The Aotearoa Digital Arts Reader
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New Data: Curating and Archiving Digital Art in New Zealand[1]

Lissa Mitchell

How do we ensure long term access to digital information? Traditionally art museums and galleries have been concerned with static physical objects, and even those that regularly exhibit video and audio works rarely have in place policy for documenting those works beyond their existing systems for physical artworks. Questions of digital preservation in relation to the arts extend to the struggle the traditional art world seems to have incorporating art of a digital nature as part of institutional exhibition, research and collection activities. Few museums and galleries in New Zealand are purchasing digital works and even fewer have policies and procedures for documenting and caring for them. Venues that do exhibit media artworks, largely leave long-term upkeep of the work in the artists' hands.

In a generic sense, digital art can be divided into two categories: works that use digital technologies as a *tool* and works that use them as a *medium*.[2] Artworks in the former category—photographs printed from digital files and moving image work—are largely what New Zealand galleries are purchasing. These sit within easily extended traditional art forms; for example, a digital photographic print is a physical object. Equally, moving image on DVD (no matter what the original format: film, analogue video, digital video, software) extends from the acceptance of video as an art form. Another aspect to this categorisation is that works using digital technologies as a tool are generally made by artists with established reputations for producing work in established media. These artists work by selecting the medium best suited to conveying the intent of the work, while technical aspects of production are contracted out to specialists. Programming, for instance, is used as a means to an end rather than a medium with intrinsic artistic possibilities.

Works that use digital technologies as a medium—works made from software programmes or that utilise networks—are not generally acknowledged by New Zealand institutions as a collectable art form, that is, unless they are part of an installation with physical components such as et al.'s *maintenance of social solidarity—instance 5* (2006). This installation, exhibited as part of the *Scape Biennale of Public Art* at the Christchurch Art Gallery, was constructed of multiple media including modified data projections of a live Google Earth feed, newspapers, and installation furniture such as tables, chairs and headphones.

Digital archiving within New Zealand's broader cultural sector can provide a useful context for discussions about curating and archiving digital art. Government initiatives in digital preservation are focused on two areas. The first is the preservation of digitised versions of physical objects. This area involves cultural institutions through initiatives such as the *National Digital Forum* that aims to make collections accessible on the Internet. In the 2007 Budget, the National Library of New Zealand was allocated just over $8 million over four years to expand the amount of digitalised heritage content online. Besides the public benefit of increased access to heritage collections, the strategy argues that "the availability of unique New Zealand content is expected to help drive demand for broadband, improve the return on investment in capability, and create opportunities for commercial use."[3] Some of the results of government funding in this area over the last few years are available for access from the National Library, Te Ara, and Matapihi websites.[4]

The other more recent area of attention is objects that are 'born digital'. This area of archiving is currently narrow and focused on harvesting websites with content that fits standardised protocols of software formats and scripting. In the 2007 budget, the government allocated $8.5 million over four years to enable Archives New Zealand to "develop a strategy for archiving 'born digital' materials, material that originated in a digital environment."[5] Archives New Zealand is primarily a storehouse of government records—this extends to their digital holdings. 2007 was the first year that government spending responded to the need for resources for archiving digital data.

At the other end of the spectrum is the New Zealand Film Archive, a charitable trust formed in 1982. Unlike archives in other countries, which may collect and preserve only feature films, the remit of the New Zealand Film Archive is very broad, encompassing home movies, artists' videos, short film and features. The Film Archive provides *kaitiakitanga* or long term care and management of material donated to the archive, while ownership of the physical tapes and rights to the content are retained by the stakeholders (who variously include the donors of the material, its producers, or those depicted in the work). The Film Archive is already archiving 'born digital' moving image material from a variety of formats including DV tape and digital betacam. The Film Archive also has a programme for the migration of moving image material from heritage tape formats, such as VHS, S-VHS and U-matic, onto a digital format for long term preservation. Currently digital material is stored on removable hard drives and LTO tapes (LTO—or Linear Tape-Open—is a magnetic tape data storage technology developed as an open alternative to the proprietary Digital Linear Tape). The Film Archive's work in this area could be strengthened by the provision of further resources for servers and the development of cataloguing and metadata collection programmes. In the 2007 budget, The Film Archive was allocated $2 million over four years to boost its "efforts to collect and protect our heritage of moving images."[6] The issue is not solely one of software or the moving images themselves. During the late 1980s the then National Museum (now Te Papa Tongarewa) purchased historic video works by Phil Dadson and Popular Productions. The format at the time of purchase was U-matic tape. While the tapes sat securely in collection stores, over time the playback equipment required to run these tapes was disposed of and replaced as the institution kept up with technological trends for showing moving image. Recent transfers of these works to digital sub-masters and DVDs for exhibition has been possible because The Film Archive kept and maintained these old machines through its mandate to collect and preserve moving image heritage. Despite these initiatives, there are no New Zealand cultural institutions dedicated to archiving digital art and art remains unmentioned by Government research and policy on digital preservation.

