

Digital Practice: PictureNSW and the Development of Guidelines for Local Digitising Programs

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Abstract

The paper arises from the PictureNSW project undertaken in 2004 and 2005 by the State Library of New South Wales in cooperation with New South Wales public libraries. The paper sets out the goals of the project, the processes followed, and the rationale and nature of the Guidelines produced by the project. It sets out some lessons of the project, and some suggestions for the future.

Preface

Public libraries in New South Wales have a cornucopia¹ of online pictures. Over the past decade and more many libraries have created and maintained growing collections of online images – mainly historical. In the absence of a common approach, they have been inventive, creative and diverse. The PictureNSW project, undertaken by the State Library of New South Wales in cooperation with NSW public libraries, created simple guidelines which all could use.

The paper includes

- 1 an introduction which sets out the background to image digitising in public libraries
- 2 an account of the PictureNSW 2 project
- 3 an outline of the guidelines, with a focus on issues relating to standards, interoperability, the achievement of common practice, and consistency
- 4 some conclusions.

Digitising in Public Libraries

This paper is about digitising activities by Australian public libraries and local historical societies, with a particular focus on the PictureNSW program.

The creation of electronic copies of photographs goes back in Australia to the 1980s. Early projects include the Museum of Victoria *World's Biggest Family Album Project*² and the State Library of New South Wales' *At work and play* Bicentennial project.³ Digitised collections have been made available on the Internet since the development of the World Wide Web in the early 1990s. While large cultural institutions led this practice, smaller institutions soon followed.

The large photographic collections in large libraries, museums and archives are the source of most material in online collections. Public libraries are adding their collections to the online environment so that even quite small libraries with modest collections can have a unique online presence.

Many local digitising programs were initially funded by small grants. Because there were no state or nationally-based programs for small institutions until quite recently, digitising practice developed in a variety of ways as individual institutions worked out their own solutions and practices. As libraries confronted issues, including which image resolution to use, how to preserve digital copies, and how to make the images publicly available, they developed solutions of their own, or took them from a wide range of sources. There was often extensive consultation with others who had already undertaken digitising projects, so that particular practices spread; the quality of information transferred varied depending on who was asked to provide it.

Early digitisation program development occurred in those libraries where staff championed these programs, or had expertise in the technology, or a passion for historical collections, or some mixture of these elements.

Several central approaches were developed. Nationally, the scene has been dominated by Picture Australia, which was developed by a group of large cultural organisations (www.pictureaustralia.org) Picture Australia (PA) uses metadata to aggregate disparate local collections. It has created a portal that brings together libraries, museums, archives and other institutions, both small and large. PA's documented standards are also a valuable resource for digitising practitioners. It is common for digitising projects to be PA-compliant from commencement regardless of whether membership of PA is a clearly defined goal.

The Collections Australia Network (CAN), formerly AMOL (Australian Museums and Galleries Online), is the other major central approach, and is planning to provide online "exhibition space" and infrastructure for many Australian museums, galleries, libraries and collections. The AMOL site was relaunched in September 2005 as Collections Australia Network, with the goal of "enabling small to medium collecting institutions to expand into the online environment in a modest yet effective manner." (CAN 2005). Of particular relevance to public library digitisation projects has been their online digitisation course, "Capture your collections" at <http://amol.org.au/capture/>, the most accessible and useful online course available in an Australian context.

Planned future developments in CAN seem likely to add useful resources to those available to local image digitising activities – a core goal is to help smaller institutions to digitise. The project will include a webform for submission of data, server space for storage of smaller online collections, and an open archives repository.

States have varied in the extent to which they have taken a whole-of-state approach, although most states have moved towards this in recent years. One of the most significant initiatives was the PictureNSW program, which is described below. Also, within New South Wales, the State Library has a strong, well-established digitising program extending back to the 1980s, and a clear digital library strategy. The Australian Pictorial Thesaurus⁴ was initially developed from the PICMAN Topic Thesaurus created by the State Library of NSW for use with its PICMAN database.⁵ It is now used in the largest national collection of online images. Further development of this thesaurus has occurred as part of a Council of Australian State Libraries (CASL) initiative. It will also be adopted by CAN.

