.:THEPOOCH:. – HCI AND LIVE PERFORMANCE

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ABSTRACT

In this paper, we describe .:thePooch:.'s explorative live performance activities which combine human-computer interaction, live art and computer programming. We discuss how our non-traditional user interfaces investigate modes of interaction and create tools to support creativity. We conclude with a discussion of our future work.

Keywords

Live art, HCI, Performance Triad Model, interaction

1. INTRODUCTION

.:thePooch:. [6] is a group of individuals mainly from within the Department of Computing at Lancaster University. We have come together through a shared interest in exploring the boundaries that exist between art and technology with the intention of exploring the interplay between technology, art and the environment via non-traditional user interfaces [4]. Our background in interactive interface technology design has put us in an ideal position to develop some interactive art installations and live performances (herein called live performance) which have the objective of providing pure experience to the users. Our observation of the user experience informs our future work by providing the raw material to create new models of interaction and ultimately tools to support creativity towards the goal of removing the boundaries between art and science.

The aim of .:thePooch:. is to explore non task-based use of hi-technology in live performance. Our work combines visual, conceptual and interactive aesthetics with aspects of interaction and entertainment. We create live performances in playful arenas [2] – hyper-real social environments such as bars, nightclubs, and performance parties as well as non-traditional spaces such as foyers, gardens and castle grounds. In focusing on these spaces, we avoid the often rule-bound and predictable environment of galleries and formal exhibition areas. Our purpose is to engage an audience using technology as a bridge to improve accessibility of our art. We attempt to draw people into tripartite interaction [5] with installations providing only limited description or instruction, with the emphasis on exploration and discovery on the part of the audience. We examine how:

- using hi-technology can allow for (re)imagining in playful arenas;
- interactivity in playful arenas changes with the addition of computationally-augmented artefacts and performances;
- to prod social situations with a technological stick;
- to evaluate the suitability of particular interactions in given social contexts and physical environments;
- to record and reuse data from these events.

The practical and technical issues arising from placing one's work in playful arenas are considerable and yet remain the reason why we are drawn to it. Playful arenas are exciting, dynamic spaces where performance and performative behaviour can and do collide. Licensed and unlicensed playful arenas, incorporating the warehouse and festival aesthetic, now utilise state of the art equipment to transport people each weekend into a performed fantasy wonderland, which has a relationship with the world and the participants' sense of world making. Our interest lies not only in examining the performative dynamics of these spaces and those who participate within them, but also in creating site-specific interventions and installations using ubiquitous sensor technologies to expose the technical, conceptual and aesthetic parameters associated with mobile performances which infiltrate unanticipated performance spaces.

2. MODELLING INTERACTION

Traditional models and ideas of the human-computer interface become ineffective when we apply them to computationally-augmented live performances in playful

arenas and so there is a need to study the use of these emerging technologies in an effort to create new models of interaction.

HCI is ripe with interaction models and paradigms, which discuss the interface between and through users and the computer. However, in computationally augmented live performance, the observer or audience becomes an essential aspect of the interactivity. In this sense, observers act as co-creators of the artwork. We describe this paradigm as tripartite interaction – the fluid activity between participants, performers and observers that manifests from a performance.

In order to better understand these interactions, we created the Performance Triad model (PT) [5]. In the PT model, the observer, participant and performer are equal collaborators in a performance, which lies at the heart of the triad. A performance is by definition as that which is present between performer, participant and observer. The performance as a whole exists in a particular context and the context occurs within and creates an environment.

We use the PT model in both the design and analysis process – to consider new possibilities and to deconstruct existing performances and installations. We provide examples of this in the following section.

3. PORTFOLIO

Our website contains an up-to-date list of our previous, current and future activities however, we provide a sample of our activities here.

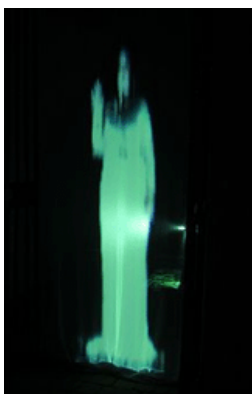## 3.1 Interactive Installation

3.1.1 Bronwen

Bronwen (Figure 1) is an interactive ethereal apparition trapped in a two dimensional reality. Despite this, she still has a sensory perception of this world and reacts to proximity and motion of objects and people. As participants move closer to Bronwen or there motion becomes faster or more exaggerated, Bronwen reacts negatively to the invasion of her personal space. Browen's response is created using a basic webcam, projector and java

Figure 0 - Bronwen waving.

code. She only appears in the evening, and has been seen under trees in gardens during festivals, trapped behind iron gates outside gallery exhibitions, and in the residence hallways during conferences.

