

The State Library of South Australia's Audiovisual Digitising Plan

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From a paper presented at the IASA 2008 Conference, Sydney, Australia

The State Library of South Australia's audiovisual collections are relatively small in international terms, comprising about 38,000 items, and they represent only a tiny proportion of the material that the Library is responsible for preserving and making accessible to the public. However, they include the highest risk formats held in the Library; analogue formats that are subject to deterioration and dependent on replay equipment that is rapidly becoming obsolete. This paper explains the State Library's digitising plan for its audiovisual collections. It focuses in particular on oral history and other sound recordings, and sets out the goals, costs and strategies identified to date.

Collection Categories

The State Library has four main categories of collections:

- a general reference collection,
- items published in South Australia or by South Australians,
- non-government archival collections relating to South Australia, and
- various special collections.

The general reference collection contains some audiovisual material but these items can be discarded and replaced if they wear out or are stolen. However the Library has legal and ethical responsibilities to preserve access to all South Australian items for posterity. Legal deposit legislation means that publishers must provide the Library with one copy of every film, video, CD and record they produce in South Australia. The Library also buys copies of audiovisual titles made by South Australians interstate and overseas, and searches for second hand copies of titles published before 1989 when the legal deposit legislation was extended to include audiovisual formats. The Library currently holds about 13,000 titles in these categories, and the collection grows by about 400 items each year.

The Library enters into legal agreements with donors of archival collections as well. The archival records of businesses, organisations and individuals can include significant audiovisual components. For instance, the records of the car manufacturer Holden Ltd, which started in South Australia as a horse-drawn carriage maker in the 1850s, include several thousand films, videos and sound recordings documenting the company's production history, advertisements and training programs. The Library holds about 10,300 items in these categories, also growing by about 400 items each year.

The State Library has actively supported oral history in South Australia since 1987. We provide interviewing training sessions in conjunction with the Oral History Association of Australia, advise on project planning and funding applications, and lend digital field-recording kits to eligible projects. We also have a modest program of commissioning oral history interviews by professional historians. The oral history collection currently contains 7,900 hours of material, and grows by 350 hours each year.

Over 6,000 record discs originally collected by South Australian John Purches is our largest special collection of audiovisual material. It is recordings of mainly American popular music and jazz from the 1920s to the 1950s. The collection features over 1,500 artists, including many of the jazz and crooner greats, and it was reputed to be one of the world's finest collections of Bing Crosby recordings when Mr. Purches's widow donated it to the Library

in 1977. The Library also has a very large children's literature collection. In 2003 we took the opportunity to select from a second-hand dealer's record collection a representative sample of storybook records produced by Walt Disney and other publishers, comprising about 425 titles.

However, all the Library's audiovisual collections combined represent only about one percent of the Library's South Australian and special collections. South Australian newspapers alone represent 10 per cent, and are another high-risk format due to the poor quality of newsprint. Preliminary work on the Library's digitising plan has found that no more than a quarter of one percent of the South Australian collections has been reformatted over the 15 years that digitising technologies have been available. No sizeable collecting institution aims to digitise all its holdings, but preservation imperatives as well as the growing expectations of users and funding allocators mean this rate of digitising must be accelerated.

Refining the Scope

It has taken some time to determine the size of the State Library's audiovisual collections. The total figure of 37,700 is becoming more and more accurate for preservation purposes but is still a bit rubbery in places. It excludes copies that have been made for preservation and access, but we are not yet consistent about counting multiple holdings of published items, or counting new items added to some parts of the collections each year.

Broadly speaking, librarians count titles and archivists count linear metres – neither method is particularly useful for managing audiovisual material, especially for preservation purposes. Nevertheless, the Library has come a long way in recent years. Until 2004 the figure quoted in the Library's Annual Report for the published audiovisual collection was almost 70,000 items higher than it is today. It was a meaningless figure because it included a massive unsorted collection of second hand record discs from a retired dealer. Once the South Australian and children's literature content was extracted, and the rest disposed of with the donor's blessing, we re-set the counter at 16,440 and have proceeded from there.

Other counting and identification projects are giving us detailed information about particular formats. Videos are the most challenging to manage because of the proliferation of formats, each with a specialised replay system. We now know that the Library holds 17 formats. We also work closely with a local businessman with a lifelong interest in video formats, who collects and maintains obsolete equipment. Every can of motion picture film in the Library has been examined to identify and extract any nitrate footage. Nitrate film, which ceased production in 1951, is at the end of its lifespan and needs urgent intervention if its contents are to survive. The Library has a cooperative arrangement with Australia's National Film & Sound Archive (NFSA) whereby they reformat and store our nitrate film and both institutions make surrogates available to the public. Most film is acetate-based and subject to vinegar syndrome decomposition. The Library has tested every reel, separated those already in the rapid stage of decomposition, and staff are systematically repairing, rehousing and reformatting them.

