Invisible Boundaries, visualising our personal social spaces

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Invisible Boundaries is an interactive installation design that aims to highlight the existence of our invisible personal and social boundaries and how we affect one another's on a daily basis.

Interaction design, Interactive spaces, Interactive installation, social boundaries.

1. INTRODUCTION

We live in a fast paced world where the majority of our social interactions take place through technology rather than face to face. Thanks to these advancements in technology we spend less and less time consciously interacting with one another.

My design aims to address physical social boundaries and how through the growth of online social networking these boundaries have been challenged and broken down.

2. BACKGROUND

The project came from the Create 10 brief which asked students to explore interactions that make transitions visible. These transitions could be ones between analogue and digital, transitions across time, place or information spaces.

My investigation began by researching the term transitions. The Collins English dictionary defines the term transitions as

'Change from one state to another'.

With this definition in mind I then researched the transitions that exist across time and place. This led me to map out how we experience transitions. I noticed that all the transitions we experience are dependent on certain conditions being satisfied. This could be the condition of time, sunlight or temperature.

From the flow chart above you can see that the breakdown in how we experience transitions highlights how changes in space and safety & security are experience when similar conditions are satisfied.

The other area that was highlighted in this research was how personal and public spaces exist online and in the physical world yet their parameters are unique from one another.

3. OUR VIRTUAL SELVES

The next part of my research was conducted online using virtual ethnography. I wanted to explore the idea how our personal and public boundaries translate from the real world into the virtual world.

With the rise in online social networking our perspective on personal and public is being distorted and changing between virtual and real spaces. People are now spending just as much if not more time living virtual lives than their real ones. With these virtual interactions becoming more and more regular there is a risk that we are becoming less and less familiar with experience and routine of real world social interactions.

These changes are in turn having an effect on the ways we perceive our private, personal, social and public boundaries.

4. PERSONAL SPACE

There is a vast amount of psychological research into the importance of personal interactions between people. My looked primarily at Edward T. Hall's investigation into our personal boundaries [1]. Reaction bubbles as he defined them.

Although we cannot see when another person has moved between our social and personal boundaries we are definitely aware of the intrusion. Psychologists have stated that these boundaries appear as in fig. 1.

Fig 1. – Edward T. Hall - Reaction Bubbles

5. HOW IT WORKS

The installation works through Processing and blob tracking using the Flob Library. The program takes an initial snap shot of the interactive space via an Infra-Red camera located above. After that any object, of a significant size that passes through the space will be detected as a person and by identifying the area of pixels the person occupies a centre point of the person can be identified. By locating the tracking camera in the ceiling the interactive floor graphics and the user are translated into a 2D scene. This simplifies the

application of the interactive response of the graphic when a user moves into the interactive space.

6. BENEFITS

The aim of Invisible Boundaries is to create a fun and evocative interaction that can be experience individually or by more than one person at a time.

7. REFERENCES

[1] Hall, Edward T. (1966). *The Hidden Dimension*. Anchor Books.

Greenberg, Ira (2007). *Processing: Creative Coding and Computational Art*. Friends of Ed.