Picture Queensland and Picture Victoria are being established under the direction of the relevant state libraries. The two projects have quite different standards, which highlight the variety of options available for aggregated image collections.

Picture Queensland (PQ) is creating a high-quality archival resource of selected images from the State Library and in the future also from libraries throughout Queensland. The image library is at <http://www.pictureqld.slq.qld.gov.au>, and is still at an early stage, including (Sept 2005) a small number of images from the State Library and others from five public library services. Quality control is maintained by State Library staff, who provide extensive support.

Phase 1 of the project had its major focus on production of standards and guidelines, including quality assurance issues, acquiring storage capacity, software issues, and other procedural issues, such as indigenous protocols. In Phase 2 there was a focus on digitising images, investigating

what other players – education, museum and art museum sectors – were doing, and implementing an outreach program, with six initial pilot sites. Training was undertaken in three Queensland locations.

At the same time, there has been a great deal of parallel development, with digitising programs in larger local government areas, such as the Gold Coast, Maroochy Libraries, and the City of Brisbane. One issue with the high standards adopted (in relation to archiving, resolutions, mandatory record fields) was that libraries may be unwilling to re-do what they have done in order to match a higher standard.

Picture Victoria (PV) is creating a portal for access to Victorian images – at <http://www.pictures.libraries.vic.gov.au> PV is open to a range of picture collections, although funding and resource allocation is available only to public libraries. This support includes assistance with transfer of established digital image collections to PV and training and/or funding for outsourcing scanning for libraries whose images are not yet digitised. Like PQ, PV is a centralised database – public libraries provide digitised images and records relating to them. It uses a resolution of 72 dpi and does not provide an archiving facility for digital masters – PV aims at access, not preservation. Fifteen Victorian public library services and eight local history/historical societies are involved at present. The State Library's large online collection of images is not included.

A third example: the State Library of Tasmania maintains an Images from the Heritage Collections website, with a state-wide images database maintained by the State Library and located at <http://images.statelibrary.tas.gov.au> The Archives Office of Tasmania provides a service at <http://resources.archives.tas.gov.au/archphotos/searchmenu.asp>

Standards and Guidelines in Public Libraries

Looking at Australian practice, there have been only recent efforts to standardise practice. There is therefore diversity of practice in standards. Amongst NSW public library local history specialists, there was a clear preference for a low common denominator approach to standards, as has traditionally been the case; libraries argued for an optional controlled vocabulary, and relatively low resolution images. However, there was also recognition that where there is an option to improve standards, particularly image resolutions, this should be done.

While this paper is concerned with public libraries, the digitising context is local history. Very often public libraries are affiliated with local history societies, which provide much of the local demand for and interest in online collections. On the other hand, local history interests may be primarily affiliated with a local museum, which plays the role occupied elsewhere by the library.

Most online collections are dominated by scanned copies of historical photographs. There is relatively little material based on digital originals. Such material is likely to become increasingly important in two main categories – digital photographs of historic sites, artefacts and people; and older digital images which become progressively of historical value themselves.

Digital originals will have somewhat different standards and approaches. Selection will involve culling from a large number of digital images and discarding a great deal. Preservation is likely to be of the in camera JPEG version at the highest possible resolution. A great deal of metadata can be captured by the software itself and included in the record.

PictureNSW Stage 2

Amongst public libraries in NSW there are some large online collections, with a total of over 200,000 images online. Now, through its PictureNSW program, the State Library of NSW is facilitating a state-wide approach through leadership in digitising practice, provision of expertise and mandating of basic guidelines in its funding programs.

