
New media design for cultural institutions

First Author

Mr Jerry Watkins
Institute for Creative
Industries and Innovation
Queensland University
of Technology
jj.watkins@qut.edu.au

Second Author

Dr Angelina Russo
Institute for Creative
Industries and Innovation
Queensland University
of Technology
a.russo@qut.edu.au

Abstract

Community co-creation programs are increasingly used by cultural institutions in an attempt to draw new audiences to their collections. By providing engaging interactive experiences in partnership with the community, institutions may well increase their audience numbers in the short term; but to optimize the viability and longevity of such programs, institutions and designers should consider the integration of strategic design methods with curatorial processes in order to reconsider the capture, display and promotion of collections and/or exhibitions. This case study uses a project from the State Library of Queensland, Australia to showcase a human computer interaction-derived design method developed by the authors to ensure a strategic response to community co-creation initiatives. Using a variety of media, the new Multi-Platform Communication Design method has enabled the design of web-based distribution; a community and a facilitator's training program; and the development of a mobile multimedia laboratory. This paper details the design method by which these multiple communication platforms were developed and implemented to achieve successful project delivery.

Keywords

Human computer interaction, community co-creation, new media design, mobile computing, experience strategy.

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In 2000, the Premier of Queensland announced the AU\$260 million Millennium Arts Project [www.millenniumarts.qld.gov.au]

The project involves the development of a strategic planning framework for Queensland's Cultural Centre Precinct and will see the State Library's main building redeveloped to a facility more than twice its existing size. In addition, the development includes the design and construction of a Gallery of Modern Art and a new public plaza.

The State Library of Queensland supports a network of 326 public library sites in metropolitan, regional, rural and remote areas. Queenslanders make 21.4 million visits to these libraries each year and the SLQ has a membership of 1.7 million people.

Project/problem statement

As designers we are interested in how we can use the design process to contribute to community literacy in digital technologies. As researchers, we are interested in how to extend community literacy in digital technologies.

Our previous research [1& 2] has focused on the skills which audiences require to engage in digital consumption. These have been termed the "information literacies". Although literacy has historically been a field of study most notably discussed in education, media and cultural studies have recently focused on the information - or "new" - literacies and skills which are demanded of audiences. For example, Nixon proposes that forces such as the global cultural economy and public policies regarding information and communication technology (ICT) are now so deeply embedded in our daily lives - at home, work and school - that in many places they are shaping a 'new landscape of communication' and 'new learning environments' [3].

These information literacies are a readily recognizable phenomenon: the impact of technology on cultural communication should be well known to anyone familiar with the history of the printing press, radio, telephone and television. Indeed, human computer interaction (HCI) research and practice have dealt quite successfully with some of the usability design issues raised by the information literacies for some time. Furthermore, ICT offers an opportunity for regional and remote communities to partner with cultural institutions in the preservation of cultural identity. This research is formed around interaction design principles which foreground 'human' rather than 'technical' determinants

of ICT usage. While this is not a new approach, the focus is on audience-centered outcomes which are facilitated by design and curation: audience experience drives technology and not vice versa.

Background

The potential contribution of information literacy programs to the social role of cultural institutions within the Queensland environment is significant. Brisbane is the state capital and home of all the major state-funded cultural institutions: the State Library, Queensland Museum, Queensland Art Gallery and Performing Arts Centre. It may or may not be coincidence that all these institutions are co-located on the banks of the Brisbane River. Therefore Brisbane's South Bank Cultural Centre not only shares a name with London's South Bank arts complex, but both institutions display quite similar architectural form.

The similarities between Brisbane's and London's South Bank centres stop there. Unlike London, South-east Queensland's growing metropolitan community is not centred on Brisbane and the majority of the state's population are not urban dwellers. Furthermore, Queensland's main tourism attractions are the Gold Coast resort area south of the city, and the Great Barrier Reef to the far north of the state. Brisbane is not a major tourist hub. The state of Queensland therefore experiences a widely distributed population yet this is not reflected in the position of its major cultural institutions. Regional and remote communities which could benefit significantly from greater input by cultural institutional input into education, development and community programs are generally unable to access these institutions.

