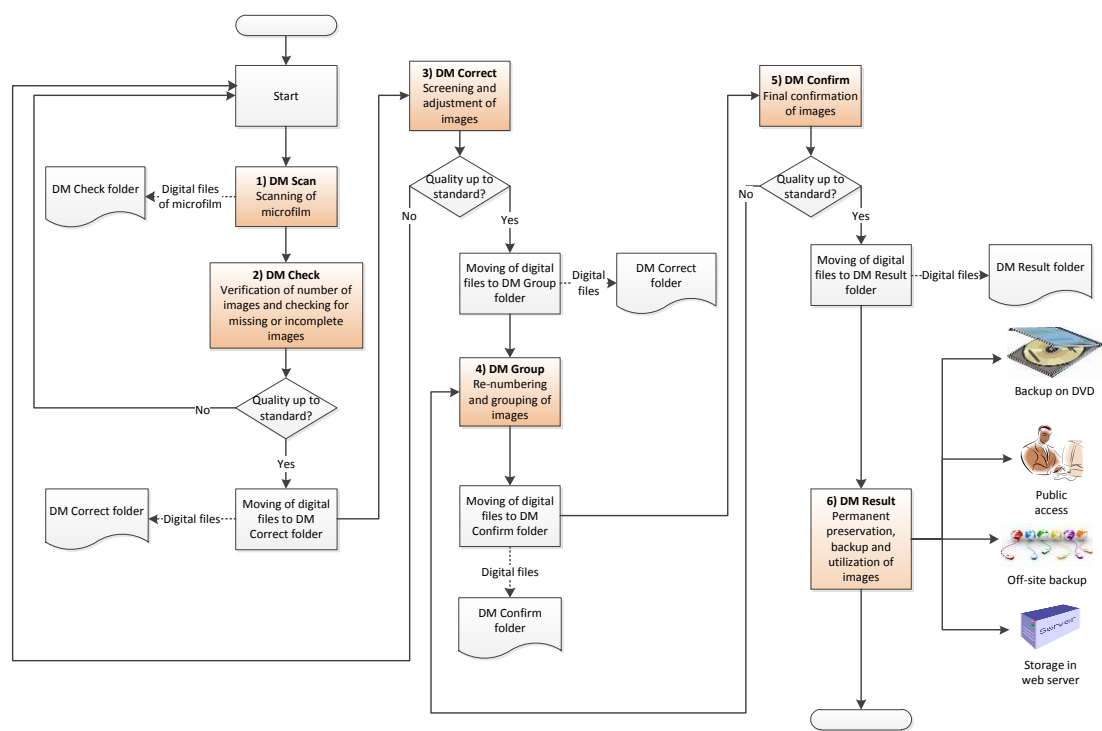
1. it can only be accessed in the Archives;
2. it has to be read on a microfilm reader in a page-by-page manner, which makes access to information time consuming;
3. one roll of microfilm can only be read by one user at a time, which makes access to information exclusive;
4. it has to be handled with care to avoid damage.

Hence, AH carried forward the plan of record migration in 2005 when the technology of digitization from microfilm became available. Through the migration of record images from microfilm to digital media, the shortcomings of microfilms were made up and better conditions were created for the preservation and utilization of records.

Up to the present, over 4000 of 6000 rolls of microfilm, accounting for 70% of the total number held by the Archives, were converted to digital format. The work plan of AH is to digitize all the microfilms in its custody.

