"ParticipART": Art Track Exhibition of the Participatory Design Conference 2006

Introduction

Elisa Giaccardi[1], **Giulio Jacucci**[2], **Debra Cash**[3], **Leah Lievrouw**[4], **Bo Helgeson**[5], **Ina Wagner**[6]

[1]University of Colorado, Boulder, USA
[2]Helsinki Institute for Information Technology, Finland
[3]National Public Radio and New Century Enterprises, Boston, USA
[4]University of California, Los Angeles, USA
[5]Blekinge Institute of Technology, Ronneby, Sweden
[6]Vienna University of Technology, Austria

ABSTRACT

Following the success of the Participatory Design Conference (PDC) Art Track exhibitions 2002 and 2004, ParticipART includes work of artists and creative practitioners incorporating or reflecting on participatory processes to support new roles and forms of engagement for the audience. The exhibition aims to create an inspiring space for discussion that can enliven and enrich the dialogue between participatory design and the creative practices. In this paper we discuss our motivation, the exhibition theme, the works selected, and their potential impact.

Author Keywords

Art, culture, creative practices, participatory design

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

The Participatory Design Conference (PDC) has traditionally focused on the design and development of computing and information technologies with the active engagement of the people who use or are affected by these systems. Over the years, the efforts of artists, musicians, architects and designers working across a wide range of disciplines have contributed to invigorate the discussion on the design boundaries of such engagement, and in recent years PDC has actively sought submissions from artists and designers that exemplify the principles of participatory design. This year's exhibition takes inspiration from artists and creative practitioners who incorporate and reflect on the multiple participatory processes that can expand the boundaries of audience engagement in either experiencing

or engendering the work.

Artistic work based on emergent media and technologies is a particularly fertile domain for the development of tools and environments that both supplement creative practices and contribute valuable research and design methodologies for other disciplines [13]. By promoting divergent thinking and creative visions, new media art practices offer a platform that emphasizes creative engagement as a locus for innovative design and evaluation methods [12], thus encouraging fresh and critical perspectives [11].

With this motivation in mind, we organized this exhibition as part of the Participatory Design Conference 2006. Our objectives can be summarized as follows: (1) explore novel relationships and multiple participatory processes enabled by emergent media and information technologies; (2) emphasize the cultural impact of participatory design across a wide range of disciplines; and (3) promote exchange and integration between technical and creative communities that adopt participatory approaches for distinct but potentially interweaving purposes.

EXPANDING THE BOUNDARIES OF ENGAGEMENT

Participation is the central theme of the conference and the exhibition. "ParticipART" includes work of artists and creative practitioners incorporating or reflecting on participatory processes to support new roles and forms of engagement for the audience in the experience of the work or its iteration over time through a process of continuous changes and development. Broadly speaking, participatory design in the context of digital arts and media ranges along a spectrum of forms and approaches. As highlighted in a round-table discussion on participation in arts and design at this conference, organized by two of the present authors [4], some designers create conceptual frameworks or digital environments and then invite others to contribute or act within them. Others organize environments or events that are subsequently created and extended by the joint action of participants and designers alike. Some of these environments exist exclusively in the virtual world while

others represent augmentation of natural settings and public spaces.

Creative work and practices based on interactive media and technologies inherit concepts and forms that were elaborated in art decades earlier. From a participatory design perspective, an interesting aspect of this inheritance is the focus on media and technologies supporting creative and open-ended activities in relation to which the artist is more of a "meta-designer" than a conventional author [15]. These activities expand the boundaries of audience engagement in the unfolding of the work and the correlated process of sense-making, thus promoting new participatory roles and practices.

The participatory works in this exhibition challenge us to consider these new roles and practices through the innovative use of interaction methods and techniques ranging from image processing to motion tracking systems, often originally combined with novel and configurable architectures in the physical space.

SELECTED WORKS
The works selected span a wide range of artistic practices, interaction techniques, and production methods to address the issues related to the exhibition theme. For discussion purposes, we group the works according to how they incorporate or reflect on participatory processes to support new roles, and thus new forms of engagement for the audience.