New Zealand has a significant history of digital art made specifically for the web. The online components of *W3* (1998), the last exhibition curated by The Honeymoon Suite in Dunedin is an early example. Unlike other galleries, The

1. This essay owes part of its existence to discussions I have had with my colleagues Adrian Kingston at the Museum of New Zealand Te Papa Tongarewa, and Jamie Lean at the New Zealand Film Archive.
2. Christiane Paul, "Challenges for a Ubiquitous Museum: Presenting and Preserving New Media," 2007. http://neme.org/main/571/preserving-new-media
3. Judith Tizard, "Support for Digital Content Expansion," *Budget 2007* [media statement], 17 May 2007. http://www.beehive.govt.nz/?q=node/29397
4. The National Library of New Zealand, *Matapihi*. http://www.natlib.govt.nz/collections/digital-collections Matapihi includes online collections of a number of New Zealand cultural organisations. http://www.matapihi.org.nz/ Te Ara: The Encyclopedia of New Zealand http://www.teara.govt.nz/
5. Judith Tizard, "Funding Support to Preserve Digital Archives," *Budget 2007* [media statement], 17 May 2007. http://www.beehive.govt.nz/?q=node/29396
6. Helen Clark, "Nationhood Celebrated in Film, Music and Heritage," *Budget 2007* [media statement], 17 May 2007. http://www.beehive.govt.nz/?q=node/29388

Honeymoon Suite saw the possibilities of using websites as both an independent gallery space and as a promotional tool for the physical gallery. *W3* included web works by artists Sean Kerr and Douglas Bagnall.[7]

The title of Bagnall's *12,800,000 Views of the South Island and Taranaki* (1998) enumerates the possible permutations of the work. The user produces compositions riffing on the styles and iconographies of well-known New Zealand painters by engaging buttons specifying locale ('city', 'suburb', 'seascape') and imagery. Clicking on the picture adds further elements, including Bill Hammond-ish birdmen, patchwork airplanes in the style of Peter Robinson and lumpy McCahon-esque hills. The user may also choose to add critique to their composition by requesting a randomly generated 'art review'. Employing the computer as both tool for generating imagery and as model for a recombinant approach to art production, Bagnall's work invites the users into a playful reconstruction of New Zealand art history.

Sean Kerr's work *Fake* (1998) renders his title onto an on-screen block of virtual woodgrain. By moving their cursor over each letter the user triggers one of four different audio and photographic sequences. While the components of Bagnall's work were created entirely on computer, Kerr's work uses the Internet to trigger and display externally generated audio and moving image. In 1997 Gary Schwartz argued that "digital imagery at the end of the twentieth century, after all, is still anchored, through its dependence on photography, in the nineteenth."[8] These two works are an early demonstration of how a fundamental difference had arisen between the expression of the internal modes of computer processes and the importation and re-working of photographic and video imagery.

Other early web art projects are no longer fully functional or online. Codec.org.nz linked four contemporary arts organisations, with each gallery commissioning an artists' project for the site.[9] *alt.waysofseeing,* Michael Stevenson's project for Artspace was a collaboration using the web expertise of Robert Hutchinson (whose *Spatial State of A and B* was New Zealand's first online gallery). Keri Whaitiri and Mike Dunn created a sound-based project presenting a series of oral recordings of Māori proverbs. The impulse for preservation means that the website is still accessible (on the project curator Danny Butt's website) but this presence is undercut by a lack of functionality—many of the more software-dependant art projects are broken.[10] In this way the Codec site is a realistic example—and warning—of the current fate of digital art in New Zealand. Without the artist's commitment to regular maintenance, the work is rendered no one's responsibility and simply falls out of play.