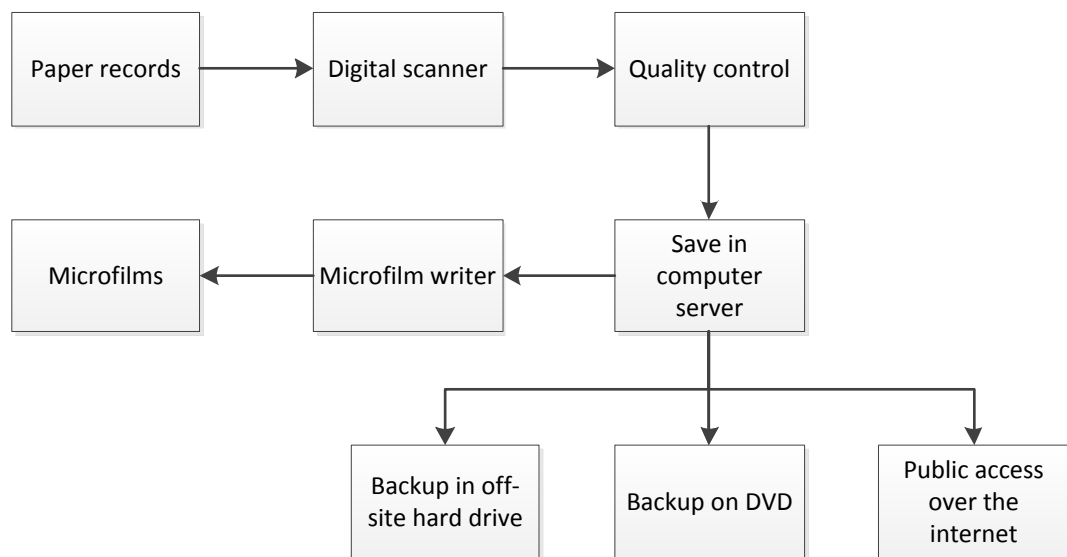
Digital images of microfilms produced by a microfilm scanner are reviewed for quality control. In comparison to microfilms, their digital images are clearer, easier and quicker to read and they are directly saved in the server. The digitization process is conducted in a workflow manner to strike a better balance between quality and quantity. The main elements of the workflow include:

- Scanning of microfilms
- Verification of number of images and checking for missing or incomplete images
- Screening and adjustment of images
- Re-numbering and grouping of images
- Final confirmation of images
- Permanent preservation, backup and utilization of images



(Diagram 1) Workflow of Microfilm Digitization

Apart from microfilms, paper records in AH are also digitized using high-quality image scanners. Digital images of the paper records are directly saved in the server and backed up on microfilms, DVDs and other media. Please refer to the diagram below for the workflow of paper record digitization.



(Diagram 2) Workflow of paper record digitization

In addition, digitization of images in the collection of AH (including maps, photographs, slides and illustrations) has been carried out since 2001 and the output is considerable.

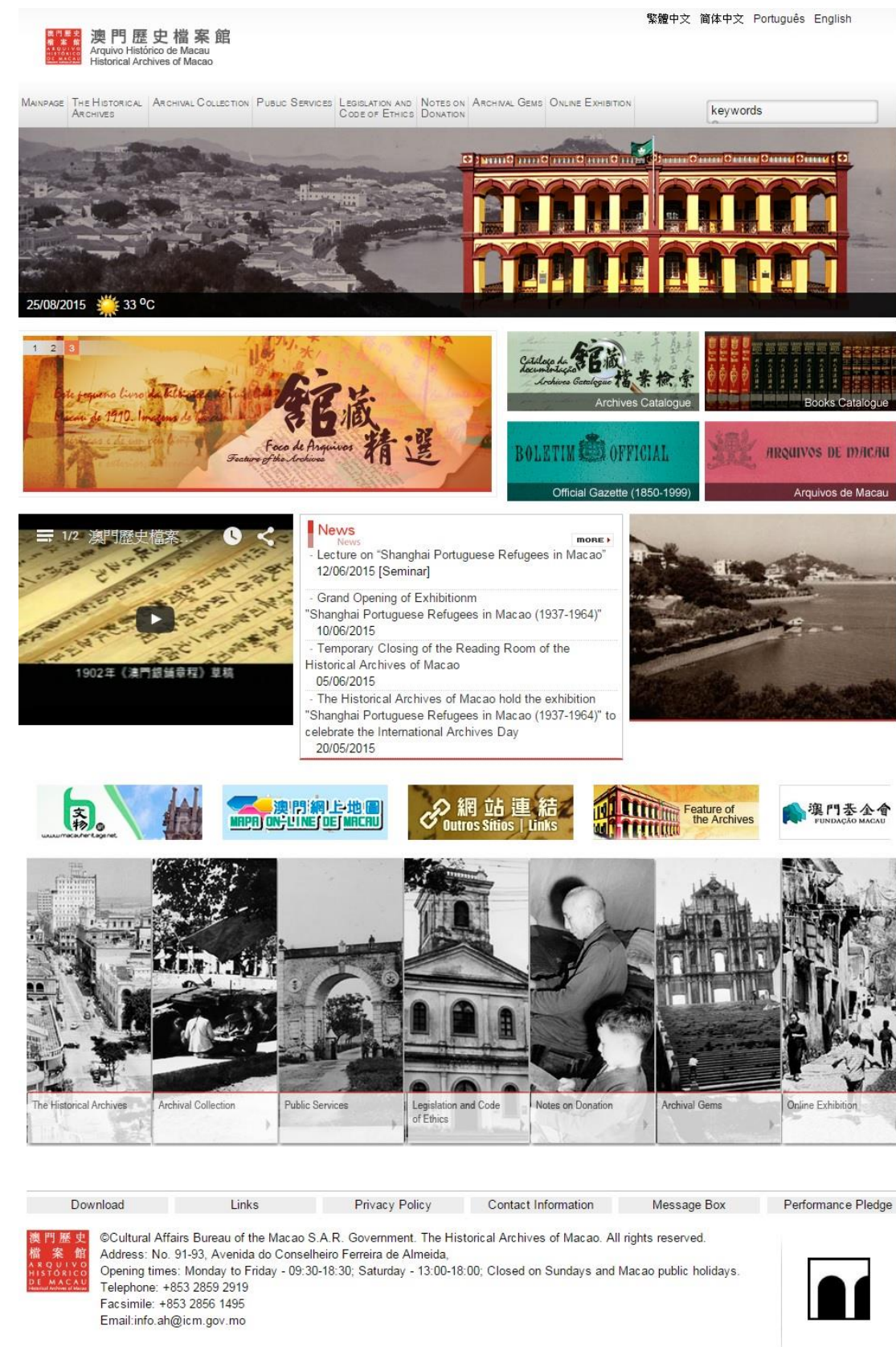
Summing up the digitization project, thanks to the progress over the years, AH is equipped with adequate devices and manpower to meet operational needs; efforts are geared towards the setting of standards to ensure the quality of digital outputs, as well as the improvement of their preservation (including storage and backup) and utilization. Digital images of some of the Archives' holdings have been uploaded to the internet for the easy access of readers and researchers around the globe.