Enabling Authorship
Several of the works incorporate participatory processes to enable novel forms of authorship (from collective to hybrid to collaborative). Gregory Lasserre's *SphèrAléas* is an immersive semi-transparent environment for wide-angle projection inside which visitors produce sonorous and pictorial compositions by "polyphonically" manipulating tactile sensors. In Jacky Sawatzky's *R.g.b-project* [18] participants are asked to conduct a "color-walk" through the city, using a video camera to document one of the three colors: red, green or blue. The recorded video is then processed according to computational criteria that make the software act as a collaborator in the production of the footage. The final installation allows visitors to edit the footage and create a further layer of poetic interpretation. Peter Edmunds's *SwarmSketch* [6] is an online art system where users can participate in the drawing of a collective sketch. The original aesthetics of the sketches emerges by strictly limiting the agency of each individual participant.

Affording Connectivity
Another group of works focuses on the sense of connectivity afforded by interactive technologies. In Victoria Vesna's *Water Bowls* [21], four water bowls reflect different aspect of water related to our connected human condition. Some of the most common metaphors of water are revisited using some of the latest scientific observations and simple sounds and images are locally and remotely processed to emphasize "the global connectivity of water/human systems, beyond borders." Gruppo Làbun's *Pegaso3* [8], based on the sculpture "Pegaso" by Paolo Minoli, is an installation that makes use of sounds and colored lights to create an artificial environment that can be modified by visitors' gestures. In Juha Kela's, Pekka Ala-Siuru's, and Sanna Kallio's *Aurora Borealis* [14], user can select a light color by performing a certain gesture with the control device and control its intensity by tilting the device. Pekka Ala-Siuru's *NeonAlbers* [1] is an interactive artwork for the home constructed with light and sound level sensors and two wall displays.

Interacting with Artificial Beings
Works in this group create environments where visitors can interact with artificial creatures and pseudo-life forms at various levels. Mauro Annunziato's and Piero Pierucci's *E-sparks* [2] creates an environment where living artificial beings develop language and behavior by interacting with the installation visitors that try to dialog with them. Experientiae Electricae's *Organism* [7] is a playful multi-user installation of organic texture engaging the participants in the manipulation of a pseudo-life. Playful interaction is organized along propositions of collaboration that create a dynamic social link in the multi-user structure. In Linyew Cheang's *Shifting Nature* [5], natural forms (such as fish, amoeba, water ripple and energy) are responsive to body gestures and movements of the audience within the exhibition space.

Reinterpreting the Visitor World
These works use live video footage as a means to mirror, reinterpret, and shape the visitors' relationship with both the private and the public space. In Jonas Hielscher's and Klaas Jan Mollema's *Reaction Machine* [9], visitors see themselves looking at another person on a television screen. By recording a video of themselves, the act of looking is mirrored ad infinitum for subsequent visitors. Nell Breyer's *Time Translations* [3] uses cameras to capture movements of passers-by in public spaces and visualize the choreography of daily activities. The live video footage is processed and juxtaposed with the pedestrian movement recorded seconds, minutes or days before, and finally projected back in the public space as an ephemeral drawing. Susanne Schuricht's *Double Room* [19] is a semi-stationary and configurable architecture to be located in every-day places. The installation fosters an interactive exploration of the public urban space by allowing to re-frame "reality" through the wooden sliding wall of the architecture. On an integrated screen, video recordings of the private actions of previous visitors appear temporally delayed and become visible to the subsequent visitors.

Engaging in Performative Acts
Other works place a special focus on engaging the visitors in collective performances and social processes. Daria Loi's *[my|your|our suitcase]* [16] engages the visitors in an active relationship with real world objects. Participants are

9

enabled to express ideas and reflections within a space where meaning can be co-created and co-experienced in the act of "unfolding/unpacking" and "making/designing". *The Sine Wave Orchestra* [20] is a participatory sound project for large audiences. Equipped with a mobile device and an individual speaker, participants can play a sine wave and thus create a collective sound performance in the public space. Martin Mairinger's *USED Clothing* [17] is a "second-hand-shop" where visitors can bring and exchange clothes, and add content to them. A virtual library is provided for each single garment through RFID transponders and web technology. In this library owners can add arbitrary information and multimedia contents so that the history of each single garment can be visualized.