The State Library of Queensland (SLQ) is not only an impressive physical structure located on Brisbane's South Bank, it is also the governing body for the entire State's library network. This network encompasses a geographic area bigger than most European countries, yet home to a population smaller than many European cities. In order to serve its regional constituents such as local libraries and community groups, SLQ runs a number of public programs and outreach initiatives, the latest of which is now described.

- Client State Library of Queensland
- Project duration January – June 2005
- Angelina Russo Producer, project manager
- Jerry Watkins Interaction design
- Alex Seel Systems design
- Grace Peng Interface programming

Challenge

We were approached by SLQ to provide design and research consultancy for their new initiative "Queensland Stories" (www.qldstories.slq.qld.gov.au). Queensland Stories is a comprehensive new media initiative which includes a website which displays community "mini movies", digital training for community members and the development of a mobile multimedia laboratory which tours regional and remote Queensland.

Our broad initial brief was to provide creative design concepts underpinned by research in order to realise the strategic implementation of new media environments within SLQ's main Brisbane facility, as part of the Queensland Government's wider Millennium Arts Project, a major expansion of the State Library's main site in the city of Brisbane (more details at

<http://www.slq.qld.gov.au/about/mlp>). The design challenge lay in the development of a comprehensive strategy for the capture, display and promotion of the Queensland Stories initiative. This strategy was constrained by institutional protocols in relation to website design and interaction, including consistent user experiences.

The challenge in relation to the community was to formulate a comprehensive framework to draw audiences into a community content creation program, by providing them with the skills and training to capture their stories. The challenge in relation to the institution was to design a training program, mobile media laboratory and website which would enable audiences to reconsider their relationship with the library and to see their role as individuals in the preservation of cultural identity.

Solution

Our design strategy focused on audience-centred outcomes which would be facilitated by design and curation, particularly how audience experience would drive technology and not vice versa. Our approach was informed by media studies research which suggests that "new literacy" has limited value to communities if they cannot access technologies, nor have reason to.

Community content creation is not a new field of study. As Vergo [4] reminds us, since the 1960s, cultural institutions have broadened their programs to include audience interaction with content through education and a range of public programs. While audiences have come to interact with the institution, any artefacts which they create are not normally collected, catalogued and made part of the institutions'

collections. This has resulted in audience interaction being restricted to entertaining ways of “making meaning” of content without providing a strategic avenue for ongoing distribution. Our design strategy provided a structured method within which institutions could plan for the inclusion of community created content as integral artefacts of their collections. We analyzed in particular the participatory elements; production cost; method of delivery; narrative form; and the level of tuition required for successful participation (with an emphasis on developing narrative skills and techniques as much as technical competence).

To meet the community content creation challenge, we chose to research off the shelf ICT products which would offer an opportunity for regional and remote communities to partner with cultural institutions in the preservation of cultural identity.

A. Method

We employed our own solutions architecture entitled Multi-Platform Communication Design in order to provide:

- A cost-effective strategic and technological framework to repurpose existing content to reach greater audiences.
- A mechanism for cultural institutions to share resources across multiple communication platforms.
- A guide for both client and project team to lead the development process.

The MPCD method (table 1) has evolved from the Method for Usability in Software Engineering (MUSE) approach developed by Long and Dowell [5].