Difference that digitization makes to reader service

Digitization facilitates access to records. As introduced earlier, the digitization of AH's image collection was commenced in 2001. Digital images of photographs and maps are uploaded to AH's online catalogue for the easy browsing of users in the Archives. It marks the first achievement of AH's improvement of access services.

In the recent years, the official website of the Archives is continuously developed to incorporate more services. Readers can now register online to enjoy access to the Archives' catalogues, images of records in some of the fonds held by AH, as well as a range of full text historical documents. It is fair to say that AH is providing an increasing amount of resources for free access on its website. While AH allows readers to make digital copies of its online resources, the reproduction is in low resolution and readers who prefer high resolution copies are required to apply for the reproduction in AH's Reading Room. These free online resources are especially useful to researchers outside Macao. It is also noteworthy that in a goal to maximize utilization of archival materials, entries of the catalogues of AH's collection are being translated to support searching in Chinese, English and Portuguese.

It is envisioned that with the diversification of services on AH's website, archival resources will become further accessible and usable to the public. Below are some examples of services that AH provides online:



(Diagram 3) Homepage of the website of the Historical Archives of Macao

澳門歷史檔案館
Arquivo Histórico de Macau
Historical Archives of Macao

繁體中文 簡體中文 Português English

MAINPAGE THE HISTORICAL ARCHIVES ARCHIVAL COLLECTION PUBLIC SERVICES LEGISLATION AND CODE OF ETHICS NOTES ON DONATION ARCHIVAL GEMS ONLINE EXHIBITION

keywords

Arquivos Catalogue

Books Catalogue

BOLETIM OFFICIAL
Official Gazette (1850-1999)

ARQUIVOS DE MACAU
Arquivos de Macau

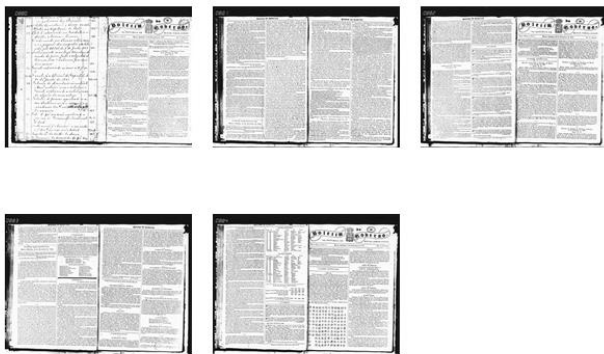
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- Lecture on "Shanghai Portuguese Refugees in Macao" 12/06/2015 [Seminar]
- Grand Opening of Exhibitionm "Shanghai Portuguese Refugees in Macao (1937-1964)" 10/06/2015
- Temporary Closing of the Reading Room of the Historical Archives of Macao 05/06/2015
- The Historical Archives of Macao hold the exhibition "Shanghai Portuguese Refugees in Macao (1937-1964)" to celebrate the International Archives Day 20/05/2015