BROADER IMPACT

The works in the exhibition touch diverse aspects relevant to participatory design. We highlight a few important issues. *Language technologies* are applied to sense and process visitors' speech and support a more natural interaction (for example with novel forms of artificial life) [2]. *Sensors, motion tracking systems, haptic interfaces, and RFID tags* enhance visitors' interaction with both the public and the social space [5][7][8][14][18]. Novel architectures create *immersive and configurable spaces* [16][20]. *Video feeds* are used to mirror and shape visitors' perception and experience of the world, by bridging visible and invisible, private and public, local and remote, past and present [9][20]. *Image processing and display* is used to filter and interpret visitors' views and perspectives [3][19]. *Internet technologies* are used to connect and support collective practices [6][22]. Finally, *natural phenomena, forms and materials* (from electromagnetic waves to liquids) are used to drive the interaction process [5][17][21][22]. Some of the works could fit in several of the areas we have identified. Additional themes span across these areas, questioning artist's and visitor's roles and expanding the boundaries between real and virtual, artificial and natural, action and representation, performance and outcome, interface and content [10][11].

The exhibited works, with their the correlated themes and inquiries, constitute creative laboratories to explore new participatory roles and new forms of engagement that can inform and enliven our understanding of participatory design and the critical role technology can play in support of participative practices.

OVERVIEW OF THE SELECTION PROCESS

All 70 works received were subjected to a rigorous selection process. This process consisted of reviews and individual discussions by the Art Track co-chairs and members of the selected Art and Science Committee. Emphasis was placed on artistic merit and innovativeness, aesthetic and technical quality, attention to the larger cultural and technological context, and the relation of the proposed work to participatory design, rather than on authors' reputation or affiliation.

REFERENCES
1. Ala-Siuru, P. "NeonAlbers," this volume.
2. Annunziato, M. & Pierucci, P. "E-Sparks," this volume.
3. Breyer, N. "Time Translations," this volume.
4. Cash, D. & Lievrouw, L. "What/when/how is participation in digital arts and media? A round-table discussion on designing for participation," this volume.
5. Cheang, L. "Shifting Nature," this volume.
6. Edmunds, P. "SwarmSketch," this volume.
7. Experientiae-Electricae, "Organism," this volume.
8. Gruppo Làbun, "Pegaso3," this volume.
9. Hielscher, J. & Mollema, K.J. "Reaction Machine," this volume.
10. Jacucci, G. "Interaction as Performance: Cases of Configuring Physical Interfaces in Mixed Media*." PhD Thesis*, University of Oulu, Finland, 2004.
11. Jacucci, C., Jacucci, G., Wagner, I., Psik, T. "A manifesto for the performative development of ubiquitous media." *4th Decennial Aarhus Conference on Critical Computing: Between Sense and Sensibility*, ACM Press (2005), 19-28.
12. Jennings, P., Giaccardi, E., Wesolkowska, M. "About face interface: Creative engagement in the new media arts and HCI." *Extended Abstracts CHI 2006*, ACM Press (2006), 1663-1666.
13. Jennings, P. & Giaccardi, E. "Creativity support tools for and by the new media arts community." *NSF Report on Creativity Support Tools* (June 2005), 37-52. Available at: http://www.cs.umd.edu/hcil/CST/.
14. Kela, J., Ala-Siuru, P., Kallio, S. "Aurora Borealis," this volume.
15. Giaccardi, E. "Movements and passages: The legacy of net art." *Leonardo Electronic Almanac,* 13, 4 (2005).
16. Loi, D. "[my|your|our suitcase]," this volume.
17. Mairinger, M. "USED Clothing," this volume.
18. Sawatzky, J. "R.g.b-project," this volume.
19. Schuricht, S. "Double Room," this volume.
20. The Sine Wave Orchestra, "The Sine Wave Orchestra," this volume.
21. Vesna, V. "Water Bowls," this volume.