The State Library of New South Wales has a long-standing and established digitising program extending back to the 1980s, while the Library Council of New South Wales and its program of grants has provided initial funding for much of the work which has been undertaken locally.

In 2003/04, the Office of Information and Communication Technology (OICT), NSW Department of Commerce, allocated funding to the State Library for the first stage of the PictureNSW Project (research and scoping). The purpose, as defined in the Project Plan (August 2003), was:

- ◆ to gather information about the local history collections of New South Wales public libraries;
- ◆ to identify common standards for digital image and metadata creation;
- ◆ to make recommendations on technical and infrastructure requirements of an aggregated service; and
- ◆ to test the concept of an aggregated New South Wales image service.

In December 2003, an audit was undertaken of New South Wales public library local history collections and historical society collections (if housed within Council or on the premises of a public library). All 99 NSW public library services gave detailed responses to the audit questionnaire.⁶

In summary the public libraries in NSW reported holdings of approximately: 635,000 photographs; 149,000 printed books; 12,800 minute books; 16,360 rate books and 5,000 oral history sound recordings. 47 libraries have/had digitising programs. There were no uniform standards applied for digitisation. The results of the audit and the consultants' report have been published (State Library of NSW 2004, 2005) and there is also direct electronic access to each library service website and to their digitised collections (where available) through a directory.⁷

Public libraries attended a seminar in 2004, when the audit had been concluded, and discussed the state-wide collecting of local studies material. The seminar highlighted four case studies provided by public library local studies staff. They brought together examples of best practice, which showed considerable diversity. This was the origin of the Guidelines for Local Digitising Programs, which were sought by public librarians to simplify and streamline planning for digitisation projects – a way of pooling expertise which already existed across the state – if you knew where to ask.

Stage 2 of PictureNSW, also funded through the OICT, was to investigate and make recommendations into the needs and requirements for a state-wide approach to digitisation projects and activities in NSW public libraries through the provision of standards and guidelines, and of training.

The aim and scope of the project are detailed below:

- ◆ To identify and document digital technical standards and guidelines which then become essential criteria in the Library Development Grant Guidelines for digitisation projects (the Grants being the major source of funding for all NSW public libraries' digitisation projects).
- ◆ To develop a proposal for awareness and familiarisation sessions on digitisation initiatives for NSW public libraries, in association with representatives of the State Library's Public Library Services Division and members of the CPLA (Country Public Libraries' Association) and the MPLA (Metropolitan Public Libraries' Association).
- ◆ To participate in a feedback/training presentation on the outcomes of the PictureNSW Project Stage 2 for NSW public libraries and State Library staff.

The guidelines were to include:

- ◆ advice/criteria for selection of material to be digitised
- ◆ cataloguing/metadata standards; and
- ◆ digital access and preservation standards.

The scope was extended early in the project to include specifications for the treatment of digital originals (i.e. photographs taken with a digital camera.)

Both projects have been undertaken by consultants – Swinburne Library and Information Service (SLIS) and Practico Pty Ltd – working with a Steering Committee led by the State Library of NSW.

Development of Guidelines

It is inevitable, given the evolutionary nature of image digitising, that standards have been selected to meet the needs and understanding of the time, as well as the influence of preceding experiences. They are likely to lack consistency and coherence. They will also likely to change over time with developments in technology, falling costs of hardware and of data storage, and improvements in the bandwidth available to Australians.

Other factors which have impacted on standards and practices include patterns of supply, the development of local practices, and vendor supply or user association patterns. For example, users of a particular integrated library management system may take a common approach to managing their digital collections; in Victoria the proliferation of Inmagic software in the 1990s had a major impact on how images were stored and indexed. In NSW, Victoria and elsewhere the services provided by SearchTech (since the 1980s) have been influential in creating patterns of practice, such as the adoption of particular screen resolutions.

As part of the project, research was conducted into international and Australian standards, guidelines and practice in libraries and other relevant organisations. This included critical analysis of the feasibility of such practices for New South Wales public libraries.