Official Gazette (1850-1999)

Year: 1850 Month: 11



(Diagram 4) Digital images of the Official Gazette of Macao

澳門歷史檔案館
Arquivo Histórico de Macau
Historical Archives of Macao

繁體中文 简体中文 Português English

Keywords

1459

2000

Catalog

1/2

10

	Reference code(s)	Level of description	Title	Date(s)
	MO/AH/AC	Fonds	Civil Administration	1734/03/24 - 1982/10/28
Digital	MO/AH/ANGR	Collection	Governador Arnaldo de Novais Guedes Rebelo	1902/-/- - 1913/03/03
Digital	MO/AH/APLBM	Fonds	Macao Basic Law Promotion Association	1984/12/19 - 2000/01/28
Digital	MO/AH/CCS	Collection	Cíntia Conceição Serro	193- - 194-
	MO/AH/CDSMP	Fonds	Committee for Celebration Activities from all Sectors for the Return of Macao to The People's Republic of China	1998/11/22 - 2000/06/16
	MO/AH/CP	Collection	Parish Registers	1847/03/23 - 1913/12/29
	MO/AH/DSE	Fonds	Macao Economic Services	1969/04/30 - 1971/12/31
Digital	MO/AH/DSF	Fonds	Financial Services Bureau	1843/11/30 - 1954/04/29
Digital	MO/AH/DSSOPT	Fonds	Land, Public Works and Transport Bureau	1914/08/17 - 1984/03/29
	MO/AH/EDU	Fonds	Education Department	1871/09/02 - 1983/01/04

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澳門歷史檔案館
ARQUIVO HISTÓRICO DE MACAU
Historical Archives of Macao

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Address: No. 91-93, Avenida do Conselheiro Ferreira de Almeida,
Opening times: Monday to Friday - 09:30-18:30; Saturday - 13:00-18:00; closed on Sundays and Macao public holidays.
Telephone: +853 2859 2919
Facsimile: +853 2856 1495
Email:info.ah@icm.gov.mo

(Diagram 5) Retrieval interface for AH collection

Relatórios e estudos sobre os exclusivos da venda do sal, do peixe e da carne do porco e imposto aplicável sobre os mesmos [close](#) or Esc Key

+

-

1:1

25%

MO/AH/ANGR001

(Diagram 6) Search result of AH collection (digital image open for public access)

Building of an efficient electronic records management system

Implementation of e-governance in Macao highlights the needs for the Macao Special Administrative Government to do more to address issues related to the setting of standard, management, preservation and utilization of electronic records. Given that e-governance in Macao does not stand for a total elimination of paper documents, business transactions may sometimes involve both electronic and paper document. In such cases, electronic documents have to be printed out on paper, or paper documents have to be scanned into electronic format, otherwise the records for the business transactions will become incomplete. Deficiency in recordkeeping can affect the functions of records as an evidence of administrative acts and a tool to support the daily operational decision-making of governmental departments. Furthermore, the growing use of emails has changed the conventional way of communication. The shifting of communications from paper to electronic media has brought great impact and challenge to the management of public records.

In response, AH launched a study on the building of an efficient electronic records management system in 2013. An electronic records management system has been put into trial use from June 2015 for the management of administrative and functional records generated in the Archives. It is anticipated that the system can strengthen the internal management of AH's business records and enable the Archives to garner experience and prepare for the provision of general and customized advice and suggestions to governmental departments and public services of the MSAR in terms of the management, preservation and utilization of electronic records.

Conclusion

It is believed that digitization allows more people to enjoy the richness of cultural heritage, through which more possibilities can be opened up for education, lifelong learning and social inclusion; and at the same time helps to preserve original documents and save delivery cost. However, digitization also brings challenges to the Archives. To cope with these challenges, the MSAR Government has adopted a series of measures, including reforming and restructuring of administrative units, forming of task forces and dedicated departments, assigning of staff to participate in international seminars and exchanges, researching and studying on technical issues of electronic records management system and electronic records, developing technical standards, guidelines and norms that can meet both local needs and international requirements, etc, in an ultimate goal to seek solutions for technical problems relating to the integrity, authenticity, reliability and usability of electronic records.