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Russo, Angelina and Watkins, Jerry (2005) Post-museum experiences: structured methods for audience engagement. In Thwaites, H, Eds. *Proceedings Eleventh International Conference on Virtual Systems and Multimedia*, pages pp. 173-182, Brussels.

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Post-museum experiences: structured methods for audience engagement

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Abstract.

The modernist program underpinned the formation of our civic cultural institutions profoundly affecting the ways in which museums, libraries and art galleries collected artefacts and displayed them to their audiences. In the “post-institution” context, museums and libraries are forming new ways of working with their audiences to create meaningful interactive experiences. The internet offers a new medium through which “meaning making” and interaction can be explored to produce diverse cultural programs. While the modernist program relied on curators to mediate knowledge and information to further the institutional agenda, the post institution can play a proactive role in the development of audience experience and meaning by engaging in representative curatorial practices which enable individuals and communities to partner with communities in the preservation of cultural identity and the creation of community content. This opportunity will be realised through structured design methods where cultural institutions work with their audiences to create new experiences. This paper describes a structured method for cultural interactive experience design (CIED) and places it within an historic and political context in order to explore how curators and designers can move from collection focussed to audience focussed interactive experiences.

1.0 New media induced changes to the museum

In the modernist museum, the relations between knowledge and power were embodied in architectural forms [1]. Spaces were designed to be solid and permanent, and their construction reflected an ordering of the modern state where objects, galleries and narratives were viewed via an ordered system. Guidance through curatorially developed communication focussed around minimal labelling while the placement of collections within an architectural space provided a permanent display of the power/knowledge of the museum.

As with the cabinets of curiosities, the modernist museum represented the principles of wonder through artefacts displayed within particular frameworks. Here the frameworks were scientific rather than mystical. Two remnant examples of these principles of ordering can still be found in Australia: The Pacific Cultures Gallery in the South Australian Museum and the Museum of Economic Botany at the Adelaide Botanic Gardens. Both exhibitions are housed within late nineteenth century classical revival architecture where the building in its surroundings delivers a measured ambience which suggests permanence, solidity and authority. Both collections are displayed within a scientific framework, presenting object as fact without interpretation. These nineteenth-century displays situate the viewer in relation to display by defining their position within an evolutionary narrative.

While the modernist museum was a distinctive medium which mediated power and knowledge through object collection and display, the post-museum is still finding its way by carving out new spaces for audience interaction and meaning making. Silverstone describes this shift in attitude as “no longer, if ever it was, an institution which can be understood in its own terms as innocently engaged in the processes of the collection, conservation, classification and display of objects” [2].

In the post-museum, the discourse of power and knowledge has been displaced by audience interaction and “meaning making”. These discourses have been supported by new media technologies which have enabled the virtualization of the museum environment. This has resulted in the dematerialization and deterritorialization of the museum. The dematerialized museum has presented artefacts as symbols within a virtual context while the deterritorialized museum has enabled the development of partnerships between cultural institutions which support broader access to collections.

There are significant overlaps in the theories of the modernist and post museums. In particular, navigation through space, integral to the theories of new media, has a specific function in the museum as it creates a permanence which is uncharacteristic of other contemporary media. Navigation through space produces a relationship with both collection and institution and defines the museum as a communicative medium. The internal processes of collection, registration, conservation and display position the museum as a unique communication form in the landscape of contemporary media applications. It is this unique communication which can be utilised in the shift from object driven to audience driven interactive experiences.

2.0 Technologies of navigation

While the modernist museum relied on its institutional position to both collect and preserve knowledge, it did little to encourage audiences to see themselves as active participants in knowledge exchange. New media brings new opportunities for audiences, collection management, display and distribution by providing the medium through which the institution can partner with communities to develop new types of interactions with content. The impetus to create new types of audiences and audience experiences is a product of the broader entertainment/ education options available to audiences. This has led to cultural institutions reshaping their agendas to meet contemporary needs.

Increasingly we find that information and communication technology (ICT) is used to encourage new forms of collection, new ways of engaging with audiences and new models of distribution. For example, cultural networks such as Australian Museums and Galleries Online (AMOL) (<http://www.amol.org.au>) link content across institutions, thus providing a distributed network of collection resources across Australia while the Voyager Heritage Network (<http://www.visitmuseum.com/en/about.asp>) has created a “museum without walls” which acts as a portal of museums in Northern Ontario, drawing together the diverse trade and manufacture of the area, providing a social and historical document of the area.

