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**Headline:** Preserving a nation's history in the digital age

» UPFRONT

# Preserving a nation's history in the digital age

By Chua Mui Hoong

WHEN Madam Salimah Ismail first joined the National Archives 22 years ago, she repaired fading paper documents by hand.

"We would use fibre to cover and patch up holes in the thin paper. But now it's much easier," said the conservation assistant, now 51.

The difference: a high-tech machine that makes use of digital imaging.

Think "archives" and for most people, images of decaying tomes in dusty rooms spring to mind.

But at the National Archives of Singapore, preserving the nation's records has gone high-tech.

Fragile paper documents are prone to deteriorating quickly in Singapore's climate, from insect or fungi infestation.

High acidity of paper and ink, mixed with humidity and high temperatures, also cause chemicals to interact and destroy the paper.

These old records are vital, because they capture a nation's history and preserving them helps future generations of scholars to have a clear idea of the past.

Good records preservation also makes a difference in international disputes, added National Archives director Pitt Kuan Wah, 49, who joined in 1983 as an oral history interviewer.

"Archives are useful not only for domestic history writing. In cases of national negotiations or international disputes, some of the records also come in useful," he said.

For example, in the dispute between Singapore and Malaysia over Pedra Branca now being heard at the International Court of Justice, documentary evidence from the archives plays a role in Singapore's case.

Though most government records these days are electronic, conserving and repairing old documents remains part of the work done.

The archives' collection of paper records, photographs and illustrations dates back to the early 19th century.

It also has broadcast reels and audio tapes from more recent times, such as the declaration of Singapore's independence.

It helps ministries archive their paper files. Each month, a fresh load of files is sent to the archives.

Most of the new material it helps to manage is electronic, such as e-mail messages on important issues.

Preserving old documents remains an important part of the work done and here, technology has made the process faster and more accurate.

Take the leafcasting machine, which is used to repair old documents. Over the years, several modifications have been made so the work is easier.

One big change took place last year after a team brainstormed ways to use digital imaging to help in its work.

The result is a $10,000 system that links an Olympus digital camera to a computer software system.

The camera snaps a shot of the document to be repaired, holes and all.

The computer software then calculates the amount of paper fibre needed to strengthen the paper and fill up the holes.

"Previously, we had to do manual calculations and it was much slower," said senior conservation officer Noraini Omar, 38.

The new system means only one person is needed to repair a batch of documents, down from four or five previously.

ST PHOTO: LIM WUI LIANG

**ADVANCES: (From right) National Archives director Pitt Kuan Wah and senior conservation officer Noraini Omar, with a machine modified to make repairing old documents easier and more accurate.**

More importantly, it makes for more accurate repair, since the camera and computer can calculate more precisely the amount of fibre needed to repair the weak parts of the paper.

The machine has caught the attention of archivists in Malaysia and India, and the blueprint has been sent to them.

A number of overseas archives in Asia, including those in Indonesia, Vietnam, Hong Kong and Macau, have sent conservation staff here for attachments.

While conserving and repairing old documents is still part of the work done at the archives – much of its work is now digital.

During next week's Asean Summit, for example, the archives will act as a consultant to help manage and conserve electronic records. This means e-records of the summit can be preserved for posterity.

With more records being digital now, archive management has become more about electronic rather than paper records management, said Ms Irene Lim, deputy director in charge of the audio-visual archives.

One challenge: how to "migrate" content in media which have become obsolete into a format that is more durable and easy to search.

For example, a news broadcast of an important event may have been stored on a video format that is no longer in use. The archives' job is to transfer the content into a format that can be read by today's machines.

But as archives become high-tech, not many visitors need to handle fading paper records any more.

Most head to the search website www.a2o.com.sg (Access to Archives Online), which won an award at the prestigious Stockholm Award in 2004 for e-culture.

This website brings together the archives' various collections of voice recordings, photographs, broadcast reels and paper documents in an easy-to-use online format.

Explaining the archives' focus on technology, Mr Pitt said: "As a nation's history is created every day, every hour and minute, a national archives must be dynamic and must always be in the frontline of records creation in order to develop cost effective strategies to preserve and share them with future generations."

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**THE DIGITAL WAY FORWARD**

**"We would use fibre to cover and patch up holes in the thin paper. But now it's much easier."**

**MADAM SALIMAH ISMAIL, 51, a conservation assistant with the National Archives for 22 years, who used to repair fading paper documents by hand. Now a high-tech machine that makes use of digital imaging makes the job easier.**