The development of the digital guidelines also took into account the information and knowledge gained during the Local History Collections Audit and discussions with the Project Steering Committee as well as SLIS's experience in developing digitising procedures for the State Library of Victoria in 2002 (State Library of Victoria, 2002)

In order to gain an overview of how digital standards, guidelines and training are provided to public libraries and museums in other Australian jurisdictions, telephone or in person interviews were conducted with representatives from State and Territory Libraries, including the State Library of New South Wales, and the Museums Association of Australia.

In November 2004, a focus group was held at the State Library of NSW with New South Wales public library staff who have varying levels of experience of digitising projects. The purpose of the session was to identify issues which would assist in the development of guidelines and training programs for digitising projects in New South Wales public libraries.

The main inputs to decisions about standards and best practice were based on: reading of the literature; the practice and preferences of public libraries; and what was realistically achievable. In developing the guidelines it was intended that libraries be stretched a little but not so much that scope of the task was a disincentive.

The decision-making process involved consultation primarily through a steering committee representing the State Library of NSW and specialists from NSW public libraries. Proposals from the consultants went through this process.

Outline of the Guidelines

Specific guidelines deal with five areas – selection, cataloguing/metadata, image resolution, file management, and access to images. The Guidelines also take into account the likely growth of digital originals as a component of digital image collections, and the paper addresses this issue.

The Guidelines indicate both minimum standards, and best practice. The best practice has, in some cases, a higher standard which may depend on a level of finance or technical support that may not be available to many smaller public libraries or societies. The Guidelines relate to standards, interoperability, and consistency of practice.

Selection

The Guidelines simply require a “documented rigorous selection procedure”, and this statement is complemented by a rationale which sets out some proposed criteria. Although many public libraries have aimed to digitise their entire collections of photographs, this is not always the case, and hard copy collections of photographs usually include material of varied value.

There is a wealth of advice available on how to create a selection policy, including sample policies.

Cataloguing

The Guidelines indicate the links between MARC fields and Dublin Core elements, which aid the display of records in web OPACs in a form which is able to be harvested. The mandatory DC fields are given as the minimum standard. Subject and keyword are both optional fields.

The use of a thesaurus (either the Australian Pictorial Thesaurus or Library of Congress Subject Headings) was recommended, but was not included in the minimum standard. The main reason for regarding subject treatment as optional is the nature of image description. Most images include a title which is descriptive of the image, and which may make additional subject information redundant. Many public libraries with existing digitisation programs make use of subject headings to add further value to the image being catalogued. Subject headings make it easier to browse the digital collection.

The Guidelines also note that cataloguing is expensive. It is by far the most expensive element in digitising a collection of photographs, and accounts for most of the cost, and this factor was also relevant in recommending a minimum standard which would not be too onerous.

There are a number of metadata guidelines available. The Guidelines recommend the use of the PictureAustralia metadata guidelines. However, this is not part of the standards.

Image resolution

The Guidelines note the importance of selecting an appropriate resolution for scanning relative to the physical size of the image and recommend a resolution for a standard print of at least 150 dpi, and 2 megapixels for digital photographs.

The standard resolution is much greater than that used in early digitising projects, and the main reason for this is that improved storage and communications mean that this resolution is increasingly used for online material, and that it can be used without creating problems.

The Guidelines, in dealing with best practice, turn their attention to formats appropriate for longer-term archiving of digital copies and digital originals, recommending retention of an archival copy in a TIFF lossless format and a resolution of at least 300 dpi. For digital photographs, the recommendation is for 6 megapixels.

File management

The Guidelines recommend as a minimum that files are regularly backed up and stored offsite as part of a disaster recovery plan. They also prescribe naming files using up to eight alphanumeric characters and a three-character file extension indicating the file format.

