Tools for Open Interpretation: Using Novel, Non-Desktop Computing to Support Multiple Perspectives in Children's Historical Understanding

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The Disappearing Computer

The research which we report in this paper was undertaken within a project of the European Union's *Disappearing Computer* (DC) initiative. The DC comprised sixteen cognate projects, each concerned with different aspects of people's lives and their enhancement through new non-desktop computational artefacts. Our project, SHAPE, (Situating Hybrid Assemblies in Public Environments), focused on exploring how novel ubiquitous computing technologies might be designed and appropriated, *in situ* to augment visitors' experience of public spaces, specifically galleries and museums. The project extended over three years, during which time we engaged in a number of innovative technology explorations, testing and trying-out the interaction capabilities of a number of novel and emerging computer technologies: e.g., Augmented Reality; 3D tracking; and wireless RFID technology. Our work was also strongly informed by a human-centred-interaction design sensibility. We also conducted an extensive series of observational studies of visitors and children in museums and interviews with kids and teachers and general visitors. During our design process, we furthermore consulted a number of other key design informants, including museum curatorial and educational personnel.

Our work culminated in the public exhibition of innovative assemblies of computer technology at three selected museums across Europe, namely The Technical Museum, Stockholm, Sweden; Nottingham Castle and Museum, Nottingham, UK; and The Hunt Museum, Limerick, Ireland. In this paper, we report specifically on the design and evaluation of our third and final exhibition of the SHAPE project at The Hunt Museum, which was called *Re-Tracing the Past: exploring objects, stories, mysteries.*

Evaluating the Exhibition

A total of 326 schoolchildren visited the *Re-Tracing the Past* exhibition in the Hunt Museum in June 2003. In all, ten different school groups participated in our study. We conducted follow-up sessions with eight classes and we completed pre-visit sessions with six classes. We visited one class, Ms. Cleary's fifth class, Presentation Primary School, Sexton St., Limerick City, twice. All the participant children were in the age category, 9-12 years. Generally, from our evaluation we found the *interpretational openness* of the novel computer-augmented exhibition helped to support significant creativity/spontaneity of ideas among children. For example, in this discourse episode, one of the kids, Pat comes up with the previously unmentioned idea of using a Y-shaped object as a diviner:

Patrick: "I think it is a diviner for looking for water for a well."
Researcher: "Brilliant Pat, that's excellent, great idea."

However, our ethnographic evaluation highlighted a need for some structuring or scaffolding to help support more systematic reflection, which may help children to develop beyond having just lots of great ideas, and to start to ask more focused questions and probe deeper, and reflect more profoundly on artifacts and history.

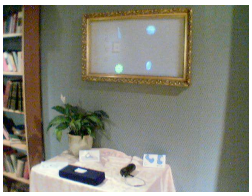

Figure 1. The interactive mirror installation in the interactive Hunt Museum exhibition

Acknowledgments

The authors would like to acknowledge all those involved in the construction and evaluation of the exhibition, particularly their colleagues in the SHAPE project.