Data Body Banking: Understanding Post Biological Identity through Embodied Mixed Reality Art

Julian Stadon
Salzburg University of Applied Science
Bayerhamerstrasse 12E/24, 5020
Salzburg, Austria
julian.stadon@fh-salzburg.ac.at

1. INTRODUCTION

This demonstration will present recently completed research for a practice based PhD that explores the psycho-topographical relationship between bodies of matter, embodied data and data bodies, presenting a contribution to the field of mixed reality art, with a particular focus on post-biological identity. It will consist of the presentation of a body of practical outcomes that aim to provide a new contextual positioning, of current discourses relating to this field, in order to shift its focus to networked mixed reality art and post-biological identity.

The research aims to propose a new practical framework for understanding post-biological identity through the creation of art, made in response to relevant discourses that focus specifically on networked mixed reality, embodiment and personal data archival. This is achieved through developing real-time data transfer systems that bridge representations of embodied data and data bodies in mixed reality applications. This process involved significant analysis of current technical and theoretical examples, in order to develop a range of solutions that engaged the viewer with related practical and theoretical discourse.

The particular outcome being presented is from the *organtradAR* series (2009–2014), which developed a new technique for converging physical, augmented and virtual reality environments in real time, in order to demonstrate that post-biological identity cannot be represented in a linear model and also, to propose that artistic practice offers a method through which to further develop and validate such a claim. The outcomes of the project suggest that contemporary construction of identity follows a multi layered *and* rhizomatic evolution that

is constantly integrated within a layered topology of other networks.

Through creative production, such theories relating to networked Being, can be made tangible and new methods for art production, in particular embodied mixed reality data transfer, can be presented.

2. BACKGROUND

The origins of post biological identity are still a matter of debate, however this research subscribes a the point of view – proposed by Cubitt (2004), among others – that the origins of mixed reality media art and post biological identity exist in the early cave paintings at such locations as Lascaux, Northern Canada and Regional Australia.

Figure 1: Example of Early data body banking in Australian Indigenous Rock Art

Brian Massumi (2002) states: “The body, sensor of change is a transducer of the virtual.” Through existing in virtual representations that are directly linked to living bio-systems, we effectively sense, feel and think in a way that hybridizes the virtual with scientific inquiry, and therefore we require a

discourse that addresses whether this does in fact make us post-biological. Through creating real-time data transfer systems that bridge representations of embodied data and data bodies in mixed reality environments, the practical outcomes of this research scopes a broad range of theoretical discourses in an attempt to propose a framework for understanding post-biological digital identity. In this process the theoretical research was analysed and then explored in experimental creative practice that focused on five main objectives:

1. To define mixed reality art, as a legitimate transdisciplinary field in relation to the wider field of media art based research
2. To present theory relating to mixed reality interfaces, interactive networks, identity and the body in writing and to merge these discourses through creative practice.
3. To propose a new theoretical and practical framework specifically for mixed reality art, that focuses on representations of the body and post-biological identity.
4. To articulate post-biological identity as a relationship between embodied production and consumption of art, in relation to the representation of data and ideas in practice, through mixed reality art.
5. To provide better understanding of this relationship through the introduction of new hybrid terms to describe the field.

This process involved the creation of what one might term bridged non-autonomous digital agents. These agents are by nature embodied, through physical interaction with them, within unique mixed reality environments. These agents, or rather 'data bodies', take many different forms, based on the nature of the data in each iteration and were constructed according to a range of interface and content-based solutions that rely on viewer/user participation to function. In such works there is often a number of different options for viewers to access and participate in them, through the provision of a range of simultaneously integrated mixed reality interfaces, including physical, augmented, virtual and networked solutions.

Initially a method was established that used networked augmented reality for real time visual data transfer of embodied representations into virtual environments. These representational forms of agency, while born of data, take on the appearance of bio-referential forms and thus *become* embodied. This method developed a new technique of presenting the real time relationship between embodied interaction and embodied data that focuses also on identity, data storage and ownership. Based on the outcomes of these practical experiments, a reassessment of previous referenced literature was made and a set of hybridized terms were developed that will be introduced in the resulting PhD thesis document.

2.1 Project Example: organtrader2010

organtrader2010 is a novel mixed reality interface that allows for the transfer of virtual organs, based on data from real MRI scans, via augmented reality into a virtual online environment (Second Life). Using the metaphor of organ trade to allude to traditional gallery hierarchies and ownership of identity and data bodies, *organtrader2010* allows users to donate, sell, buy or steal virtual organs across a range of platforms including an interactive mixed reality system, the standard Second Life interfaces and mobile platforms. *organtrader2010* uses the organ trade metaphor to also question the meaning of ownership and the relationship between content, property and materiality. In regards to (unregulated) machines of production and the subversion of power hierarchies, *organtrader2010* examines the roles of media artist/supplier, gallery/distributor and participant/trader. In doing so, the project also explores deterritorialisation of the body and post-biological identity in mixed realities.

organtrader2010 uses a narrative representational structure in a mixed reality context where a participant, wearing a camera mounted HMD (head mounted display) can transfer MRI scanned organs to an augmented organ 'trader.' This augmented Second Life avatar can exist in both physical and virtual (augmented) space simultaneously, so when the participant hands over one of their organs to the 'augmented trader' they are also giving their organs, unsuspectingly, to the in-world avatar.' This avatar is linked to a network of organ trader avatars that all have ownership permissions to clone, steal and sell organs from the augmented trader and sell them to other Second Life avatars. The system uses a script to link the augmented reality application with Second Life via a remote server. This allows for the real-time transfer of 3D visual material, linking the user with augmented and virtual (embodied) representations of itself. The use of fiducial marker and proximity tracking adds to the viewer's experience of agency within the processes involved in the simulated organ trade and in the process of media art creation, display and dissemination.

3. REFERENCES

- Cubitt, S (2004) *The Cinema Effect*, MIT Press, Cambridge, MA.
- Deleuze, G. & Guattari, F. (1972–1980) *A Thousand Plateaus: Capitalism and Schizophrenia*, Vol. 2 of *Capitalism and Schizophrenia*.
- Massumi, B (2002) *Parables for the Virtual: Movement, Affect, Sensation*, Duke University Press.
- Stadon, J. (2014) *organtrader2010.mov*. <https://www.youtube.com/watch?v=m8mBdu6J3wg&feature=youtu.be> (retrieved 19 February 2015).