3.1.2 Andrine

Andrine (Figure 2) is a virtual personality who reacts to messages sent to via SMS. She uses an array of facially expressions to portray her emotions when reacting to receive messages. Andrine's underlying abstraction is based on the science of corpus linguistics and centres on the parsing of messages for emotive content.

However, the participant never sees this complex code running in the background; they simply see a huge projection emotively responding to their message. So affective is this response that participants are often afraid to insult or anger the avatar [3]. Andrine can be "reskinned" to anyone's face in about 5 minutes using a basic webcam. She likes to hang out in cafes, restaurants and at performance parties.

Figure 2 - Participants texting Andrine.

3.1.3 Kirlian Table

Inspired from the images found in Kirlian photography, Kirlian Table (Figure 3) allows you to view the psychic aura of the person/object interacting with objects on the

Figure 3 - A Speak&Spell's aura on the Kirlian Table.

table or with the table itself. The longer an object is present on the table, the more psychic energy is stored in the table and the more intense the psychic aura.

Should you remove the object, the psychic aura lingers and slowly dissipates - items that have charged the table for longer take the longest to fade. Kirlian Table has found itself many public social spaces, such as galleries, theatre foyers and community areas in office buildings.

Kirlian Table was designed in one day during the Scrapheap Challenge, a three-day extreme prototyping competition [7].

3.2 Performance Art

3.2.1 Schizophrenic Cyborg

In Schizophrenic Cyborg, a hidden participant is wirelessly linked to a performer who interacts with observers in a shared space. The performer wears a display "Teletubby-style" on their belly and the hidden participant uses their invisibility to encourage interaction between participants and observers by sending provocative and controversial messages and content to the performer's display.

Since observers are unaware of the hidden participant, they assume that the performer is controlling the display. When Schizophrenic Cyborg was performed at a performance art party, the hidden participants knew that they could not be held immediately accountable for their actions, and so they tended to 'misbehave' [5]. The misrepresentation of control caused both participants and performers to act subversively from within the performance parameters, to see what kind of reactions they could get from observers. Schizophrenic Cyborg likes busy public places best.

3.2.2 Hands of Fate and Film Jockey

In Hands of Fate a performer stands in front of a large projection screen and through gestures controls the events happening on the screen, such as making a building decay, or causing a volcano to erupt.

Film Jockey is based on the same technology is much like the "choose your own ending" book; a performer points at various objects around the room a small sequences of film clips are played on a projection screen behind the performer. If the performer changes the sequence of objects they point at, then they change the order of the film clips. While Hands of Fate has made many appearances, particularly at festivals and theatre foyers on large-scale public displays, Film Jockey has mainly been used as a demonstration tool at hands-on workshops.

3.3 International Conferences and Workshops

3.1.1 Performance Parties

In May 2002, we ran Art-Cels [1], an art and technology performance party and the last event in a three-day celebration with performance artist Stelarc [8]. The event challenged artists and technologists to come together to discuss, display and perform the future of computing and performance art in human-machine communication.

Guerrilla performance was encouraged; artists were asked to turn up on the night of the event and perform in any manner they wished.

3.1.2 Workshops & Seminars

To disseminate our work, we regularly conduct workshops with students, artists and technologists, including Leeds University, School of Performance and Cultural Industries, Doncaster College and Lancaster University and folly new media centre.

3.1.3 Conferences

We have attended and presented academic papers at several conferences, including the Computers and Creativity, HCI International, PixelRaiders, Pervasive Computing and Mobile HCI. Currently, we are organizing an international conference, which we describe in the future work section of this paper.

4. FUTURE WORK

In November 2004, Folly (UK) in partnership with .:thePooch:. (UK), Robert Saucier (Canada), KIT collective (UK, Canada, France) will bring together 25 artists and 25 scientist for a week of explorative activity and scientific inquiry to be co-hosted at folly and InfoLab21, the Northwest centre of Excellence for ICT. Our two main themes explore the intimate spaces found in viral communities and self-replication and, absent presence, virtual sensing and distant co-action.

Also, we are creating content for a large-scale ubiquitous display network which will be built on the university campus in 2005. Several large-screen projections and small ubiquitous displays will be strategically placed around the campus. This EU funded initiative will give us access to the largest concentrated group of ubiquitous computer users in the world. We are collaborating with the School of Performance and Cultural Industries, Bretton Campus at the University of Leeds, Nuffield Theatre at Lancaster University, and international artists to create site-specific interactive performances and installations for this project.

Finally, we are organizing several performance parties which will take place during the Liverpool Biennial in September, October and November 2004. The event will mirror the ethos of Art-Cels, in that the venue will be open to the public and will include several guerrilla performances.

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