Collaborative Cataloguing of Moving Images and New Media Art Works

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Abstract

This paper outlines the collaborative development of a catalogue of moving images and new media art using the Dublin Core as a starting point. Conventional methodologies are superceded by the need to accommodate a culture of information sharing and the uncertainties of rapidly evolving technologies. Multiple inputs and outputs create unexpected points of resistance where the borders of a new cultural organisation are defined by the extent to which its Application Profile is deployed.

Keywords: DC-2001, moving images, new media, Dublin Core, collaborative cataloguing, application profile.

1. Introduction:

The cataloguing of moving images and new media art works for the on and off line spaces of The Australian Centre for the Moving Image (ACMI) has resulted in a departure from conventional methodologies.

The collaborative nature of these methodologies has meant that the borders of this cultural institution are defined more by the extent of deployment of a Cataloguing (Metadata) Standard (Application Profile) than by information ownership.

It takes time to create high quality metadata for moving images and new media art. It also requires a facility for selectively gathering information from a range of people (in different locations). Such people need a repository for their knowledge and a means of accessing and discovering contextual relationships inside and outside of their fields of influence. This paper explores issues arising from the development of the ACMI Catalogue (1) where deploying the Dublin Core was just the first step.

2. An overview of the project:

In the centre of Melbourne, beside the river, on roofed-over railways lines, there's an unusual public space nearing completion to be known as Federation Square. In essence, it's a $400 million public arts precinct. The first part of this precinct to open will be the Australian Centre for the Moving Image - to be known as ACMI.

Fig 1. Aerial impression looking north with Flinders St Station on the left

ACMI will include some interesting concepts: a vast underground Screen Gallery for internationally significant digital art - to be exhibited on 300-400 screens of all kinds and sizes; a ground floor dedicated to screen literacy, in all its forms and another floor of cinemas. In addition, there is a commitment to delivering a satisfactory reflection of these screen-based experiences on-line. It's not just a conceit that the built environment articulates the open, multifaceted and federated qualities of the networked world. There's currently nothing quite like it anywhere else and, as you can imagine, it's an exciting project to be involved with.

2.1. We will not be made hostages to proprietary agenda

To create something fresh, worthwhile and enduring in an environment where there is no history and nothing is stable (even the building is on springs) requires a flexible approach. Curatorial, public programming and collection management units have little choice but to invent processes as they go. As projects evolve, so do needs. It is unrealistic to expect stakeholders to accurately specify their requirements in advance. In such an environment, it's essential that curators and cataloguers are not made hostages to proprietary agenda. Failure to recognise the reality of what is more like an artistic methodology is often the cause of a kind of technological trap where control is ceded to outsiders. In Australia, it is common practice for contractors to be brought in by performance minded IT managers to develop 'bleeding edge' technical solutions that are based on little more than vague generalities and half-formed ideas. By the time some overarching technical 'solution' is deployed, either the technology has become obsolete or the requirements have changed and the project fails.

A more pragmatic approach is to resolve to stay in control of any technology deployed. When resources and skills are limited, this amounts to keeping everything very simple and modular. It means building an iterative culture of incremental improvement - a process that never stops - a process that overcomes obsolescence by matching actual practice and reflecting current needs.

2.2. Goals and challenges

Collection Management had four major challenges:

1. To gather up the collective knowledge and memory of all who might influence the life cycle of each work into bite sized 'chunks' of metadata, called title-records.

2. To make suitable fragments of this information globally accessible, as well as providing a source of content for footnote screens in the screen gallery, back-of-house administration, printed catalogues, reports, displays, lists, things to do, audio tours, interactive experiences and, most importantly, control over the flow of information about valuable assets (including the metadata itself).

3. To generate Dublin Core conforming elements so that other cultural institutions can exchange metadata;

4. To accommodate the metadata locked up in legacy databases.

2.3. Getting started - simply

New media works are often characterised by being capable of delivery in multiple formats. A significant departure from the item/format centred model of our main legacy database was to base the notion of what constituted a 'chunk' of information on the David Bearman model (2). In this model, works are expressed in many genres and/or performed at many times and may be produced in numerous manifestations. Each record is based on the intellectual content of the work rather than on its particular manifestation or format.

