Pervasive gaming on public transport

Digital games have the potential for changing attitudes towards social issues such as climate change and sustainability. The aim of this project is to deliver a working, proof of concept, pervasive game that would itself be themed around transport and sustainability and intended to be played on public transport.

The use of digital games to change social attitudes towards issues such as climate change and sustainability, does not have to be based on fixed computing. With the rise of the smart phone, games can make use of a range of sensor and augmented reality technologies.

The working, proof of concept, pervasive game will be an augmented reality game played on smart phones. Interaction with the game will be presented on-screen with 3D graphics that overlay the real world. The players will be able to interact with a communally created world on the public transport route they take everyday. It will be a simple, ambient, social game in the same vein as Farmville or Foursquare.

Current research questions

- How can we make use of contextual data gathered on public transport, via mobile devices?
- What are the affordances and constraints for game design on public transport?
- How can Layar Augmented Reality Browser (Layar, undated) be used as a game delivery platform?

Future project research questions

- How can we use pervasive and ambient gameplay techniques to make a public transport journey more fun and engaging?
- How can we create an experience that embeds an understanding of the systemic nature of sustainability and transport issues?

Issues and findings

Motion sickness whilst using an AR browser

All participants reported a feeling of motion sickness whilst using it. This included those who said that they didn’t normally feel motion sickness whilst reading or using devices in cars or public transport.

Social issues of camera use in public transport

People in front of the camera are very aware of being photographed or filmed.

Device and interface issues

Particular issues faced are, firstly, the variability of lighting conditions, and secondly, the relationship between GPS data and the application.

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