New industries are forming around the types of technologies which can be employed within the cultural institution environment. They range from simple closed caption display boards to motion detectors, proximity switches and ubiquitous environment solutions. A range of technical services are offered but as yet, there is little in the way of descriptive analysis of the cultural meaning of such interactions and the ways in which experiences can be designed to increase audience engagement.

Early museum websites centred on the possibilities of navigation. Programming conventions opened up new possibilities for audiences to explore museum collections by providing paths which created open-ended experiences. This type of audience interaction was underpinned by the notion of the “virtual curator” [3]. These developments were stimulated by changes in the ways in which museums displayed their content for the web. Digital preservation and collection have become major issues in the museum environment as has the need to account for the enormous expense of these processes by drawing audiences into these newly acquired resources.

The rise of digital preservation and collection protocols has occurred as hardware and software technologies have increased “in situ” experiences. Some of the technologies which have enabled this successful interaction have included:

- Push button and motion detector activators, proximity switches and countdown timers.
- Close-caption display boards.

- Keyboard encoders (touch screens) which replace keyboards in exhibitions.
- Integrated sound, light, video and audio systems to allow “on-demand” playback.
- Video controllers which allow selection of video material.

Some of the technologies which have enabled changes to the web interface include:

- Integrated flash and html video programming which reduce file sizes and provide “on demand” video download.
- Flash conversion technologies which do away with specialized video streaming servers.
- Dynamic database construction allows audiences to “personalize” and “save” their visit.
- Fledgling synchronous and asynchronous web and interactive television technologies.

While commercial companies have developed to provide content management systems and hardware solutions to a variety of “virtual” and “in situ” exhibition applications, few offer a strategic approach to media management which focuses on cultural interactive experiences. One of the reasons for this may be that while the technologies continue to evolve, the design of audience focussed cultural interactive experiences points to a shift in curation from collection to audience focussed practices, one which has yet to be adopted by most museums.

3.0 CIED methodology

Over the past year, the authors have developed structured methods for curators to develop interactive experiences which accurately capture – and appropriately analyse – audience requirements from the bottom-up, in order to design an entertaining, stimulating and representative exhibit.

This research uses an abbreviated informal structured analysis and design methodology based on the Method for Usability in Software Engineering (MUSE) approach developed by Long and Dowell [4]. This method have been used very successfully by the authors in the creation of interactive artefacts and experiences within the commercial sector - in particular, the method’s insistence on the specification of design solutions as the starting point of the design process.

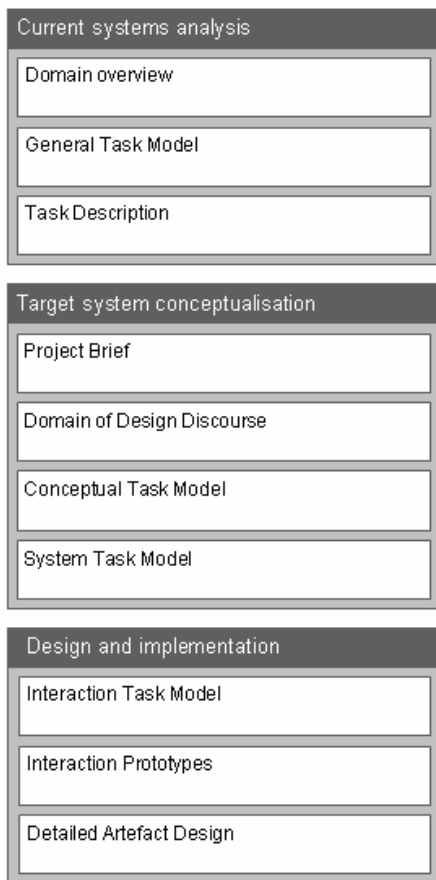
The method presented in this research is termed Cultural Interactive Experience Design. CIED – which features significant variations from the fast MUSE approach proposed by Long [5] – comprises three phases:

1. Current systems analysis.
2. Target system conceptualisation.
3. Design and implementation.

3.1 CIED phase 1: current systems analysis

One of the distinguishing features of CIED is that it is not an exploratory design method. Its precursor – MUSE – encourages both designer and client to specify desired outcomes before the design process is commenced. This engineering discipline is carried through into CIED, whose first phase demands a detailed examination of the “current system” – in this case, the theories and knowledge which underpin current cultural curatorial practice. This extensive current system analysis uses three tools:

- Domain overview: explains and locates the role of the cultural institution within the Australian public sector framework.
- A General Task Model of the current modernist museum paradigm reviews the modernist museum as a location for cultural interactive experiences.
- A Task Description of the role of the cultural interactive experience in current community-based museums informs CIED phase 2.