Although the long-term care of digital art is a new area it is worth looking to the historical context. Films were being produced for years before the establishment of archives was deemed necessary. In video art, it was ten to fifteen years since artists began using the medium before it came to be seen as an area worthy of preservation efforts. Much of what has been lost in video history are the open reel tapes from the sixites and early seventies. The history of these media informs the principles for the care and preservation of digital art works being developed collaboratively by museums such as the Guggenheim, Tate Modern and the Whitney, who already have substantial film and video holdings.

1: Douglas Bagnall, *12,800,000 Views of the South Island and Taranaki*, 1998, website screenshots.
2: Sean Kerr, *Bruce Deranged*, 2004, computer, monitor, cardboard, software, installation at Michael Lett, Auckland, courtesy of Michael Lett and the Museum of New Zealand Te Papa Tongarewa.
3: Mladen Bizumic, *Ajpotu: Psychic landscape*, 2004, DVD, monitors, paint, collection of the Museum of New Zealand Te Papa Tongarewa.

7. The online gallery for *W3* is still accessible, archived on former gallerist Warren Olds' website http://www.warrenolds.com/honeymoonsuite/1998/W3/index.htm. Likewise both Sean Kerr and Douglas Bagnall present, promote and archive their work on their personal websites see http://seankerr.net/ and Bagnall's http://halo.gen.nz/
8. Gary Schwartz, "Digital Imagery and User-defined Art," *Art Bulletin,* LXXIX, no.2 (June 1997): 207.
9. The projects were Artspace—Michael Stevenson and Robert Hutchinson; Galerie Dessford Vogel—Sulcus and Yellow; Teststrip—Spatial State; and the Physics Room—Keri Whaitiri and Mike Dunn.
10. http://www.dannybutt.net/codec.org.nz/

fig. 1

fig. 2

fig. 3

Richard Rhinehart of the University of California Berkeley and the Pacific Film Archive, has led the development of the 'Media Art Notation System'—a documentation tool for writing metadata for art works.[11]

One of the first multi-institutional initiatives in preservation of new media works was the Variable Media project. According to John Ippolito, one of the originators of the project, "the variable media approach asks creators to play the central role in deciding how their work should evolve over time, with archivists and technicians offering choices rather than prescribing them."[12] The project seeks to tackle historical media as well as the new and digital, incorporating the non-traditional materials and processes used in contemporary art practice. Its interests begin with early twentieth century media art and include work utilising, for example, nitrate film, videotape, and ASCII. The Variable Media project was one of the first initiatives to address technological obsolescence in art from an institutional perspective. Ippolito characterised the situation:

> *It is going to take more than manila folders and telecine machines to preserve anything more of our cultural moment than the lifeless carcasses of forsaken mediums. We need artists—their information, their support, and above all their creativity—to outwit oblivion and obsolescence.*[13]

The Variable Media project demonstrates how the existence of older forms of new media and installation art have led beyond purely archival practices, where it is believed that a film, video or sound recording is preserved simply by duplicating it. Artworks employing non-traditional materials and technology complicate the issue of obsolescence. These works, often ephemeral or assembled of perishable materials, cannot simply be stored or photographically recorded, but often need to be re-made for exhibition. Take, for example, Jim Allen's *New Zealand Environment No. 5* (1969) part of the collection of the Govett- Brewster Art Gallery. The work is a large installation including neon, steel and hessian, and containing fresh wood chips and greasy wool. Part of the content and effect of this work relies on the olfactory qualities of these perishable components.

Archives and libraries work by standardising procedures and grouping objects by type for categorising and documenting. However, these systems have been developed for needs which are not always applicable to contemporary art. Strategies for preserving artworks need to consider the conceptual and relational aspects of individual works and the intent of the artist. Digital material is no exception. Art works have unique spatial layouts, functionality and site specificity. This makes preserving them different from artefacts such as business documents which, once digitalised, can be standardised and cared for as groups. It is worth noting that digitisation is not necessarily the same as digital preservation, which must technically achieve successive high-quality migration over the longest term. Digitisation is the process of converting analogue or physical objects into a digital form, for example, scanning a photograph or transferring an old sound or video tape to a digital format. Digital preservation is concerned with the management of digital information over a long period of time. This could involve migrating data to other software formats. Therefore the initial data needs to have qualities and features that allow for these changes.

