

STAFF PAPER

Exploring the Roles of Digitisation and Microfilming in Preserving Australian Newspapers for Permanent Access

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Newspapers have always presented a challenge to those wishing to ensure their ongoing survival. Designed for impermanence, newspapers require active management if their content is to endure. For many years, Australian libraries have relied on copying newspapers to microfilm to ensure their long-term survival. But with developments in digitisation and the associated possibilities for providing enhanced access, microfilm is now being challenged as the pre-eminent preservation medium. Australian libraries are exploring the role digitisation might play in preserving access to newspapers and under what circumstances a digital version might be preferred to a microfilm one.



Figure 1: Viewing a newspaper in the National Library of Australia's Newspaper Reading Room; photo: National Library of Australia.

The Australian Newspaper Plan (ANPlan; www.nla.gov.au/anplan), established in the early nineties, aims to collect, preserve and provide access to all Australian newspapers. This Plan is a collaboration between the national libraries of Australia and New Zealand and the eight Australian state and territory libraries. ANPlan libraries have been keen to explore how digitisation will affect how they will fulfil their obligations under the Plan.

Fundamental to the ANPlan is the participating libraries' belief that users should be able to explore into the future the rich documentary heritage contained within Australian newspapers. Reporting what was of interest to the communities of their time, newspapers are one of the most valued sources of social, political and cultural history in Australian libraries. This material may be in the form of social and political commentary, construction and shipping news, advertisements, births, deaths and marriages, court reports, reports on prominent characters in the community and cultural events, cartoons and photographs.



Figure 2: Viewing scanned images; photo: Greg Power, National Library of Australia

Providing impetus to the ANPlan libraries' consideration of digitisation has been the overwhelming desire of local libraries and community organisations to provide users with digital access to their local newspapers. Ease of access, enhanced access, space considerations and the expense and difficulty of maintaining microfilm reading equipment are among the reasons for public libraries' interest in digital technologies. ANPlan libraries are keen that long-term as well as immediate access issues be considered by organisations embarking on newspaper digitisation and that developments at the local level be integrated with the national infrastructure for digital newspapers which is currently being developed as part of the Australian Newspapers Digitisation Program (www.nla.gov.au/ndp).

Digitisation, or any copying process, may be considered a useful preservation tool either through its ability to deflect use from original hard-copy newspapers or by serving as a long-term substitute for the original. To fulfil the criteria of the latter, copies must:

- be considered useful by users;

- capture adequately the significant properties or key valued characteristics of the source material;
- be produced in a way that does not present an unacceptable risk of damage to the source materials; and
- be long lasting.¹

Of these, the focus of Australian libraries has chiefly been on establishing the feasibility of ensuring that significant properties are captured and that long-term access is maintained. In June 2007, a workshop attended by ANPlan libraries was held in Canberra to develop an 'action plan' to assist in gaining a better understanding of what the respective roles of microform and digital copies for preserving newspapers might be. ANPlan libraries identified: understanding the rights issues involved in providing access to digital copies and costing the different approaches as crucial aspects in developing this understanding. Developing guidelines to ensure long-term access to digital versions and gaining a better understanding of the future viability of microfilming were also considered to be important. The issues involved in preserving access to online newspapers and the possibilities of collecting and preserving pre-press electronic copies of print-version newspapers were also adopted as elements of the action plan. In recognition that the initial step for ANPlan libraries in the process of preserving newspapers for permanent access is building complete collections of the newspapers published within their jurisdiction, a national 'Search and Rescue' campaign is currently enlisting the help of the public in finding missing newspapers.

To ensure that digital versions of newspapers can be reliably kept into the future, practical standards, or at least guidelines, need to be developed. These guidelines must cover digital capture from both hard copy and from microfilm, file formats, compression, metadata and the storage and the ongoing management of digital files for permanent access. The National Library of Australia is developing these guidelines as well as exploring options for storing and maintaining selected digital newspaper content. This it sees as an extension of its current role in the management of print and microfilmed versions of newspapers and a necessary part of achieving ANPlan objectives. Much of the guidelines development is an integral part of the Australian Newspaper Digitisation Program where the articulation of standards, procedures, roles and responsibilities is a necessary part of establishing a national infrastructure for a service which provides permanent access to digitised newspapers. Many of these guidelines are already available through the ANPlan website. In exploring the roles that digitisation and microfilming might play in preserving permanent access to Australian newspapers, ANPlan libraries have agreed that examination of the relative costs of preservation microfilming and digitisation are crucial. Keeping in mind that the 'product' is somewhat different – users tend to expect more from a digital version in terms of fidelity to the original, searchability and ease of delivery – the costs, both immediate and ongoing, will nevertheless be a crucial factor in libraries' decision-making. Tables 1 and 2 give examples of cost elements identified by two Australian libraries for in-house microfilming (Table 1) and for outsourced digitising from

microfilmed newspapers and content analysis (Table 2) and provide an indication of the aspects which need to be considered when comparing the costs of these processes.