3.2 CIED phase 2: target system conceptualisation

The CIED method encourages specification of strategic design concepts to address specific design problem, in order to provide a mental model of the target design. Four tools are deployed in phase 2:

- Project Brief: the Brief for the proposed (target) bottom-up interactive experience design derives positive elements elicited from phase 1's analysis to act as a specification for the Conceptual Task Model (below).
- A Domain of Design Discourse provides a structure - in this example, a semantic net – within which to capture user needs statements to inform the Project Brief.
- A Conceptual Task Model provides a mental model of the target design for shared understanding and agreement between curator, community and designer.
- An initial System Task Model for the media museum underpins the Conceptual Task Model with appropriate technology platforms and applications.

Table 1 – the Cultural Interactive Experience Design method, a derivation of Long and Dowell's Method for Usability in Software Engineering (1989).

3.3 CIED phase 3: design and implementation

Phase 2 client sign-off leads to design and implementation. This phase guides designers in the creation of the artefacts and/or environments to provide a solution of the specific design problem, prior to hand-over to production teams.

- An Interaction Task Model is used in the current research to specify the user behaviour anticipated within the target system, from overall application coherence, location and egomotion through to exact interaction with an interface to trigger events.
- Interaction Prototypes of the target system storyboard user and system behaviours using technologies identified in the System Task Model in order to specify the core events and objects required by the interface to respond to user behaviour as identified in Interaction Task Model.
- Detailed Artefact Design is the final stage of the CIED method, after which the project is ready to enter the production stage.

The CIED method has been developed to provide the tools which curators and designers can utilize in the design and production of both “in situ” and “online” interactive experiences.

The modernist program affected the development of museums, libraries and art galleries in similar ways. Each focussed on the technologies of conservation and preservation, the rigorous registration and cataloguing or “ordering” of content and the display of mediated content

according to curatorial intentions. As these institutions continue to evolve, CIED can be considered to provide a structured approach to interactive experiences across these institutions.

To illustrate this point, this paper describes the development of the State Library Queensland's (SLQ) innovative "Queensland Stories" project. The project required a web based portal where individual web-based stories by community members could be captured and displayed from within the existing collections database. Using the CIED method, the designers were able to target the specific curatorial needs which would support this initiative, particularly, the development of new literacy training programs, the development of a mobile multimedia laboratory and the development of protocols for the collection and registration of community created content.

Stage 1 of the CIED method was employed to structure the development of a shared understanding for the project. By analysing the domain of cultural interactive experiences within the modernist and post institution, the designers were able to contextualise the display processes which had been successful and to propose an approach to a "community co-creation" program which would achieve the desired institutional outcome.

Stage 2 was employed to create the first prototype for the project. An off-the-shelf ICT community co-creation product known as "digital storytelling" was used to stimulate community members in the creation of media for the website. The first prototype was built in Macromedia Flash to ensure video file sizes could be kept to a minimum and to test the potential for seamless transition from website delivery to digital television. The background to this decision was derived from the vastly distributed population in Queensland. It was considered that the "Queensland Stories" project could be migrated to community television to attract broader audience numbers. The interface below illustrates the first prototype which linked to the SLQ ENcompass database so that viewers called on the official digital records of the State Library, the "Picture Queensland" (<http://www.pictureqld.slq.qld.gov.au>) repository where the films and images were catalogued and stored. Following testing the client renegotiated the brief to ensure compatibility across its constituent audiences and this site was archived.