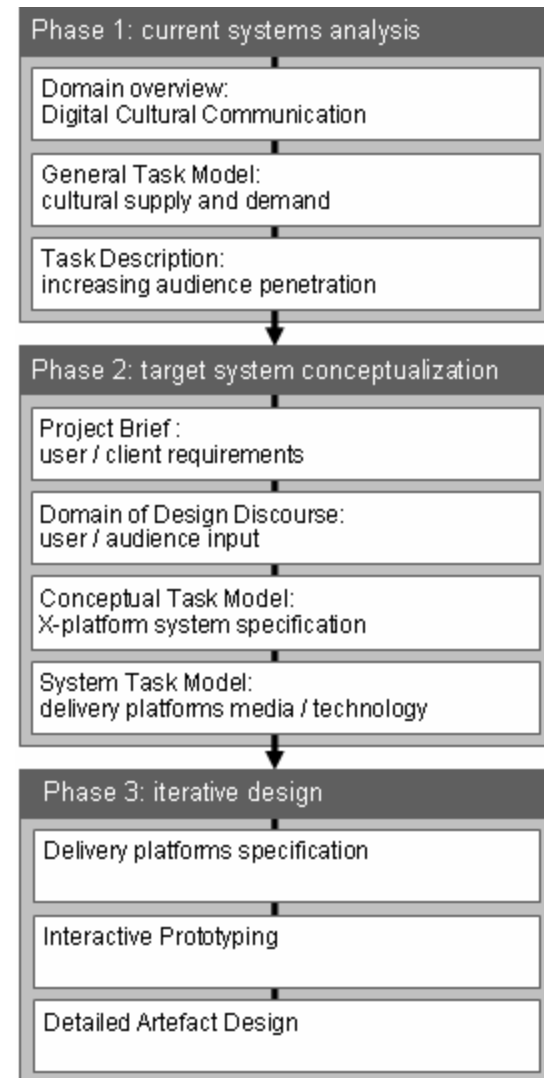


Table 1: the Multi-Platform Communication Design method

The attraction of MUSE to complex interactive projects lies in its insistence on the clear specification of design solutions as the starting point of the design process. This “engineering discipline” has been applied successfully by the authors in commercial multimedia projects, where it is preferred to iterative or waterfall based design methods - both of which can fail to deliver the same creative impetus at the beginning of a project as an engineering method. Although depicted as an end-to-end process, MPCD functions effectively as a modular method.

Due to the unstable technologies involved in multi-platform development (iTV, DVB, MHP etc.) MPCD does not seek to start the design process with a clear statement of desired performance. Rather, agreement between client and designer upon target audiences and strategic platforms is sufficient to start the process. Although MPCD presents and functions as an end-to-end analysis, design and production method, successful implementation assumes that the design team already has substantial cross-media experience, as well as interaction design knowledge and server/database familiarity [6].

By applying MPCD to a cultural interaction environment, we created a framework through which we could design systems to enable community members to learn the skills necessary to create digital content. At the same time, our multi-platform approach provided the institution with a “purpose-built” training program which could deliver the skills necessary for community members to create content. The strategy incorporated a comprehensive promotional plan to encourage community members to both participate in

workshops and to promote the distribution of content across a number of platforms.

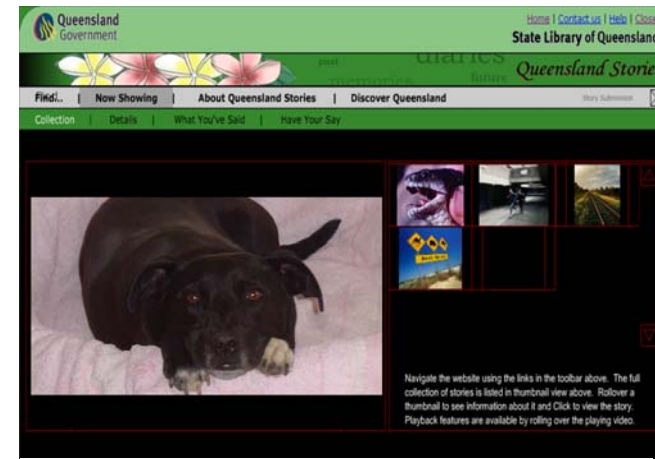


Image 1: Queensland Stories Flash website prototype

In addition to MUSE, MPCD borrows from a number of other previous methods. For example, the technique of designing specific media products to reach multiple audience segments lies at the foundation of the marketing communication and advertising industries. But MPCD goes further than media planning in that it uses multiple channels to extend the artifact itself, rather than just promote it. More pertinent to this new method are the various other techniques which have been developed in response to digital convergence and which all - broadly speaking - share an understandable commercial desire to take existing content to new audiences. For example:

- Multi-platform publishing brings a commercial focus to the possibilities of re-purposing magazine print

content for online distribution.

- Multi-channel broadcasting describes a technology-oriented initiative to rationalize TV broadcast formats as part of digital TV developments.
- Multi-platform design examines mobile/Internet application delivery across desktops, PDAs etc.

Where MPCD differentiates itself from such precedent techniques is in its concern with traditionally site-specific media, such as the museum exhibition or the library collection (the potential commercial application of MPCD to immersive brand experiences, theme parks etc. is not discussed in this paper).