The Library's latest activity is a survey of every record disc to identify those that are lacquer or shellac. The lacquer playing surface is inherently unstable and shrinks at a different rate to the substrate of metal or glass. The shellac is very brittle. Staff are assessing the condition of each, flagging those that have already started to craze or delaminate, and beginning to digitise those that can be managed in-house.

The Window of Opportunity

Major sound archives worldwide are in the midst of transferring their analogue material to digital mass storage systems. The National Library of Australia has already digitised 50 percent of its oral history and folklore collections, amounting to more than 20,000 hours. They plan to complete the other half before 2020¹. The United States' Library of Congress and the great audiovisual archives of Europe, which measure their collections by the millions of recordings, are working to the same kind of timeframe. They too are stockpiling the spare parts necessary to maintain the replay machines, and are well aware that the machine-hours left may fall short of the hours of audio needing transfer. We are starting to use the year 2020 in our planning and funding proposals as well. Meanwhile, many conventional libraries and archives are unaware of the urgency, or maintain the pleasant fiction that while their current analogue equipment is in working order the future can wait.

We have decided that the task of digitising analogue recordings in time is daunting enough without adding to the backlog. We recommend to South Australian oral history practitioners that anyone still using analogue recording equipment changes to a digital system capable of recording at 24-bit, 48 kilohertz, such as a solid state Compact Flash card recorder, or borrows our units. Since making the change ourselves, we have been under great pressure from community groups and professional historians to sell the trusty Marantz CP430 standard cassette recorders that we lent to local practitioners for almost 30 years. However, this will do nothing to stem the tide of analogue recordings requiring transfer, and the Marantz recorders have been put in storage in case they are ever needed as replay units.

Now, half the 350 hours of oral history accepted by the State Library each year are on Compact Flash cards according to our specifications. They are reformatted through the digital audio archiving system in one-fifth of the time it takes to digitise a one-hour cassette. The Library will of course continue to receive older analogue sound recordings for years to come, but by changing to digital field recorders we have freed up more time to manage them.

Selecting for Preservation

Ideally, while a large library or archive may aim to digitise only five or 10 percent of its entire collection over time, that figure will include 100 percent of its analogue audiovisual holdings. This goal will be achievable for a few institutions, but in reality significant amounts of analogue material will never cross the digital divide and must be lost. In some cases this will be a tragedy of missed opportunity, but in well-managed collections it will be the result of pragmatic decisions to ensure that the most significant material is preserved in time. Preservation selection criteria can be applied in four stages, and it is useful to represent the process as a decision tree. The following is the State Library's preservation decision tree for oral history recordings.

¹ National Library of Australia, *Oral History and Folklore Collection - Preservation and Access Digitisation of Audio Recordings*, [2008]. URL:<<http://www.nla.gov.au/digicoll/audioprogress.html>>.

1. Does our institution have preservation responsibility for the recording?

If No:

Determine the recording's future status in the collection.
Consider return to donor, transfer, repatriation or destruction.

If Yes:

2. Is the interview and its recording of sufficient quality to justify preservation?

If excellent interview + excellent recording → high preservation priority.

If excellent interview + poor recording → medium preservation priority → serve as transcript.

If poor interview + excellent recording → low preservation priority.

If poor interview + poor recording → no preservation priority → benign neglect.

If high preservation priority:

3. Is the recording format actively deteriorating or at risk of deteriorating?

If No:

Maintain high preservation priority.

If Yes:

4. Is the recording format's replay equipment obsolete?

If No:

Maintain high preservation priority → digitise as soon as possible.

If Yes:

Digitise immediately.

Many audiovisual collections include recordings that may be the preservation responsibility of other institutions. The most common examples are radio programs and recordings of lectures, speeches and public events. Also, anthropologists recording indigenous culture in the mid-twentieth century quite often distributed copies among colleagues and collecting institutions. Alternatively, collections can hold unique recordings of no value at all. When portable open reel recorders became available in the 1960s the novelty of the new technology at the State Library resulted in all kinds of odd recordings being cataloged. They included test recordings, book readings (not by the authors) and administrative procedures such as 'Mrs. Fitzpatrick explaining our telex procedures'.

The future status of duplicate and redundant material should be determined during a preservation selection process. Some duplicate recordings will be retained for local access. Others may be transferred or repatriated to the institution with preservation responsibility for the originals. Others should be destroyed rather than put aside for another generation of staff to puzzle over. Of course, all these decisions must be appropriately authorised and thoroughly documented in the catalogue and permanent files.

Most oral history collections will include interviews of very poor recording standards that are unlikely to be used in audio form in the future. The interviews that have high research value should be properly transcribed to preserve the content, but digitising the recordings can be made a low priority. If there are interviews of marginal research value as well as poor recording standards, they can be treated with 'benign neglect'. This means that they will only

be digitised if a research enquiry predates their eventual deterioration beyond the critical point at which restoration will be impossible.