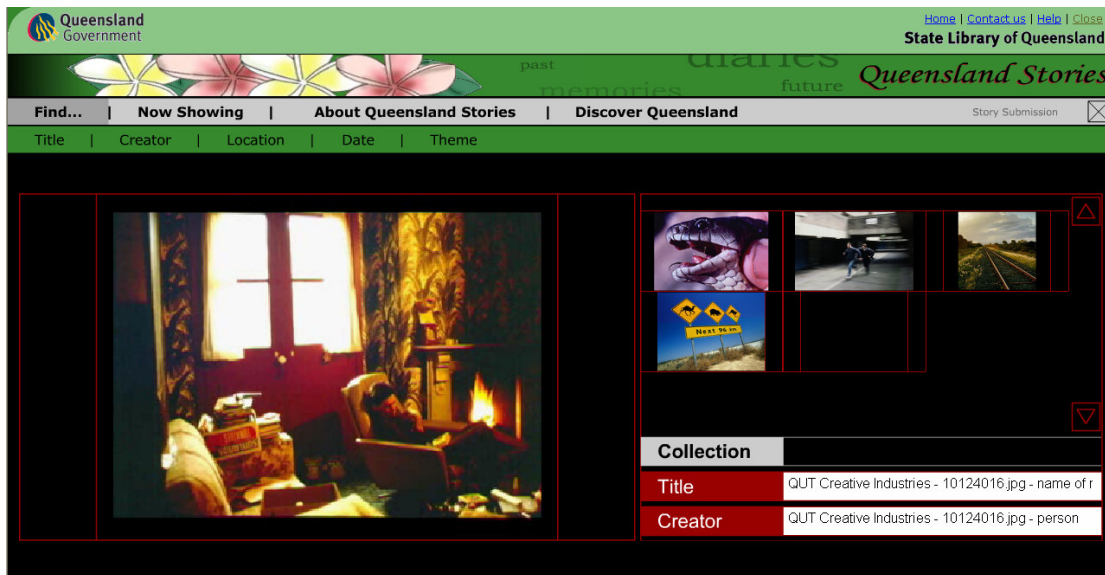


Figure 1: Queensland Stories prototype

Stage 3 of the CIED method took the information from Stages 1 & 2 and developed the interaction task model which would be used to deliver the final detailed design. In this iteration, all testing with the database were reconfigured to be compatible with the new cataloguing system which had been implemented within SLQ. As the State Library falls under the auspices of the State Government website protocols, the interface and system was redesigned in both

html and flash allowed content to meet government regulations. The final website was designed to avoid extant objects such as media player pop-ups to ensure that the initial intentions as documented in stages one and two could be realized within the stringent government protocols.

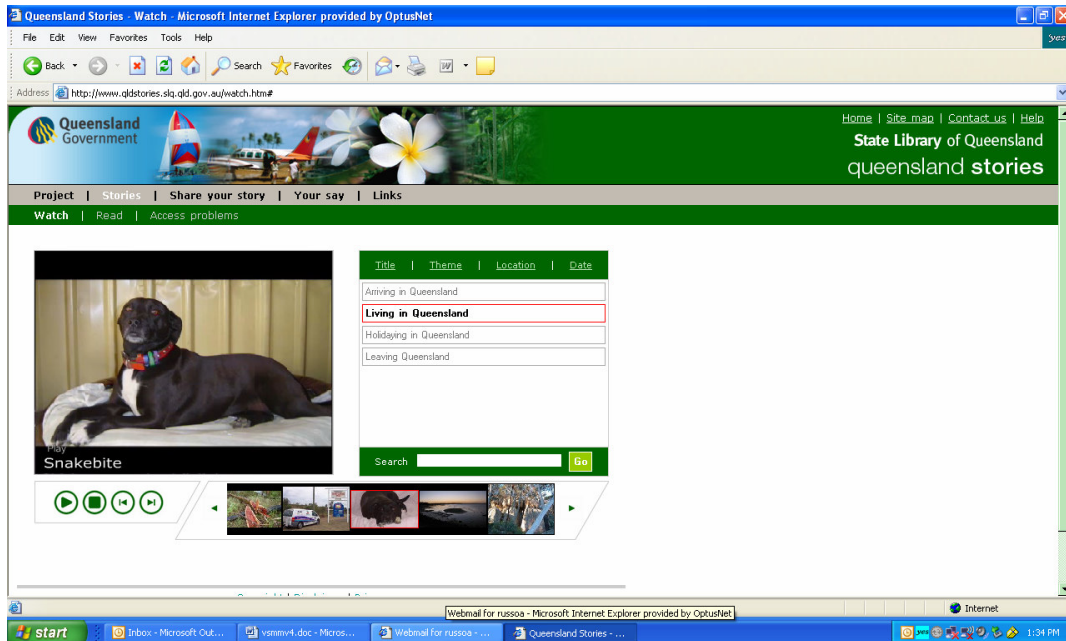


Figure 2: Final HTML and Flash Queensland Stories website

As CIED had identified the need for capture, display and promotion of content, the designers went on to design a storytelling training program which SLQ could deliver to their communities in order to capture content across the state. The promotion of this training program was supported by a grants scheme and the distribution of content was achieved by designing the content management system where content could be catalogued and registered as part of the main collection within State Library Queensland.