MPCD does not seek to commit its users to additional significant infrastructure investment; rather, MPCD encourages the designer to use existing channels and platforms in a more strategic fashion to deliver and extend compelling audience experiences. Used in conjunction with a strategy for the capture, display and promotion of content, MPCD provides an effective design tool which can be used to meet the needs of cultural institutions which seek solutions to high-level policy directives to increase audience numbers.

B. Solution

Queensland Stories website

Stage 1 of the MPCD method was employed to structure the development of a shared understanding for the project. By analyzing the domain of cultural interactive experiences within the modernist and post cultural institutions, we were able to articulate to the client the types of approaches which might be successfully utilized to achieve their desired outcomes.

Stage 2 was employed to create the first prototype for the project. By situating a community led storytelling project within the cultural institution, the opportunities to distribute to television were trialed. The interface above illustrates the first iteration which was built in Macromedia Flash (image 1). The website was linked to the State Library's ENCompass database so that viewers were calling on the State Library "Picture Queensland" repository where the films and images were stored. Following testing the client redesigned the brief to ensure compatibility and this site was archived.

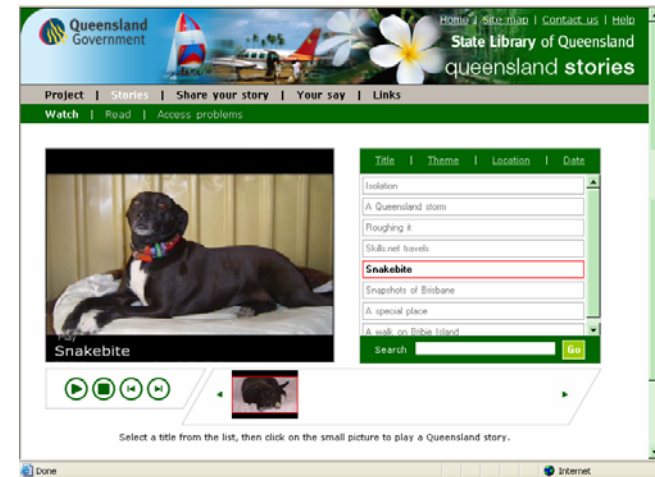


Image 2: Final html/Flash hybrid website.
www.qldstories.slq.qld.gov.au

Queensland Storytelling Training program

The Queensland Stories project is based upon the “digital storytelling” format developed by the Center for Digital Storytelling (www.storycenter.org) which is also used by the BBC’s Capture Wales initiative (www.bbc.co.uk/capturewales). SLQ provides the Mobile Multimedia Library and its own trainers to communities who have particular events or histories to record.



Image 3: Queensland Storytelling workshop

During a four -day workshop, SLQ’s trainers introduce community participants to the techniques required to prepare a short multimedia narrative, including scanning, digital imaging, storyboarding and scriptwriting (image 3). By the end of the workshop, participants have made their own multimedia story for

presentation and viewing by the community. The participants’ final story is also reviewed for inclusion on SLQ’s dedicated Queensland Stories website.

Mobile Multimedia Laboratory

Livingstone [6] suggests that information literacy has limited value to communities if they cannot access technologies, nor have reason to. SLQ’s Mobile Multimedia Lab (MML) project is designed to widen and deepen the sharing of cultural knowledge by creating a channel for cultural knowledge distribution from community to audience via the State Library. MML originated from an initial proposal to create a dedicated new media “Ideas Centre” as part of the Millennium Library project.

The Ideas Centre proposal provided for a high-end facility within the Millennium Library for members of the general public or specific community groups to create new media artefacts. After consultation with SLQ management, the Ideas Centre proposal evolved into a mobile facility in order to better serve the mission of SLQ’s Public Programs team.

The Mobile Multimedia Lab is a fully portable media workshop which allows SLQ trainers to travel anywhere within the enormous state of Queensland in order to provide communities with the skills and equipment to create their own digital media. Power and portability are pivotal to the design of the MML. The system is based on a wireless network of five Sony VAIO widescreen notebooks, supported by a range of peripherals including a mini-DV video camera, a digital



Image 4: Mobile Multimedia Laboratory

stills camera, scanner, printer, wireless projector and speakers (image 4). The system packs into toughened cases and is easily transportable by car or plane (image 5). The MML is due to be expanded with an additional six notebooks. In terms of applications, the VAIO is preinstalled with a wide range of video, graphics and audio tools.