Individual galleries and museums need to develop policies, documentation tools and digital storage to suit the material they are collecting. But the reality is

11. Richard Rinehart, "Media Art Notation System: Documenting and Preserving Digital/Media Art," 2007. http://ahds.ac.uk/performingarts/pubs/summerschool07/rinehart_leonardo.pdf
12. Jon Ippolito, "Accommodating the Unpredictable: The Variable Media Questionnaire," *Permanence Through Change: The Variable Media Approach* (New York and Montreal: Solomon R. Guggenheim Museum and the Daniel Langlois Foundation, 2003), 47. http://www.variablemedia.net/pdf/Ippolito.pdf
13. Ippolito, "Accommodating the Unpredictable: The Variable Media Questionnaire," 47.

that even the most well-resourced art institution in New Zealand cannot guarantee the long-term preservation of digital and new media art works. For digital art, the understanding of what happens when a museum or gallery acquires a work needs to adapt from that which is related to traditional art forms. Museums and galleries need to become one of a number of nodes in the distributed care of these works. This impacts on all stages of the institutional relationship to the art object, from acquisition onward. Perhaps (following the lead of the Variable Media project) rather than trying to purchase data as a sort of physically tangible asset, the notion could shift to the purchasing of rights—the right to stage or restage the artist's work. However, this also raises another issue pertinent to both artworks and cultural artefacts: that of the work's loss of historical specificity through the updating of characteristics signalling their place in time.

In much contemporary and nearly all digital art, each reinstallation is a reconstruction of the work. It is not unusual for artists to be consulted, or for works, especially sculpture and installation, to require extensive documentation. Can both the institution and the artist handle these reinterpretations of the work? Traditionally institutional purchase has meant that artists relinquish some involvement in the display and care of their work. Acquiring media artworks requires a commitment to increased dialogue and negotiation with artists over the display, care, and continued operation of each art work. The reality of component failure and technical obsolescence means increased and ongoing contact with artists prior, during, and after acquisition and installation.

Documentation that unravels format from data is critical to the effective archiving of digital art. This returns us to the earlier distinction between digital media as *tool* and digital media as *medium*. In many digital artworks the container media is often confused with the artwork. For example, a gallery or museum may make use of pre-existent condition report templates and describe the physical aspects of the container media (that is CD, DVD, hard drive) and ignore the artwork contained within the 'packaging'. One of the key tools that the Variable Media project advocates is the idea of an artists' questionnaire. On one level it is impossible to standardise the diversity of art into a questionnaire, however, at a basic level, such tools enable collection staff to understand the technical and aesthetic needs of different artworks. The answers the artist provides in the questionnaire may raise further questions; issues that neither the artist nor the institution could have envisaged as being a problem.

New media art asks us to reconsider the conventions of display that allow us to recognise art as art. It is easy to understand the difference between a painting and the canvas or frame, or wall even, but where are the boundaries of a new media work? Anticipating technical obsolescence is one way of understanding what the work is, as opposed to the work's method of delivery. Progressing technology has an impact on art works left (due to obsolescence) to be presented on bigger and faster hardware than they were initially intended for. For example, in Sean Kerr's *Bruce-Deranged* (2004), a cardboard box with two eye-holes sits over a monitor on the floor. The monitor shows two googly black and white cartoon eyes that peer nervously around the room, accompanied by a remastered version of Black Sabbath's song *Paranoid*. The only parts of *Bruce-Deranged* that the artist intends to be constant are the cardboard box

and the moving image and audio, and in this way it fits the mandate of the Variable Media project. The box and eye holes can be remade and the small monitor inside playing the moving image and audio can be replaced. However, will small monitors of this kind still be being manufactured in twenty to thirty years and beyond? Will players of the future be able to emulate the look and sound of the moving image and audio made in 2004? And if not what will it look like?