The Dublin Core provided a convenient framework for a working data model. It allowed for pre-defined metadata elements to be deployed in a way that would do no harm, while experiments were conducted with a variety of qualifiers and extra elements to refine the model. Cataloguers began simply, by applying the Dublin Core Element Set to new media titles - and expressing these elements generically in XML. This was accomplished by using nothing more than a plain text editor i.e. Notepad. For example, an XML fragment looked like this:

```
<?xml version="1.0" ?>
<title-record>
<identifier>
<system>1000053</system>
<medianet-number>308102</medianet-number>
</identifier>
<type>interactive</type>
<type>website</type>
<type>collection</type>
<title>
<main-title>The Flight of Ducks</main-title>
<alt-title></alt-title>
</title>
<creator>
<firstname>Simon</firstname>
<lastname>Pockley</lastname>
<also-known-as></also-known-as>
</creator>
```

Having tested these elements against what we wanted to know about our titles, we quickly found that we needed elements like 'Audience' and 'Admin'. Our legacy database contained data about audience suitability. It was important to keep looking over our shoulders at this database because we knew, sooner or later, we would be mapping to it. 'Admin' obviously refers to our administrative needs.

As the numbers of works tested against evolving schema grew to about 150 titles, we had reached the point where iterative re-keying was too time consuming to be practical. At this point the metadata elements had become more specific and also more complex in their relationships to each other. This is not to depreciate the Dublin Core. The 'dumbing down' (in the sense used by the Dublin Core community) of the title-records to DC (and other Schema) has remained an important cornerstone of our collaborative activities, simply because it provides a 'core'.

2.4. Multiple inputs and the gathering of knowledge and memory:

Those involved in the production of metadata for new media works in digital formats will understand how important it is to get as close to the point of creation as possible. Many of our artists live in other cities and countries and the organisation itself is distributed across a number of locations.

The next step was to construct an input tool so that anyone inside or outside the organisation could input data into the title-record. Using a simple HTML form, we created an entry point that would first, allow for searching and browsing the existing records; second, allow for records to be edited or updated; third allow for new records to be created; and fourth allow for a verification process whereby the quality of records could be checked and given authority.
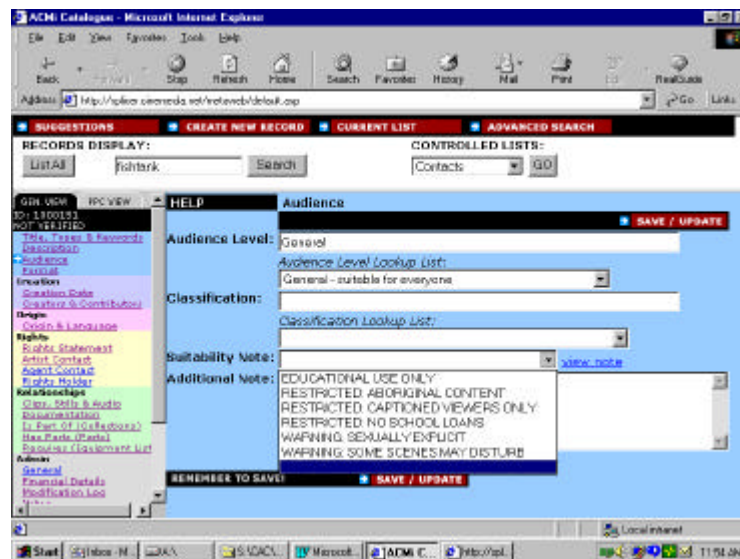

Fig 2. Screen grab of entry form showing non-DC element, Audience

This was and is a truly iterative process. Elements were grouped into entry forms that were placed beside a simple element index. The more we all used the form to create and edit records the more expectations grew and the more fields we needed to add. For example, the simple search (text based) evolved into an advanced search (element based); the development process required a Suggestions field; multiple titles by the same creator needed a cloning facility; contact details were hived off into a separate database; clips and stills appear; controlled (drop down) lists evolve; documentation appears in text boxes. Each week the changes offer refinements that make screen shots (in a paper such as this) feel almost outdated the moment they are captured.

2.5. Multiple outputs and the display of knowledge and memory:

While the generation of such a comprehensive range of metadata may not excite everyone, the production of multiple and various outputs provides a more tangible expression of the strength of collaborative cataloguing.

