

ACM Multimedia Interactive Art Program: An Introduction to the Digital Boundaries Exhibition

Alejandro Jaimes¹ and Pamela Jennings²

¹FXPal Japan, Corporate Research Group, Fuji Xerox Co., Ltd., Japan

²Human Computer Interaction Institute and School of Art, Carnegie Mellon University, Pittsburgh, USA

ABSTRACT

The Digital Boundaries exhibition includes works that use multimedia to address issues of multiculturalism, identity, and awareness. By placing technology in new contexts to explore multimedia's impact on culture (and vice versa) we create a space for the discussion of new ideas and create an interdisciplinary impact by reinforcing a dialogue between the arts and multimedia communities. We discuss our motivation, the exhibition theme, the works selected, and their potential technical impact.

Categories and Subject Descriptions

J.5 [Computer Applications]: Arts and Humanities - fine arts

General Terms

Arts Research and Practice, New Media Art, Interactive Art

Keywords

Culture, Multimedia Arts, Technology

1. INTRODUCTION

One can easily argue that multimedia started as an artistic practice. In [8], for example, the origins of multimedia art are attributed to Richard Wagner's notion of the Gesamtkunstwerk ("*Total Artwork*"), as he applied it to music drama and his design of the Festspielhaus opera house in Bayreuth, Germany in the 19th Century. But one can go even further back, considering the evidence supporting theories that in prehistoric times man mixed multiple media in his creative practices.

The impact of art in technology (and vice-versa) is unquestionable, and the particular impact of new media art on multimedia technology is inevitable. In recent years new media art has entered the mainstream and many universities around the world are creating new media art programs geared towards artists that not only *use* technology but *create* it. This shift has the potential to have a tremendous impact not only on the development of new art practices, but on technical research as well. Exploring artistic concepts while developing new technologies pushes technical boundaries because it recontextualizes the technology, opening up entirely new creative possibilities and creating a space for the unhindered exchange of ideas.

With this motivation in mind, we organized this exhibition within the ACM Multimedia conference. The purpose of the exhibition can be summarized as follows: (1) place multimedia

technologies in a new context to generate the discussion of new ideas in the technical community; (2) explore some of the issues surrounding the impact of multimedia technology on culture (and vice versa); and (3) reinforce a dialogue between the arts and multimedia communities to create an interdisciplinary impact.

In the next section we present the exhibition theme. In section 3 we discuss each of the works selected. Section 4 discusses interdisciplinary impact. We conclude in section 5.

2. DIGITAL BOUNDARIES: Multiculturalism, Identity, and Awareness

At no time in history has technology had the prospect of making a stronger cross-border impact on culture. Technology can be used to create or reinforce boundaries (being fingerprinted and photographed at an airport—a multimedia experience), as well as to dissolve them (we are bombarded by images and sounds from all over the world). Many of us are being empowered with the ability to easily create digital content, document and share our own experiences and those of others, challenging the roles of art (passive vs. interactive) and revolutionizing the way we see and hear the world. At the same time, only a small percentage of people have access to technology (boundaries of the *haves* and the *have-nots*).

Multimedia content and technology are of special consideration because they appeal directly to our senses, elevating the age-old dilemma of the distinction between reality and representations of reality. Does this new proliferation and imbalance of multimedia technology help reinforce boundaries and cultural differences? Does it contribute to define cultural identity in a new age in which everyone talks about multiculturalism? Does it raise cultural awareness or simply numb our senses making us take deep cultural differences for granted because what we "see" or "hear" is commonplace in this "new" multicultural world? Does it create new boundaries in art or help unify multiple art forms? How can art, in its many roles, make use of the same technology that raises these issues to address them?

The multimedia artworks in this exhibition challenge the participants to consider these questions through the innovative use of new multimedia technologies and combination of multiple media (photography, video, sound, etc.).

3. MULTIPLE CULTURES, MULTIPLE APPROACHES

The works selected span a wide range of artistic practices, techniques, and methods to address different issues related to the exhibition theme. We group the works for discussion purposes.

Several of the works make use of the web, either as a means of dissemination, or as a source of content. Wilson's *Traces of*

Culture [12] investigates the image search process and keywords associated with images in relation to culture. Lawson's *Vox Populi No.2* [7] uses the web as a source of news information to present participants with a "mixed reality" and explore issues deeply rooted in contemporary Colombian identity. Wolanczyk's *Princess Series* [13] uses the web both as a venue to reach a wider audience and as a critical space to question vertical cultural barriers as represented by an imaginary character that makes a living creating junk mail. Technologies for multimedia content-based search, retrieval, and storytelling within a cultural context play crucial roles in the construction of these works.