Media artworks also highlight organisational and technical differences between smaller galleries and museums. In New Zealand large museums and galleries are governed by health and safety regulations and the requirement that they comply with the Building Act. This means exhibits are expected to meet standards that would not necessarily be required for works exhibited in dealer or artist-run galleries. At present this is most apparent when artists use domestic appliances rather than high-quality components suitable for extended play (say, a six-month run in an art museum collection show). Often work is made for short-term exhibition using cheaper and more easily available equipment. The difference between this and the long-term preservation and repeated performance required in an institutional setting could lead to significant changes being made to the artwork. Mladen Bizumic's *Aipotu* (2004) is a response to the artist visiting abandoned whaling stations at Paterson Inlet on Stewart Island. The work is an installation consisting of four paintings, a photograph, and an audio visual work that plays on two budget brand monitors painted by the artist. Discussions about the inevitable need for these monitors to be replaced (and the painting of the replacements) will need to consider the look and feel of the original installation, the artist's intent, and to resolve how appropriate it is to upgrade from a budget brand to a more durable audio-visual solution. Does this upgrading change the artwork too much? Who will be responsible for painting the replacement monitors in the absence of the artist?

The inherent obsolescence of many digital works points to the assumptions underlying the practice of cultural preservation. It is possible to question the true permanence of any object, let alone those that are digital. Media art pushes the public to rethink their expectations of art and pushes museum and gallery professionals and artists to examine how they participate in the care, storage, display and interpretation of works. In New Zealand these discussions are in their infancy. The archiving of digital art is a fast-growing field that needs to incorporate a range of new strategies and solutions to address both the diversity of digital art works and the main threat to their long-term accessibility—benign neglect.[14]

14. Useful websites on documentation and archiving processes for digital and new media art:
http://www.docam.ca/
http://www.imappreserve.org/
http://www.incca.org/
http://www.variablemedia.net/
http://www.eai.org/resourceguide/

The Digital Artist in Residence Programme

Sean Cubitt and Bevin Yeatman

In 2000, 'criticism and creativity', became the framework for the Digital Arts Programme taught at Waikato University. Criticism is practical. It isn't about being negative, but communicating to other people—audiences, curators, policy makers, funders—the technical, economic, institutional and conceptual terrain that shapes media arts. It's about clarifying what artists are trying to do, and helping others make judgments about whether they succeed, and on what basis that judgement might be made. We thought of creativity as the mix of skills and innovative thinking capable of producing work able to speak from and to different communities, different points of view, different ways of seeing and being in the world. Hosting practicing digital artists seemed to be one way of enmeshing these guiding notions into our life as a department.

Key to the residencies was that there were no rules. We didn't demand that artworks got produced, or that essays got published. Our plan was to create a space and time without the usual pressures, where creative thinking and research could go on. We offered a small sum of money, an office and very significantly, access to the University library. But most of all we offered access to the University community.

In 2002, Stella Brennan became our first resident. At the time she was curating the show *Dirty Pixels*. This exhibition, examining the gaps between the ideals of digital perfection and control and the messy imprecisions of everyday life included her hand-stitched needlepoint of the desktop of her old Macintosh, *Tuesday, 3 July 2001, 10:38am* (2001 – 2002) and the video work *ZenDV* (2002). As an artist, curator and writer, Brennan touched all the areas we wanted to develop. A characteristic of her work is the use of familiar technologies and end-user software such as the iTunes visualiser and Microsoft clip art. Her final exhibition at Ramp gallery, *Theme For Great Cities,* incorporated video using second-hand Lego bricks, an igloo constructed of the boxes for our new edit suite computers and a cityscape of photocopied polystyrene packaging.

It was during this first residency that the idea for Aotearoa Digital Arts took shape. Brennan and Cubitt noted a lack of a space for digital artists to discuss work and swap information. Setting up a discussion list on the University server and pooling address books, we patched together a list of the people we knew were working in the field. ADA's history is now quite separate, but it was one of the great achievements of the residency program to set it up in its infant state.

Wellington artist Douglas Bagnall was the second resident. One of New Zealand's few software artists, Bagnall was working on his *Music Industry Simulator*. This work generates synthetic pop songs by robotic bands. Visitors to the *Simulator* website can listen to these compositions and vote the tunes up and down the charts. If one of these randomly recombined songs does well, it spawns imitators. If it is voted off the charts, it sinks without trace. The work explores the possibilities of algorithmic, computer-generated artforms and satirises both simulacral pop stars and the backroom deals cut by record executives that shape