Table 1: Cost Components for Microfilming newspapers – In-house²

Consumables
Film
Chemicals
Duplicating film
Labels
Boxes/housing
Labour
Newspaper preparation
Newspaper microfilming
Film copying and processing
Quality control
Equipment depreciation
Processor
Camera
Duplicator
Overheads
maintenance contracts
Other
Cold storage of master negatives
Methylene blue testing
Processor control strips

Table 2: Cost Components for Digitising Newspapers from Microfilm – Outsourced

Outsourced Scanning
Scanning microfilm into digital images
Cropping, image enhancement, de-skew, file naming
Delivery of images including freight
Work reports
In-house work
Addition of metadata at page level (title of newspaper, issue date, page numbers, notes)
Identifying duplicate images
Identifying missing newspaper pages and issues
Grouping digital images into batches for subsequent processing
Freight to international contractors
Varies depending on courier, country and media used.
Delivery media for contractors
Varies depending on method and amounts
ftp
portable hard drive
LT02 tape
Outsourcing Content Analysis
Page de-skew
Zoning of articles on each page
Re-keying article text (titles, subtitles, authors and first 4 lines of text)
Categorising articles
OCR of entire page
Creation of xml files
In-house work

Checking processed pages and articles meet specifications (mostly automated; some manual work).

Creation of derivatives for delivery to user (automated).

Online storage for derivatives and working space

Offline storage for masters and preservation

In addition, there are IT costs (servers and storage setting up/maintenance, software development or IT staff salaries).

Undoubtedly, Australian libraries will implement a variety of approaches for the various 'states of being'³ in which their newspapers exist. These states of being include aspects such as levels of use, levels of fragility, whether the newspapers have been microfilmed to preservation standard already or not, and the age of the newspaper. These states have their associated imperatives, which, together with cost information, will influence decisions which are made about how to provide permanent access.



Figure 3: Microform master reels; photo: Rose Holley, National Library of Australia

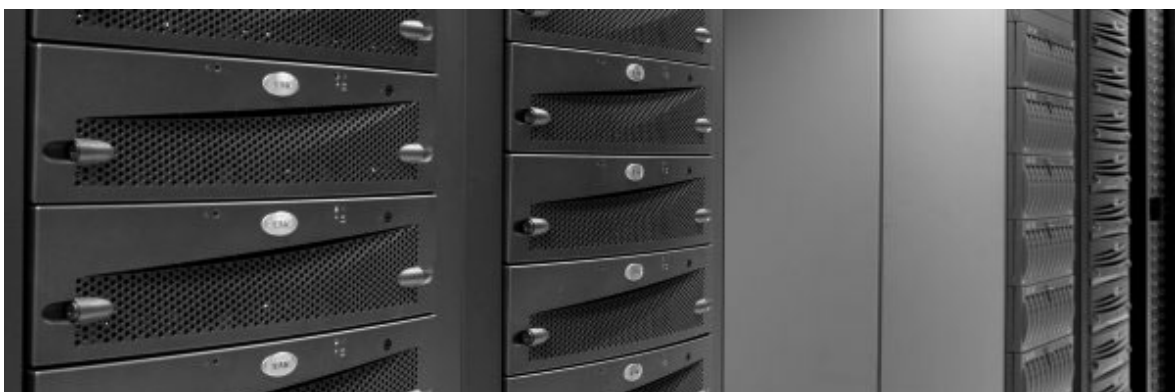


Figure 4: Digital storage; photo: Greg Power, National Library of Australia

With an awareness that all newspapers, at one stage or another, will exist in digital form, ANPlan libraries are keen to explore all options, including the possibility of collecting pre-press electronic versions of newspapers for preservation purposes. Already twelve publishers of South Australian newspapers have expressed a willingness to supply the State Library of South Australia with their electronic archives.⁴ While ultimately this may not prove to be a feasible pathway for all newspapers, obviating the circuitous pathway of digital-to-print then digitisation of the print format is logically compelling. ANPlan libraries are also aware of the vast amount of newspapers which have both online and print formats, or are published only in an online format and are committed to investigating the issues involved in collecting, archiving and providing permanent access to these newspapers.