Having identified recordings that have a high preservation priority, the order of preservation can be refined further by examining the condition of the items, and the obsolescence status of their replay equipment. Most oral history collections will be made up of open reel recordings, standard cassettes, Digital Audio Tape (DAT) and MiniDiscs, with perhaps the odd micro-cassette format represented as well. Some collections will include voice recordings on wax cylinders, lacquer and acetate records. The State Library's understanding of the obsolescence status of particular formats has been assisted by IASA's technical publications and the Australasian Sound Recordings Association's seminars, which are strongly supported by Australia's national collecting institutions.

The four-stage preservation selection criteria outlined above was applied to the State Library's oral history collection between 1987 and 2003 to determine which interviews would be transferred to open reel tape, which was the international preservation standard in the analogue era. During that time 3,300 hours of original recordings from a potential 5,300 hours of acquisitions were reformatted by a part-time audio engineer. These preservation open reels, representing original recordings of 'high preservation priority', have maintained that ranking in the Library's current digitising plan.

How Much Does It Cost?

Preserving audiovisual material has never been cheap and is not getting any cheaper in the digital era. Oral history was the original driver for the State Library getting involved in audio archiving. The combination of looming analogue obsolescence and demand for audiovisual content online was the driver for going digital. However, it was not a foregone conclusion that we would continue audio archiving at all, and if the full cost of going digital had been known in 2000, it might not have been supported. Now, the real costs of IT infrastructure are much better understood, and the figures do not seem as outrageous as they would have eight years ago. An initial investment of AU\$100,000 in 2004 let us establish a digital audio archiving system based on Cube-Tec's AudioCube and Quadriga. An additional \$150,000 has been pieced together over the last four years to enhance and upgrade the original set-up, establish a second workstation and improve the working conditions in the studios. Salaries and server storage space have been additional costs.

In some ways we have been lucky. The initial investment came primarily from the IT budget for the State Library's Building Redevelopment Project. Then, in 2005 and 2008 the Library benefited from end of financial year windfalls from the State Government's Treasury Department. The Libraries Board of South Australia was also able to support some parts of the project through allocating some of the interest on bequest funds before the financial market started falling last year. However, we believe that we have also made our own luck by being prepared to take advantage of every opportunity. Our Preservation section maintains a wish list of equipment, minor works and projects ready to be ordered or set in motion whenever funds are offered.

So, our audiovisual digitising plan is in place: we know what is in the collections, we have skilled staff, proven procedures, the equipment and the infrastructure to get stuck into the analogue backlog. Will we make the 2020 deadline? No, not unless we get about \$2m more for salaries and outsourced services over the next 10 years. Our current staffing level (one full-time and one part-time audio engineer) keeps up with incoming oral history donations and makes some inroads into the backlog of analogue recordings. To meet the 2020 deadline,

we will need to outsource some of the work and increase our in-house capacity. The 3,300 hours of 'high preservation priority' open reels are ideal for outsourcing. They are a uniform set of recordings that can be digitised by a commercial agency with minimal preparation on the part of the Library. The cost will be in the order of \$500,000, and we have begun putting forward bids for this funding. The bids also include the IT storage facilities that must be prepared for such an influx of digital files. Every hour of spoken audio captured at the preservation standard of 24-bit, 48 kilohertz is 1.02 gigabytes in size. The 3,300 hours of open reel transfers will require 3.37 terabytes of managed storage. We will also need to increase our staffing levels to about three full time positions to digitise the high preservation priority proportion of the analogue backlog by 2020 – given that about 35 percent should fall into the 'low' or 'no preservation priority' categories.

Collaboration and Perseverance

In Australia every State Library knows its preservation responsibilities in relation to newspapers. The Australian Newspapers Plan has been running as a collaborative effort under the leadership of the National Library of Australia since 1991. The State Library of South Australia has so far microfilmed to preservation standards 60 percent of the 410 newspapers published in South Australia since 1836. With the deadline looming for most audiovisual formats, it is time for Australian libraries and archives (and, similarly, those of other jurisdictions) to discuss how to share the urgent task of collecting and preserving analogue audiovisual material. It is particularly important that the scarce resources available for preservation are not wasted by duplicating reformatting already done by another agency. The job ahead is a daunting one, but experience has shown us at the State Library of South Australia that perseverance is just as important as the other preservation strategies, such as surveying collections, managing the environment, technical standards, selection criteria and collaboration. We take heart from the Australian cartoonist and poet Michael Leunig's ode to perseverance, 'How to get there':

*Go to the end of the path until you get to the gate,
Go through the gate and head straight out towards the horizon,
Keep going towards the horizon.
Sit down and have a rest every now and again
But keep on going. Just keep on with it.
Keep on going as far as you can.
That's how you get there.²*

² Michael Leunig, *How To Get There*, ca. 1992.



One of two audio digitising studios established since 2004.



State Library of South Australia Audio engineers Peter Kolomitsev and Silver Moon.



Some of the tens of thousands of unsorted second hand record discs from a retired dealer.



Some of the 3,300 hours of preservation open reels produced between 1987 and 2003.