



A Stage one investigation into the potentials of peripatetic interaction with augmented information spaces in mixed reality environments. At the Creativity and Cognition Studios (CCS), University of Technology, Sydney (UTS).

Developers / research team:

Ian Gwilt, Yusuf Pisan , Rodney Berry

Research question:

"What are the potentials for augmented artifacts and user interaction in mixed-reality environments"?

Key words:

Augmented information, perceptual user interface, distributive spaces, augmented artifacts

Introduction:

The *Augmented artifact* is a proposal for the development of mixed-reality museum installations or artworks that combine both the physical and virtual experience in an augmented information space. The intention is to create a rich, over-laid information environment through the creation of *enhanced objects* - physical artifacts that control dynamic text, image and audio.

Augmented artifacts can combine the cultural and social qualities we assign to physical objects with the potentials of digital content to facilitate an extended historical or contextual, narrative experience, beyond the confines of the user's immediate space and time-frame.

'Augmented Typography': (A possible starting point for investigation)

Physical space:

Questions and statements (quotes) pertaining to mixed reality issues are mapped in the physical installation environment. Either through the use of actual lettering applied to gallery surfaces (walls ceiling and floor), or through the creation of 3 dimensional artifacts with typographic surfaces.

Virtual space:

Through the use of wireless, augmented reality 3d stereoscopic glasses, additional content can be accessed. This extra information will relate to the physical typographical statements and take the form of short video sequences and expanded textural analysis. The virtual content will be triggered by the user looking at interactive nodes incorporated in the terrestrial texts and will be mapped into 3d dimensional space as dynamic audio and visual - animated type and video sequences.



Image of the non-augmented installation space



Image of the augmented installation space with 3d glasses

A brief list of research in this area:

Mark Billinghurst The Human Interface Technology Laboratory New Zealand (HIT Lab NZ)
<http://www.hitlabnz.org>

Steve Benford, The Mixed Reality Laboratory (MRL) University of Nottingham
<http://www.mrl.nott.ac.uk/>

Hiroshi Ishii, MIT Media Lab's Tangible Media group
<http://tangible.media.mit.edu/>

Rodney Berry, ATR Media Information Science Laboratories, Kyoto Japan
<http://www.mis.atr.co.jp/~rodney/>