The MML will be used by SLQ to continue the Library's existing program of information literacy workshops. These regional sessions include community training in use of Internet, and skills upgrade workshops for regional library staff in scanning etc. (more at www.slq.qld.gov.au/about/qlf/successes/bhp).

C. Results

The feedback to the Queensland Stories initiative has been extremely positive. The initiative was launched in early June 2005 with a promotional competition open to all visitors to make their own Queensland Story for the site. The first of the community workshops run by participants of the pilot program are underway.

Establishing the multi-platform approach to the Queensland Stories project provided both the designers and the client with a fully functional strategy for the capture, display and promotion of community-created content. This initiative is in its early stages of community testing and the success of the program will be measured by a number of factors including:

- Response to promotion.
- Uptake of community workshops.
- Hits on www.qldstories.slq.qld.gov.au
- Political responsiveness to the program.



Image 5: MML packdown

Cultural interaction: user impact

In Australia, a few institutions have fully embraced the potential of the new media to enrich user experience of cultural information – for example, the Australian Centre for the Moving Image (www.acmi.net.au). However, the benefits of interactive media remain unclear to the curatorial staff of libraries and museums, as proven by the seemingly random and unintegrated use of touchscreens within physical exhibitions; or text-heavy websites that deliver information with little regard to usability. Curators grasp the ability of new media to deliver bigger audiences via internet, but have yet to appreciate that the design of a successful interactive audience experience is more than the reproduction of a few catalogue pages online. There are valid reasons for this, including budget; availability of interactive designers in the cultural institutional sphere; and lack of familiarity displayed by senior curators with new media.

Shedroff may be able to help institutional curators come to terms with the potential role of new media as a partner to traditional site-specific exhibitionary practice [8]. He suggests that we consider the meaning of interactivity by envisioning all experiences as inhabiting a “continuum of interactivity”, separating passive traditional media experience (reading, talking) from interactive new media experiences, the latter being distinguished by:

- The amount of control the audience has over tools, pace, or content.
- The amount of choice this control offers.
- The ability to use the tool to be productive or to create.

If we acknowledge Shedroff’s continuum of interactivity, the logical realisation for curatorial practitioners is that

the online exhibition should not be a facsimile of the physical exhibition, but a distinctive user experience targeted at specific user groups. This approach lies at the basis of the MPCD method, which provides a comprehensive design strategy for curators and designers to work together in a structured manner to create compelling multi-platform user experiences.

Lessons learned: benefits of a structured usability design method

Clear communication between client and designer is regularly touted as a desirable feature of a project. A clear design method which is understood by the client can help achieve this goal. For the Queensland Stories project, MPCD provided both the practical design strategy and the underpinning theoretical principles to enable the design team to develop the schema from institutional through to community level. The principal benefit of MPCD lies in its explicit structure, which allowed both the client and design team to navigate relatively smoothly from a broad and loosely demarcated brief to the final web-based platform. This path included personnel training, infrastructure upgrades and program promotion. While a multi-platform approach to design is not new, it is an avenue rarely undertaken by cultural institutions, which - by dint of their structure - tend to produce content in isolated departments and/or as additional components to major research/ exhibition artifacts.

The Queensland Stories site is now established as a powerful medium for the State Library to collect, display and promote community-created multimedia narratives. We look forward to the success of this ambitious cultural project over the forthcoming years.

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Web resources

Australian Centre for the Moving Image
www.acmi.net.au

BBC Capture Wales
www.bbc.co.uk/capturewales

BHP Billiton skills.net roadshow
www.slq.qld.gov.au/about/qlf/successes/bhp

Center for Digital Storytelling
www.storycenter.org

Queensland Millennium Arts Project
www.millenniumarts.qld.gov.au

Queensland Stories
www.qldstories.slq.qld.gov.au

State Library of Queensland Millennium Library Project
www.slq.qld.gov.au/about/mlp

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