Academic Title: S.A.R.I. Spatial Augmented Reality Investigation

Sarah Loh

Spatial augmented reality, also known as projection mapping, is a technology whereby video projectors overlay video and image content onto physical objects. It is a relatively new technology which has been adopted by music artists to enhance their live performances and by large companies as part of advertising campaigns. It has also been used by visual artists in the creation of art installations and as a means of creative expression.

This project is an investigation into projection mapping, exploring all aspects of the technology. Topics under examination include the hardware and software required for various scenarios, how the size and type of the object or surface affects the projected media, and the differences between internal and external projection. The project investigates and details projection mapping parameters such as surface size, distance, lumens and power.

The project also investigates spatial augmented reality content creation tools, graphical programming environments and visual performance software. These tools will be used to process social media feeds. Reactive and generative visuals will be produced through creative coding. Creative coding is the use of programming and computer technology to create interactive digital artworks.

Another component to this project is the production of an e-learning lesson for spatial augmented reality in the form of an instruction manual document and a video tutorial.

Disciplines: Spatial Augmented Reality, Projection Mapping, Graphics, Generative Programming, Creative Coding, Visualisation, Social Media.

Hardware/Software Technologies: Mac, Windows, MadMapper, VPT, vvvv, Arkaos GrandVJ, Flash, Syphon, Processing, HYPE Framework, VUO, Photoshop, Twitter API, YouTube API.

Email address: sarah.loh0708@gmail.com