In terms of best practice, creating a web interface and a unique identifier for each image is recommended. Documenting the file naming practice incorporating a numbering system that is consistent with local collections is also recommended. It is important that standard file naming conventions are used, in order to facilitate cooperative ventures.

Access to images

The Guidelines prescribe the web as the main means of providing public access to digitised images. A number of early digitising projects used CD-ROM as the storage and access medium for local history picture collections. The Guidelines consider CD-ROM an inappropriate format for public access, as it restricts access to those visiting the library or to those who buy or borrow the CD-ROM.

To maximise access the Guidelines suggest images should be available for harvesting and searching by PictureAustralia and other harvesters and search engines. To achieve that level of access it is necessary to build a website which links the image and the record so that locating text will lead immediately to the image. Ideally an images website should be searchable for all of the record and where possible should also permit sequential browsing by broad category.

Conclusions

The Guidelines were developed to help public libraries involved in digitising projects. They are based on the hard work that has already been undertaken by many libraries in developing online local history collections. By providing minimum standards and rationales they encourage a systematic, standards-based approach to digitisation. The Guidelines will lead digital practice within NSW, and will be of value to digitising within smaller institutions in other states and territories too. Over the longer term, a simple approach like this one is more likely than any other to bring about interoperability, common practice, and consistency.

We want all public libraries to develop an online visual presence for their communities, and believe these Guidelines will help libraries which have not yet started, and make their work achievable, making more unique local images accessible for study, research and general interest.

The Library Council of New South Wales has endorsed the Guidelines and has recommended them for use. The Library Council will reference them in its Library Development Grant guidelines, so that public libraries seeking grant funding for digitisation projects will need to comply with the digitisation guidelines.

The Library Development Grants in conjunction with the Digital Practice Guidelines will therefore continue to assist public libraries to plan and implement quality best practice digitisation projects.

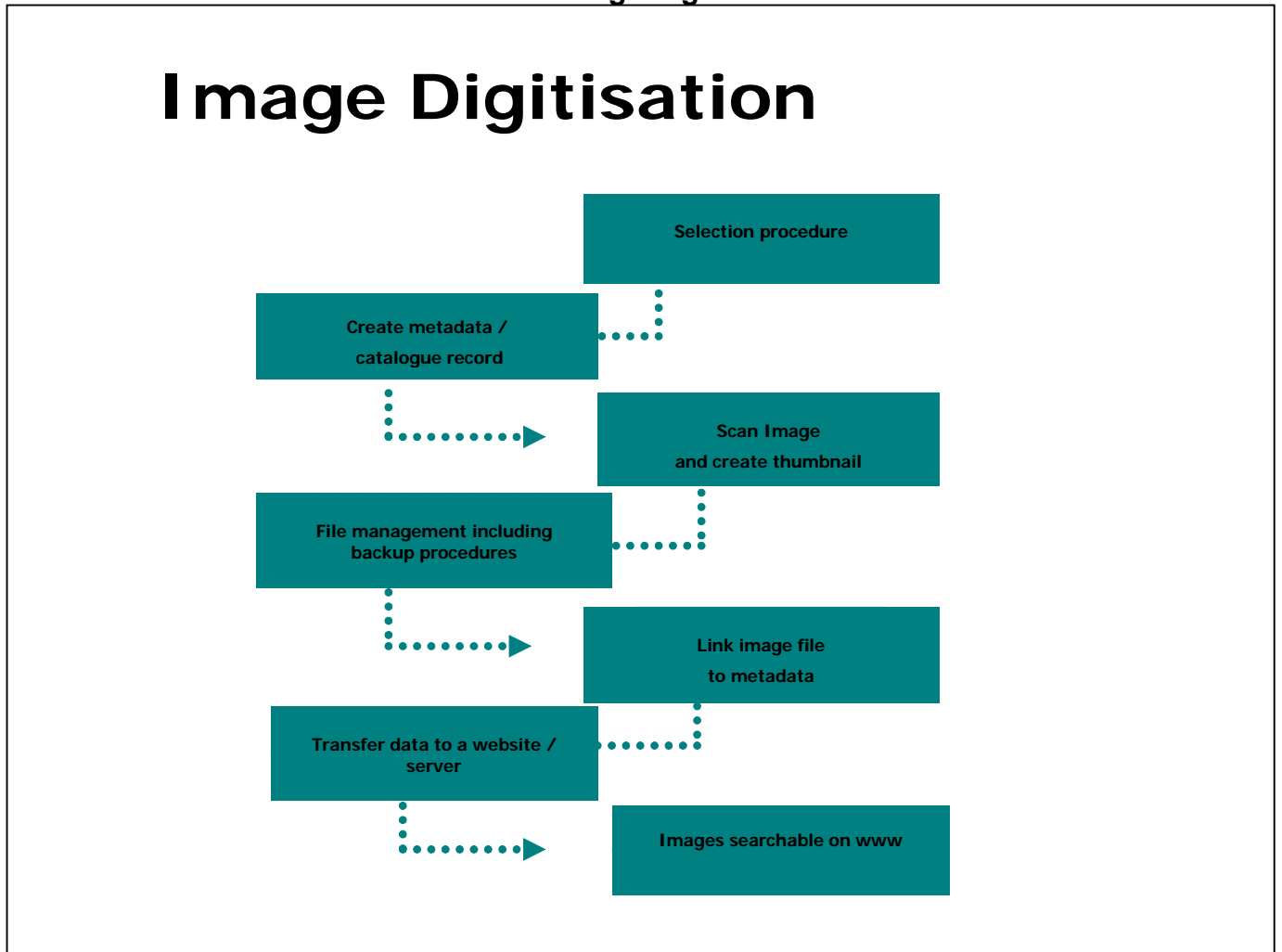
They also contribute to the growing consolidation of practice amongst the diverse range of players in Australia. Having come to grips with the variety of practice, the Guidelines provide a model for others to begin more smoothly. They are part of the growing range of tools and resources for small institutions to use in providing online images to their customers.