The digital environment raises new questions about how libraries in Australia will work together to provide permanent access to their newspapers. Aware of the interest from the public at a local level for access to digitised newspapers and a desire to integrate the activities of libraries (local and regional, state, territory and national) with respect to newspapers in digital form, the ANPlan libraries conducted a survey of public libraries in late 2007.⁵ The survey was designed to discover more about Australian public libraries' activities and attitudes regarding:

- newspaper digitisation;
- the collection of electronic versions that are identical to hard copy newspapers; and
- the provision of access (both immediate and long-term) to digital newspapers.

Responses to this survey were received from 169 libraries⁶ and showed that the number of local public libraries engaging in newspaper digitisation activities is still small, with just fifteen percent of libraries reporting that they have started to digitise newspapers, or intend to do so in the next three years. However, driven mainly by public demand, the interest of local public libraries in newspaper digitisation projects which will enable them to provide access to digital versions of newspapers appears to be high.

Responses indicated that a minority of local public libraries responding to the survey are providing access to digitised or electronic newspapers or intend to do so in the next three years. A very small number of these libraries are using OCR technology to allow digitised newspapers to be searched. Some libraries spoke about the desirability of digitisation of newspapers because of the expense of purchasing and maintaining microfilm readers and printers, limitations on space available to store hard copies and the potential access advantages for rural and remote communities.

Not surprisingly, overall, the focus of libraries surveyed was on short-term rather than long-term access. Many of the libraries reported that they are still working out how access to their digital newspapers will be preserved and what their role will be in the future. While the view was expressed that only the national and state/territory libraries would have the resources and infrastructure to undertake full-scale digitisation of local and regional newspapers, several indicated their keenness to work with their state/territory library on digitisation projects. Many are keen to receive guidelines about newspaper digitisation from their state/territory library or from the National Library of Australia and to learn about the Australian Newspapers Digitisation Program with a view to contributing to this Program.

The Australian Newspapers Digitisation Program (ANDP) is an initiative of the National Library of Australia, which it is undertaking in conjunction with the state and territory libraries, to provide free online access to digitised fully text-searchable historic Australian newspapers. This Program is currently in its pilot phase to digitise fifty thousand pages from eleven newspaper titles. The production phase will deliver a minimum of three million pages over three years. The first half million pages will be nineteenth century newspapers; the second two-and-a-half million will be newspapers from 1900 through to 1954, after which copyright applies. Newspapers are being selected according to their significance in conjunction with the availability and condition of microfilm which is being digitised. Newspapers from each state will be digitised—including the *Sydney Gazette and New South Wales Advertiser*, Australia's earliest newspaper. The National Library has also received \$1 million from the Vincent Fairfax Family Foundation to support the digitisation of *The Sydney Morning Herald* from 1831 to 1954.

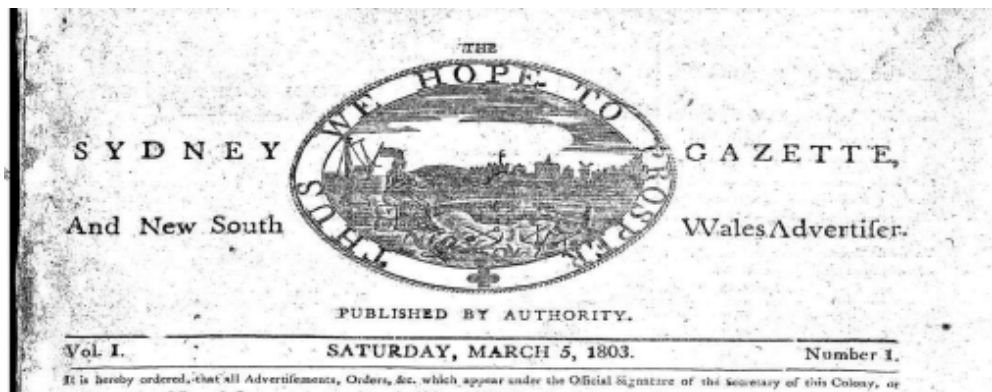


Figure 5: The Sydney Gazette and New South Wales Advertiser, Australia's first newspaper

In the emerging digital environment, many of the ANPlan partners have concerns about the future viability of microform. Withdrawal of suitable film stock, withdrawal of suitable microfilming bureau services and lack of suitable microfilm storage facilities will have a direct effect on the viability of microfilming as a preservation option. Withdrawal of industry support for access technologies such as readers and film duplicators and users' preference shifting towards digital delivery are also expected to adversely affect the viability of

microfilming as a preservation option, either through shifting use back to the preservation masters or through a reduction in demand for microfilming being met by a reduction or loss in the supply of microfilming services. Economics play a role—instead of going through the expensive process of replacing their defunct microfilm readers, smaller libraries are thinking about digital delivery.