The SLQ Queensland Stories project illustrates how the CIED method was used to structure an end-to-end interactive experience. It demonstrates how the curatorial role can be reconsidered to enable a more representative curatorial practice. It also details how CIED can be used to develop solutions which meet both the technological need of digital preservation and collection management and which enable cultural institutions to partner with communities in the preservation of cultural identity.

4.0 Domain overview – how meaning is constructed in museums

While the previous example demonstrates how CIED was applied to the library environment to create cultural interactive experiences, one of the main issues which presented throughout the development of this project centred around more traditional notions of what “should” be collected and whether the content itself provided an historic and social picture of the time or a singular representation of audience interpretation. While these issues are important in any institution, they are hardly unique to this project. Notions of historical accuracy and relevance have come under a great deal of scrutiny over the past 30 years as Western society has come to deconstruct many of the overwhelming truths within which the museum has operated [6,7,8,9,10].

Several means of classifying and analysing material culture have been proposed over the past twenty years, many of which provide useful tools for analysing the distribution of content via the web. One such classification focuses on the notion of a formalist and analyst perspective of

museum practices. The formalist perspective considers the form of objects which contain abstract qualities which are self evident in their appearance. The formalist approach underpins a great number of the display practices in the modernist museum. [11]

In the Victorian era, the physical nature of artefacts was considered a reflection of their spiritual nature. Since the important lessons were in the viewing of the objects, no further explanation was needed as the formalist perspective resulted “from a belief in the reforming power of artefacts” [12]. Not surprisingly, the formalist perspective still receives much support in traditional and influential circles. Formalist practices have been criticised for marginalizing the history and culture of women, ethnic minorities, the working class and other disadvantaged groups (34). In light of these social and cultural changes, an analyst pedagogical practice which encompasses the discourses of social history and its contingent communities and material culture has developed, emphasizing abstract explanations over historic determinism (63-64).

This abstraction allows collection material, interpretation and display to form a series of tools which are employed to deliver a more general history focussing on the dynamics of societies. The focus becomes the community, its stories and its engagement with culturally specific event. Objects become the props and not the message (63-64). The analyst approach is similar to the approach taken in Queensland Stories. Some critics have argued that the abstract nature of an analyst approach has devalued the role of collection.

The Queensland Stories project has not attempted to do away with historical accounts, nor has it tried to impose new museology pedagogy on communities whereby communities reconstruct their histories to meet a broader agenda. Examples of community backlash to such processes can be found in Witcomb’s description of works undertaken in central Queensland. Here, the community found an analyst perspective extremely confronting, ending in the destruction of new exhibits [13].

Instead, Queensland Stories provides an example of the proactive role that cultural institutions can take in allowing an analyst approach to be guided by community members, thus allowing the creation of meaning to occur from within the community, for the community. It also provides an infinitely renewable collection management system where themes can be added without the need to “rewrite” existing content. It provides a cost-effective example of collection management and interactive experience design where cultural material can be continuously added.

5.0 Conceptual Task Model – how “meaning” is changing

As Pearce [14] describes, the very act of displaying content provides a similitude for cultural meaning. When audiences are presented with sets of information, they will instinctively behave as if these symbols signify a true relationship between object, culture, time, space and viewer. It is this tendency which is most significant in the re-imagining of the curatorial process. When cultural institutions partner with communities to preserve cultural identity, they are creating a new set of relationships which guide audiences through a series of abstractions, resulting in a general knowledge not only of the object but its various histories.

Queensland Stories does not attempt to override historical interpretation but allows individual community members to tell their stories in relation to cultural, social and political activity. These are individual interpretations which add breadth to content rather than supplant existing content. This is in keeping with Pearce’s (26) assertions that our reaction to objects is as important as the objects themselves. We have the text created by the objects and its context; both originally and as a result of the signification process and we have the acts of realization by the audience. The dynamic interactive process becomes that of the object with individual and society.