Works in a second group use interaction as a crucial component. Ireson's *Minions* [4] uses motion sensors to augment the volume of competing videos, exploring the apparent notion of the inherent conflict between Christian West and the Muslim East. Lawson's *Wu Wei* [6] uses a computer vision interface to question our conceptions about interactive art: the participant's non-motion shows the video details of a traditional Japanese scroll painting. Hohl's *Radiomap* [5] detects participants' presence on a world map and plays radio stations from different parts of the world. Bohlen and Rinker's *Whistling Machine* [2] uses the whistle as form of trans-cultural communication. These works raise questions about the way in which we interact with computers and link that interaction with culture.

Several works in a third group place a strong focus on the contents of the work itself. Rubin and Gluck's *Layered Histories* [9] is based on an ancient Bible manuscript that reflects on the convergence of cultures in medieval Spain. Tarrant's *Planet Usher* [11] uses a personal multimedia collection to explore issues of memory and narrative. Blue's *Dawn at My Back* [1] intermixes printed text and multimedia content in an autobiographical reflection of growing up as an African American woman in the U.S.'s deep south. Senior's *Shibboleth* [10] is based on the content created by multiple people to explore the cultural barriers enforced by accent pronunciation differences of culturally charged words. These works are closely related to research on acquiring, preserving, and authoring of multimedia.

Works in the fourth group create digital representations of cultural spaces from the real world. Yang's *Pictopia* [14] finds a spatial digital representation for images that is based on research into architectural grids and culture. Brown's *Scalable City* [3] seeks a digital representation of urbanization in an area in which two cultures are in constant flux. Zuniga's *Vagamundo* [15] places multimedia content in a physical space (a video game in food vendor cart) to raise questions about culture assimilation by immigrants to the U.S. These works raise issues about the relationship between cultural spaces and digital representations.

4. INTERDISCIPLINARY IMPACT

The works in the exhibition touch on almost every aspect of multimedia. We highlight a few important issues.

Multimedia search: in spite of the tremendous amount of work on content-based search and multimedia semantics, few efforts have been made in the technical community to investigate the relationships between multimedia content, metadata, and culture. How can we incorporate the cultural impact on metadata and multimedia search to develop new search technologies? Should these be geared towards one dominating culture (which one and why?), cater to specific cultures, or to multiculturalism?

Interaction: several of the works question general assumptions about interaction with multimedia content. This includes the use of motion sensors, content sensitive to more than one participant, and interaction methods with deep cultural roots (public scriptural reading [9]). If our interaction with multimedia is culture dependent, why aren't the techniques we are developing?

Narrative: the creation of multimedia narratives requires technologies for capture and manipulation of personal and group collections. What can we learn from different, culture-dependent narrative traditions and norms to develop appropriate tools?

Information and representation: access to multiple, often conflicting sources of information, and novel forms of digital representation based on existing cultural constructs. Should we be limited by artificial representations (e.g., windows) or develop novel culture-based paradigms to represent and manipulate multimedia data?

From an arts perspective, it is clear that the incorporation of new technologies must transcend the novelty of those technologies and express powerful artistic concepts. Without a doubt, those artists familiar with new technologies are more likely to see beyond a particular technology's novelty (which will fade with time) and create personal works of deep universal meaning. The questions raised by such works have the potential of making an impact that ultimately transcends technical and artistic practices.

5. SELECTION PROCESS & ACKNOWLEDGEMENTS

All works (we received 57 submissions) underwent a rigorous selection process, which consisted of reviews by a Technical Program Committee and individual discussions by a curatorial committee. Emphasis was placed on artistic merit and on how technology was used to express a particular concept, not on technical novelty, authors' backgrounds nor affiliations.

We wish to thank Christina Yang and Mark Tribe for their contributions in the Curatorial Committee, and the members of the Interactive Art Program T.P.C. for their reviews. We are very grateful to Henning Schulzrinne and Nevenka Dimitrova for supporting this initiative and for their comments. The first author would like to thank Fuji Xerox for supporting his work in this process. We would also like to thank all of the authors who submitted their work to ACM MM Interactive Art Program.

6. REFERENCES

- [1] C. Blue, "Dawn at My Back," this volume.
- [2] M. Bohlen, J.T. Rinker, "When Code is Content," this vol.
- [3] S. Brown, "Scalable City," this volume.
- [4] B. Ireson, "Minions," this volume.
- [5] M. Hohl, "Radiomap," this volume.
- [6] S. Lawson, "Wu Wei," this volume.
- [7] C. Lawson, "Vox Populi No. 2," this volume.
- [8] R. Parker and K. Jordan. *Multimedia: From Wagner To Virtual Reality*. N.W. Norton, New York, 2002.
- [9] C. Rubin and B. Gluck, "Layered Histories," this volume.
- [10] A. Senior, "Shibboleth," this volume.
- [11] P. Tarrant, "Planet Usher," this volume.
- [12] S. Wilson, "Traces of Culture," this volume.
- [13] R. Wolanczyk, "The Princess Series," this volume.
- [14] W. Yang, "Pictopia," this volume.
- [15] R.M. Zuniga, "Vagamundo," this volume.