Expanded Image Workshop: Storytelling in Interactive Real Space

ELIA Teachers' Academy 2009, Sofia

Dr. Axel Vogelsang
Research Fellow/Lecturer
Lucerne School of Art and Design
Institute of Design
http://english.hslu.ch
axel.vogelsang@hslu.ch

Abstract:

This paper describes a workshop that was run in autumn 2008 at the new MA Animage at Lucerne School of Art and Design in Switzerland. Students with a background predominantly in illustration, animation or graphic design were introduced into the idea of interactive visual storytelling in real space with the help of computer controlled sensors and switches.

1.0 Introduction

In summer 2008 the Lucerne School of Art and Design in Switzerland started their new master programme in design, part of which is the major in illustration and animation, called Animage. Most of the students are rooted in rather traditional forms of visual storytelling, where the formal scope for narration is defined by a rectangular frame, screen or paper that is, as well as through linear flow of time. Since the 1960s at the latest though, the notion of film as a purely linear and passively consumed medium of narration has been called into question. The concept of *expanded cinema* (Youngblood, 1970) extended the movie format with the help of analogue means such as multi-projections, moving projectors or flexible projection surfaces. The digital age has further enriched the possibility for cinematic storytelling through various ways of user-image interaction from the joystick and other control devices to virtual environments up to perceptive physical spaces and database driven movies.
In order to provide the MA students with an understanding for this wider context of their subject of study, a workshop called *Expanded Image* was devised as part of the first semester of the Animage programme. In this two-week module, students were given the chance to explore the possibilities of visual storytelling in the context of interactive real space.
One of the main challenges was to develop a workshop in which students with no programming skills could come to quick results. And while they should at least learn to understand the basics of the underlying technologies, they should also get to grips with the various issues relating to narration and audience involvement and the more general subject of the creative process in this specific context. This paper will discuss the premises for this experiment in visual storytelling as well as the execution of the workshop and its results.

2.0 Workshop Description

2.1 The Toolbox

The two main workshop lecturers, Raphael Perret and Felix Eggmann have a background in interaction design and media art, respectively. They developed a custom-made toolbox that consisted of both hard- and software components that would allow students to get in touch with this complicated topic more easily. The toolbox mainly contained the following three elements: First there were several devices that would deliver inputs from the environment or the audience for that matter, such as light, distance and pressure sensors and different kinds of switches. Secondly there was a set of predefined actions programmed with the Software Max MSP/Jitter which allowed to connect the aforementioned inputs to actions such as playing back movies, images and sounds, turning electrical devices on and off or dimming lights. Third there was a programmable board, called Arduino, which acts as an interface between the inputs and the actions. While these tools are widely used in the context of interaction design or media art, their employment as an educational device for visual narrators such as illustrators and animators is rare if not unique. It has to be said though that while the workshop was extremely well prepared, the attendance of at least one technical staff member during the whole workshop was crucial as the underlying technical challenges were still too big to be overcome by the students themselves. The documentation of the workshop was done by both staff and students in the form of a blog that can be found at http://blog.hslu.ch/madesignworkshops

2.2 Preparatory Exercises and Inputs

The workshop itself was devised as a mix of practical exploration and theoretical inputs and took up 10 days. In the beginning students got a detailed explanation of the toolbox, followed by an introduction into the history of interactive visual arts in the form of a morning session during one of the first days. The practical part started off with a one-day hands-on exercise aiming at getting to grips with the basic ideas of this module. Therefore the approximately 20 participants were divided into six groups of three to five students each. Every group concentrated on one sensor/switch, each of which came with a very short briefing. The light sensor for example came with the line “night and day”. Each group was supposed to build an interactive piece that would include a projection of some form. At the end of this day students presented their work and discussed intentions, outputs as well as the problems they faced. The aim was that after this presentation everyone should have a rough idea of how all six sensors/triggers could be employed.

2.3 Main Brief

The main brief that was to be executed over a period of five days was approached in similar sized groups. They were supposed to develop a walk-in installation with a strong visual element that would tell its story in a meaningful interaction with the audience. The interactive pieces should be presented in a combined exhibition. The backdrop for the brief was the beginning of a short story by the American writer Edgar Alan Poe (1889) called *The Fall of the House of Usher*. The first few paragraphs tell how one evening the narrator approaches the house of his friend Roderick Usher on horseback. This house lies gloomily in “a singularly dreary tract of country” (ibid). Thus Poe prepares the reader for some mysterious if not horrifying events to happen. The students were briefed to design the House of Usher as they imagined it with the help of the interactive toolbox and based on their own image material, one room each group. Groups had to choose between basement, attic, living room, kitchen, bathroom and bedroom.

