

Project evaluation - Be, See

Name: Gert Jørgensen
Lecturer: Dr. Mick Grierson
Course: Creative Practices, CC223
Study programme: BSC Creative Computing
May 8, 2009

Introduction

My project aims to create a conscious awareness of how motion and tempo influence perception of surroundings by allowing participants to fly through a virtual space inhabited by trees which are generated by the participants physical movement.

I have named the piece “Be, See”, referring to the state of being present, allowing for true perception, not disturbed by a wandering mind. When pronounced the title is easily mistaken for the word “busy” underlining the importance of the participants awareness and state of mind.

The setup consists of a video projection of the virtual world and a web camera monitoring the space in front of the projection. When a participant flaps her arms up and down, like a bird moves it wings, the application registers and starts the fly-through. Continuous movement builds up speed which is then decreased over time. When the speed reaches zero an instructional message is displayed to hint new participants on how to interact. The pieces was displayed at The Stretch, Students Union, Goldsmiths College, University of London on May 7, 2009.

From idea to realization

Initially I wanted to create 3-5 minimalist works to display an understanding of several minimalist concepts without having to incorporate them all into the same piece. During the conception of the project several concepts seemed to fit well into just one piece though so I chose to focus solely on that. These concepts are explained in the “narrative” section.

The idea for the piece was long underway. I have several pages of discarded ideas who all share the same characteristic: they originate from the left part of my brain and focus on the technology necessary to realize them. Luckily I was aware of this on both a unconscious and conscious level which allowed me confront the problem head on both by seeking advise from Dr. Mick Grierson, friends and fellow students and by not feeling to much attachment to all the ideas I had to discard. This allowed me a fresh start on a journey into thoughts and feelings about the human state of being, thinking, flow, sanity, our relationship with nature etc. and ultimately the idea somehow just emerged from the right part of my brain as I intended at the beginning.

Once the idea was conceived choosing the appropriate tools was easy. I chose to use the Max/MSP/Jitter software for implementation as it facilitates good methods for video signal processing and incorporates the OpenGL environment for developing graphics applications. I did not have any previous experience with Max/MSP/Jitter except from a few tutorials during our classes but the interface is quite intuitive, the included tutorials are of very high quality and it allows use of the Javascript programming language with which I am very familiar.

I divided the development of the application into several phases:

- Detect flapping motion in video signal.
- Increasing speed based on detected flapping motion and decreasing speed over time.
- Generation of trees based on speed.
- Coloring of trees based on speed.
- Height of trees and camera based on speed.
- Testing

Working in phases made development time easier to estimate and schedule and allowed for quick mental reentry into a problem when having taken time off to focus on different projects that needed to be done at the same time.

Narrative

The piece has three general states of speed: slow, balanced and fast. The idea is to see if it is possible to make the participant aware of her speed and focus on being in the balanced state. I use several methods to try achieve this state:

Color

Contrary to what I wrote about color in my project proposal I have chosen to use colors actively to convey meaning. The coloring of the trees is based on a gradient scale ranging from cyan (minimum speed) through green, yellow, orange and finally red (maximum speed). This is a very powerful feedback mechanism as the meaning of the colors are unconsciously present in all of us from the use in e.g. traffic lights. Green indicates that all is good, red indicates that you should stop up and yellow indicates the change from green to red and back. This use of colors is also very common as a power indicator in speed based computer games.

Form

The complexity of the trees is also based on the speed. Low speed generates the most complex and open trees hinting an impenetrable form. When the speed moves towards the balanced state, the trees take on a more tree-like shape allowing for the most realistic and recognizable view. Once the speed is high the trees close up, have fewer branches and hint an impersonal form.

Space

Space is manipulated in two ways inside the virtual world: by the height of the trees and the position of the camera. Slow movement generates high trees and moves the camera towards the ground again helping to hint an impenetrable form. At a balanced speed the height of the trees and the camera position is aligned so you seem to fly right above the tree tops touching them a bit simulating overview and excitement at the same time. At a

high speed the trees are small and the camera positioned high above hinting a disconnection.

Physical input

Letting the participants control the simulation by flapping their arms also creates a physical feedback method that is very simple yet very effective: If you continuously flap your arms at high speed they will soon start hurting and you adjust to a lower speed. This is so natural for humans yet not all have understood that the same could be true for their mental well being.

Does it work?

The answer is yes, surprisingly well even. The participants looks uncomfortable at the beginning, maybe because of the unusual physical act they have to perform in a public space but as soon as new trees appear their focus moves the projected image. Every single person I have observed then goes to full speed, realizes that is not optimal and eventually settles at a speed which in the simulation is considered as balanced.

Technically it works well too even though the camera needs good lightning in order to detect movement. This could also easily be solved by using an infrared camera instead of a regular webcam.

In my project proposal I stated that I would consider an expert evaluation. This was based on the idea of creating interpretations of existing works. As the project ended up being my own creation instead I decided that it did not have the same level of relevancy and discarded the idea.

Future development

Technically the application works very well and could easily serve as a base for further projects needing the same physical input method. Based on the development phases the design of the application is quite modular and would allow for easy extraction of individual parts.

In terms of this particular piece I would have liked to spend more time on the tree generation algorithms mostly to make them look “prettier”. Generated landscapes could also be a nice addition.

I ultimately decided to keep it as simple as possible though, and I am very happy with the result achieved while staying true to the “less is more” paradigm.