

Implicit Participation from a Glance

Darius Garnham

Department of Computer Science, Swansea University, Wales, UK



INTRODUCTION. Most people are constantly on the move, and don't have the luxury of stopping for their information. We consider possible ways in which mobile devices could be used in public community spaces to extend current practices.

We propose the notion of implicit participation and explore what can be revealed upon current practices, considering group dynamics over peoples choices within community settings.

How is this best suited within the current interaction model between mobile and public displays, and what benefits can be drawn ?

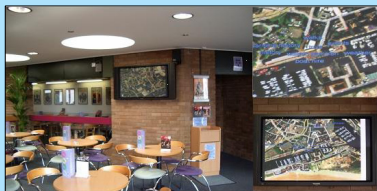
It is therefore our aim to see how current practices can be augmented to allow for enhanced awareness and new forms of interaction to be revealed naturally.

STUDY 1 – INCIDENTAL INFORMATION (ASYNCHRONOUS)

“Incidental Information” – Use and repurpose of information arising from other use or activity



“Conditioning Effect” – In the future, more engaging displays will have to either accommodate or exploit this exposure



Display positioned in a Café



Display positioned in a Common room

“Lazy Search” – viewers unexpected insights and discussions prompted with other people at the location



Display as a projected query map on an outside public wall.

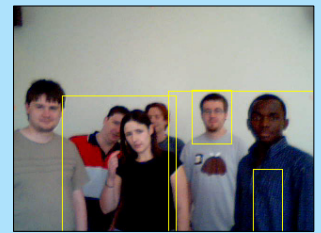
“Decoupling current Mobile & Large Screen practices” – Exploring their usage and bridging the gap between them.

CONCLUSIONS.

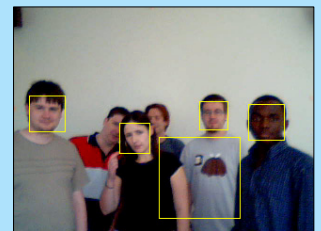
- Decoupling current practices of Mobile & Large Screen interactions allows, through combined interaction, new forms of interaction to be formulated. This augments current practices and provides new ways to communicate, sharing the expression of voice within a community.
- People don't value something until they can't live without it. By providing these 'helpers' and exploring these issues people could feel more connected with the community they are part of, and help reveal and extend future interactions.
- The notion of a glance is a powerful thing, and we have demonstrated how this can be interpreted. By considering the affordances that reveal themselves through such interactions we can then consider possible interactions of the future.

STUDY 2 – GROUP INTERACTION (SYNCHRONOUS).

Basic algorithms performance evaluations can be found in tables below. Issues with total detection of group members, see images below, require further investigation. Possible capitalization of visualization techniques considered with phones.



Detected presence using BTS08 algorithm



Detected presence using OpenCV Face algorithm

Algorithm	Percentage
BTS08	59
BTD08	66
Face Detection	46

Detection rates – Viewing audience members identified

Algorithm	Correlation
BTS08	0.015
BTD08	0.215
Face Detection	0.426

Correlations between detected and actual audience members

Algorithm	Seconds
BTS08	9.31
BTD08	9.14
Face Detection	10.69

Runtime rates over 102 recorded images

ACKNOWLEDGMENTS

The query capture work was funded by Microsoft Research, Cambridge, UK.

For further information

Please contact csdg@swansea.ac.uk

More information on this and related projects can be obtained at

- <http://www.cs.swan.ac.uk/~csdg>
- <http://www.fitlab.eu/>