3.0 The Exhibition

As the final exhibition was in a single room the size of a classroom, the chambers and rooms that made up the imaginary house of Usher had to be improvised using wooden room dividers and black sheets. The outcome was impressive, particularly regarding the very short time that was available. The approaches of the students were extremely varied. In the following three of the student art works will be described exemplarily:

3.1 The Attic

Attics are often filled with loads of junk and accordingly this room contained a pile of chairs, old desks and other rubble (figure 1). A projector is positioned in such a way that the projection fills one whole wall with the pile producing a shadow in the form of an opaque but clearly defined shape on the same screen. Starting from the entrance there is only one possible pathway through the deadwood and it leads towards the aforementioned shadow. Along this path sensors are positioned that react on movement. Triggering those sensors miraculously affects the shape of the shadow of the pile. What seems like a shadow is actually part of an animation and morphs into the form of a strange and stooped humanlike figure that turns its profile around toward the visitor, bending its arm and beckoning with its forefinger. As soon as the visitor moves nearer, the shadow virtually jumps at him, an action which is again triggered by a sensor. The ghost-turned-shadow is now directly projected onto the visitor and for a few seconds performs a wild and ferocious dance until finally exploding into smoke.

Figure 1: The Attic. The shadow of a pile of rubble turns into a ghost that jumps at a visitor.

3.2 The Kitchen

The kitchen is a simple sink the visitor stands in front of whilst looking out of a “window” behind it. This window is actually a projection, showing a street and occasionally a passer-by, the appearance of which is triggered by a sensor reacting on a person standing in front of the sink. This passer-by is a young women that stops in front of the window and points at the sink, saying that by accident she dropped her ring in there and if one could be so kind to get it out. The intention is for the user to put his hand deep down into the drain of the sink. Far down at the bottom his hand would intercept a moving ventilator. This experience is surprising rather than painful but nevertheless the spontaneous reaction is to flinch and to pull out ones hand immediately. This installation plays on the idea that the drain contains a waste grinder. Accordingly once the ventilator is intercepted, the virtual window is splattered with a burst of blood. The passerby is stupefied and moves on, only slightly embarrassed.

Figure 2: The kitchen. A girl asks the visitor to fish her ring out of the sink; an act of helpfulness with quite drastic consequences

3.3 The Basement

The idea behind the basement piece plays on the fact that Usher is not only a name but also a profession: the person that guides the audience to its seats in the darkness of a cinema or theatre, most likely with the help of a torch. Thus the torch is the chosen object of interaction for this installation. The audience enters a narrow and dark chamber. Light sensors are hidden on several spots all over this little room. By turning the torch onto one of those sensors a round projection on one

of the walls appears, simulating another torch that explores a real basement. This virtual torch moves over labels of jars and bottles, follows pipes or investigates the contents of shelves.

Figure 3: The basement. The light of a torch hits a light sensor which triggers a projection

4.0 Discussion and Evaluation of the Workshop

The workshop involved a steep learning curve, not only with regards to technology but also with respect to storytelling and the design of interactions. The latter was approached very differently throughout the described projects. A human's movement in space are hard to predict and thus it is a big challenge to guide actions in an inconspicuous way. The kitchen sink situation deals with this issue by putting the audience in a fixed position in front of the objects of interaction. The freedom of movement in the attic is much bigger in comparison but still the audiences' pathways are cleverly restricted and similarly to the sink there is also one clear centre of attention.
However, these restrictions are somewhat related to the fact that both pieces follow a linear storyline. Even though the stories told through those installations are both very short, they show a classical Aristotelian structure with a beginning, a middle and an end (Aristotle, 1895). The basement installation in contrast, allows for much more freedom because it applies methods of nonlinear storytelling. The room is actually a network of nodes that can be accessed freely at any time. Such an approach though most likely comes with the abandonment of notions such as plot or closure. (Aarseth, 1997)
The feedback of the majority of students was mainly positive. Not only did they enjoy the experience but for a lot of them the workshop was also highly relevant. As illustrators and animators most of them had never before considered their relationship with the audience with regards to interaction, nor had they questioned their usual working formats. The workshop was thus seen as the right approach in the context of an MA, which is supposed to challenge and inspire rather than instruct.

References:

Aarseth, E. J. (1997) *Cybertext*, The Johns Hopkins University Press.

Aristotle, Poetics, in: Butcher, H.S.: Aristotle's Theory of Poetry And Fine Art (1895), Macmillan and Co., London and New York.

Poe, E. A. (1889) The fall of the house of Usher: and other tales and prose writings, In: Rhys, E. (Ed.), The Camelot Classics.

Youngblood, G. (1970) *Expanded Cinema,* New York, E. P. Dutton and Company.