To date, our focus has been on the gathering of enough information to arrive at a critical mass. However, the number and range of outputs is growing rapidly in response to user needs. The raw material for these outputs is the XML title-record. XSL transformations cherry pick amongst the element and attribute trees to create a range of formats and expressions of data for different classes of user. So far, these include:

- the entire record as an XML tree
- the entire record as a single HTML display (limited access)
- non-administrative elements as a single HTML display (back-of-house)

- a (qualified) Dublin Core HTML embedded version
- a Public Program Committee view (for printing)
- an output into Director from which a Flash file is generated
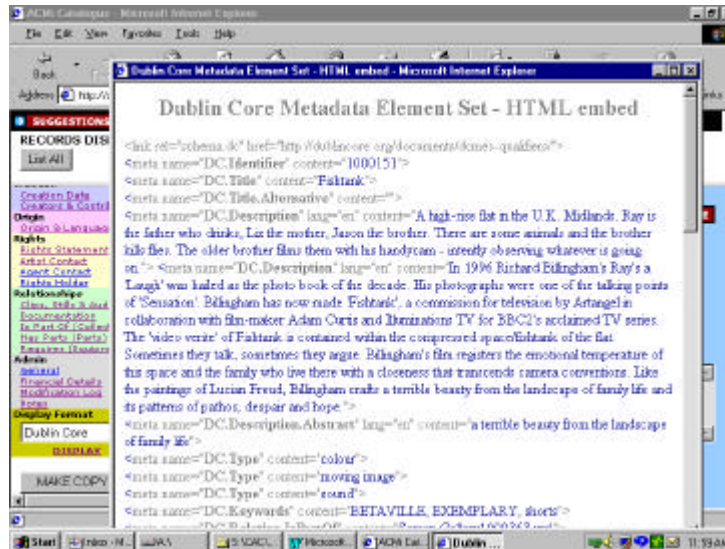- an XML output from which a 3D exhibition visualisation tool extracts clips and title data

Fig 3. Screen grab showing output as a (qualified) Dublin Core HTML embedded version

Fig 4. Screen grab showing output of non-administrative elements as a single HTML display

Outputs currently in development include:

- a range of public web interfaces for ACMI (a variety of catalogue experiences)
- integration with booking and scheduling software
- aural outputs for integration with voice recognition software
- export into outside web displays of specific collections (e.g. student gallery)
- automated export of selected elements into external database (Access)

2.6. Representing the Application Profile

Application Profiles are becoming the preferred method of representing the underlying principles at work in this information space. They include:

- elements and definitions

- qualifiers and modifiers

- controlled lists or schema/s from which the values are obtained

- mandatory, recommended, and repeatable, elements

- examples

Preparation of the ACMI Application Profile has drawn on existing profiles that had been published by the AGLS (Australian Government Locator Service) (2) and MPR (3). There are many others, and while their underlying principles are the same, their presentation does vary. When combined with associated documentation such as thesauri, style guides and levels of cataloguing, an Application Profile can become the basis of the all-important user's manual.

The challenge we've been facing in compiling the Application Profile is how to accurately capture and represent the relationships between elements. Representing the many layers of the elements, from the DC 'dumb down', through all the permutations of qualifiers and controlled lists is difficult. At this point, we've opted for a file that contains the application profile in the form of a word table, thesaurus, list of A.C.S. (ACMI Cataloguing Standards) which includes description, application and metadata elements, modifiers and qualifiers for inclusion, and a style manual.

Collectively, these items provide a layered picture of how the catalogue should be used. However, at this stage, we are struggling to find a suitable means of displaying a dynamic representation of the data at hand.

2.7. Unexpected difficulties:

In many ways the Dublin Core initiative itself is a working example of how a community of interest can work collaboratively towards a common goal. The communities of interest that are forming through the development of the ACMI Catalogue are made up of individuals who are not accustomed to working outside of their fields of influence. In general, individuals have been slow to collaborate because:

- they do not understand the need for authoritative metadata
- they have deeply entrenched paper-based work practices
- there is uncertainty about the 'ownership' of information
- they are not used to working in an electronic environment
- they are not used to being 'in control' of technical development
- they have difficulty imagining how they can draw from a collective pool of memory

Cataloguing staff are currently attempting to involve all our curators and programmers by working through their paper files to arrive at a critical mass. In many ways this is the networked paradigm at work. The more the network/catalogue grows the more useful it becomes. Artists and new media practitioners are perhaps the most difficult because they are either reluctant to re-visit completed works or of the opinion that cataloguing is someone else's job.

On the brighter side, groups without access to a database are now approaching us to gain access to our database and to metadata generation tools. They want to use the ACMI Catalogue as a back-end to their web sites. There are issues to be resolved concerning the quality and hence authority of the metadata. These issues take us back to where this paper began - to the blurring of where the borders of ACMI begin and end.

References:

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[on-line] http://splicer.cinemedia.net/metaweb/default.asp [username] catdemo [password] letmein

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[on-line] http://www.dlib.org/dlib/january99/bearman/01bearman.html

3. Australian Government Locator Service (AGLS)
[on-line] http://www.naa.gov.au/recordkeeping/gov_online/agls/summary.html

4. Minnesota Public Radio (MPR)
[on-line] http://www.openarchive.org/meta/profile.html