The work undertaken is of great significance for the next stage of building local digital image collections. This will involve consolidation and rationalisation of diverse practice, a greater

focus on consistency and quality, enhanced access to online digital collections, more effective training and skills acquisitions, and long-term management of online resources.

The following flowchart from the Guidelines illustrates the sequential steps recommended for digitisation projects. The Guidelines are available at <http://www.sl.nsw.gov.au/pls/publications>

Flowchart for Image Digitisation



References

Accessed December 2005

Collections Australia Network (2005), *Media release*, [8 April], at <http://amol.org.au>
State Library of New South Wales (2004), *A Directory and Report of New South Wales public library local history collections and local history digitising projects*. State Library of New South Wales, June 2004. Available at <http://www.sl.nsw.gov.au/localhistory/welcome.cfm>
State Library of New South Wales (2005), *Digital practice: guidelines for digitising images in NSW public libraries* / prepared by Swinburne Library and Information Service (SLIS) and Practico for the State Library of New South Wales. State Library of New South Wales, July 2005. Available at <http://www.sl.nsw.gov.au/pls/publications>
State Library of Victoria (2002), *Image digitisation of local history collections*. State Library of Victoria, July 2002. See http://www.libraries.vic.gov.au/downloads/Victorias_Virtual_Library_Digital_Collection/manual1.htm

Notes

¹ <http://en.wikipedia.org/wiki/Cornucopia>

² <http://www.museum.vic.gov.au/bfa>

³ <http://www.sl.nsw.gov.au/picman/comb.cfm>

⁴ <http://www.picturethesaurus.gov.au>

⁵ <http://www.sl.nsw.gov.au/picman/about.cfm>

⁶ Council amalgamations have subsequently reduced the number of library services to 97.

⁷ http://www.sl.nsw.gov.au/localhistory/image_collections.cfm