Where new media technologies are employed to broaden audience experiences they allow for the type of realization which Iser describes as an interplay which creates an individual meaning and interpretation which “must always remain virtual, as it is not to be identified either within the reality of the text or with the individual disposition of the reader” [15].

The virtuality which is inherent in realization must be considered in relation to physical form, described fact and documented history. As audiences, we may creatively realize virtualizations through the communication of collection but at the same time, objects are created, manufactured, ritualised and distributed as part of distinct social, cultural, political and historic processes. By providing a solutions architecture which enables individual stories to be part of the collection, we avoid creating what Pearce describes as “a series of individual sequences with little or no relationship to each other and only meaningful in terms of the individual” (27).

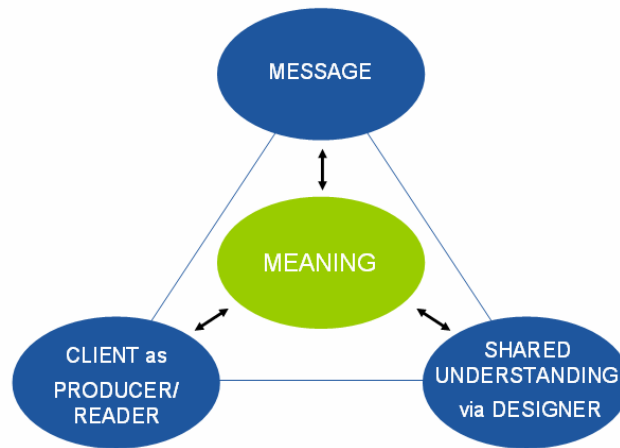


Figure 3- commercially oriented semiotic triad

6.0 Conclusion

Within the commercial sphere of persuasive interactive environments, clients engage designers to facilitate specific communication design outcomes. From brand experience to point of sale, designers use strategy and/or product to create a shared understanding between client and market. In this way – and by adapting Peirce’s semiotic triad (fig.3 above) [16]– the client becomes both producer and reader:

A community-based cultural experience is characterised by not only the ownership of content by the community, but also the production of representation and display: in this respect, the community also becomes producer and reader, reminiscent of the commercial client.

The top-down nature of current curatorial practice has some justification. The private sector commercial client is often a single entity, whereas the cultural institution “client” is in fact a complex mix of audiences, possessing disparate voices. Without the commercial designer’s shared understanding of context, outcome and expectations, interdisciplinary and institutional collaborations are bound to be fraught with disagreement and misunderstanding.

Cultural Interactive Experience Design: current vs. target		
	Current (c)	Target (t)
Paradigm	Modernist	Post-museum
Knowledge base	Institutional	Audience-based
Knowledge type	Discipline-specific	Experiential
Rationale	Curatorial expertise	Audience focus
Communication model	Institutional messages	Shared meaning with audience
Access to collection information	Restricted	Open
Evaluation	Audience	Audience
Primary publication medium	Print	Web

Table 2 - CIED methodology: an evolution in representative curatorial practice

As this paper has shown, the origin of top-down curatorial discipline finds its roots in the tradition of the modernist museum where curators were charged with delivering institutional messages, resulting in practices which emphasized the creation of spaces, objects and information which met the needs of the institution. This paper posits that in the post-museum, the need for specialised curatorial engagement does not end; rather curatorial practice must be reconsidered in terms of the skills and knowledge which are required of a new media environment.

If the post-museum – and by inference, cultural institutions as a whole - is to avoid becoming the modernist museum with new media gadgets, it would appear that curatorial practice may be situated around three key areas: the curators' ability to facilitate community/ audience engagement in the production and display of interactive experiences, their ability to act as agents of technology transfer in collaboration with new media technologists and most importantly, their ability to employ a structured methodology for enabling the first two to be delivered. By adding structured methodology to their practice, curators will be able to capture accurately the needs of a disparate user group from the bottom up and translate this analysis into representative, new media solutions to cultural interactive experiences.

This paper has presented a proposition for a design methodology which enables curators, designers, communities, audiences and investors to be involved in the process of producing cultural interactive experiences. It has situated this method within the historical context of the museum, the domain of design knowledge and the virtual museum program. It has used an example project from the cultural sector to demonstrate how an end-to-end structured approach to cultural interactive experiences can be formed from the outset of a project ensuring longevity of content and interaction and a cost-effective solution to contemporary audience needs.

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