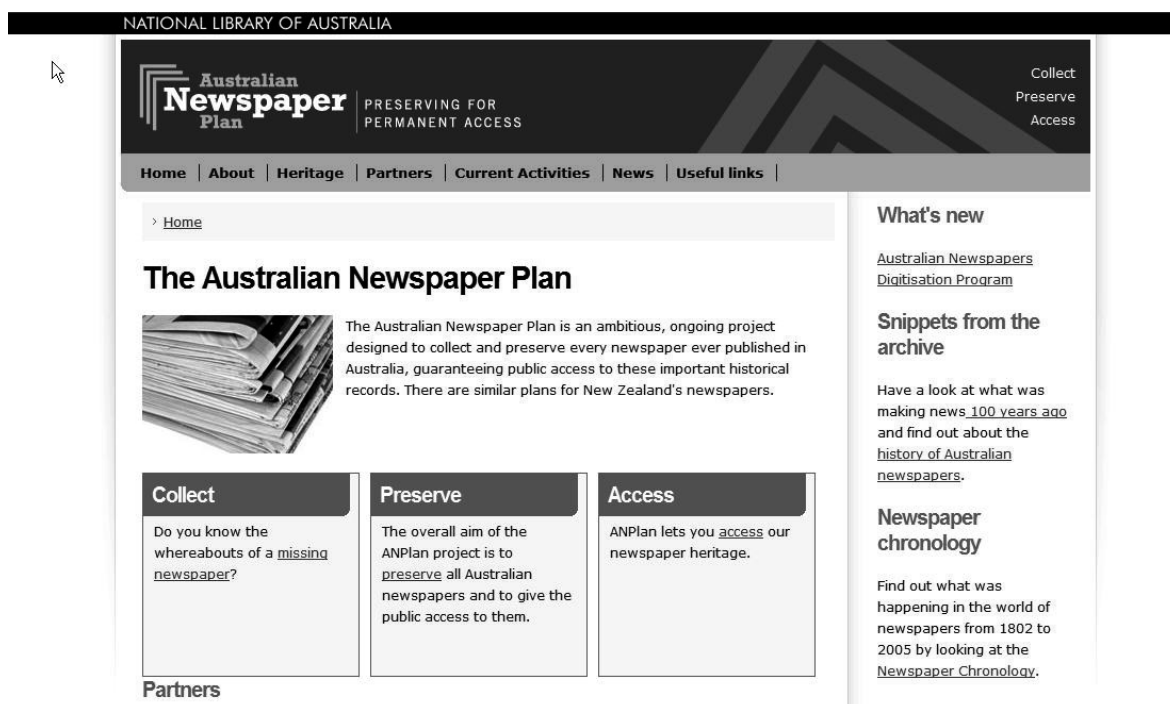


Figure 6: The ANPlan website homepage (www.nla.gov.au/anplan/)

In order to understand what role digital versions of newspapers might have as preservation copies, Australian libraries are exploring a range of questions. These are technological, economic and organisational – while guidelines for digital capture, storage and maintenance of digital data are being developed, ANPlan partners are also interested in finding out about costs and about how the spectrum of public libraries across Australia will work together to provide ongoing access to digital newspapers. With an awareness of the economic and legal imperatives which will influence choice of preservation pathway, ANPlan libraries are carefully considering the different ‘states of being’ of newspapers in their collections (as well as those which will potentially be ingested) and what combination of approaches might be desirable for newspapers of these different types. With the many forms in which newspapers are currently delivered, innovative solutions to providing permanent access are actively being sought so that Australian libraries will be optimally positioned to provide access to their rich newspaper heritage into the future.

Endnotes

¹ Colin Webb, National Library of Australia, *Roles of digitisation and microfilming in Newspaper preservation: Draft discussion paper for NPLAN, October 2006.*

² Table provided courtesy of the State Library of South Australia.

³ Colin Webb, National Library of Australia, *Roles of digitisation and microfilming in Newspaper preservation: Draft discussion paper for NPLAN, October 2006.*

⁴ Beth M. Robertson, State Library of South Australia, *The importance of partnerships for newspaper preservation*, paper given at IFLA International Newspaper Conference, 1-3 April 2008, *Old Issues, New Issues: Impact of Digital Technology upon Contemporary and Historic Newspapers*, at the National Library of Singapore.

⁵ See *The Digital Future of Newspapers: Report on the ANPlan Survey, November 2007*, accessible at: www.nla.gov.au/anplan/extras/news.html#digitalfuture

⁶ The distribution of these responses was: New South Wales: 32; Northern Territory: 1 (made by the Northern Territory Library on behalf of the local libraries in the Northern Territory); Queensland: 18; South Australia: 12; Victoria: 32; Western Australia: 60. Fourteen responses were received from unidentified public libraries.