

This Pervasive Day

Creative, Interactive Methods for Encouraging Public Engagement with FET Research

www.perada.eu

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We are now entering a world where the miniaturisation of devices is converging with a massive increase in computing power. Pervasive computing is now a reality, while advances in intelligent software make adaptation of those pervasive computing environments possible.

This outreach project investigates the science and technology of pervasive adaptation from a human-centred perspective, and considers social, ethical and legal issues. These activities have been designed to support a popular science book, an output of the PerAda project: *This Pervasive Day, the Perils and Pitfalls of Pervasive Computing*, edited by Jeremy Pitt, to be published in 2011 by Imperial College Press.

In order to appeal to a broad spectrum of the public, the PerAda team has promoted a website (www.thispervsiveday.com) as the hub for the outreach activities.

These fall into three categories:

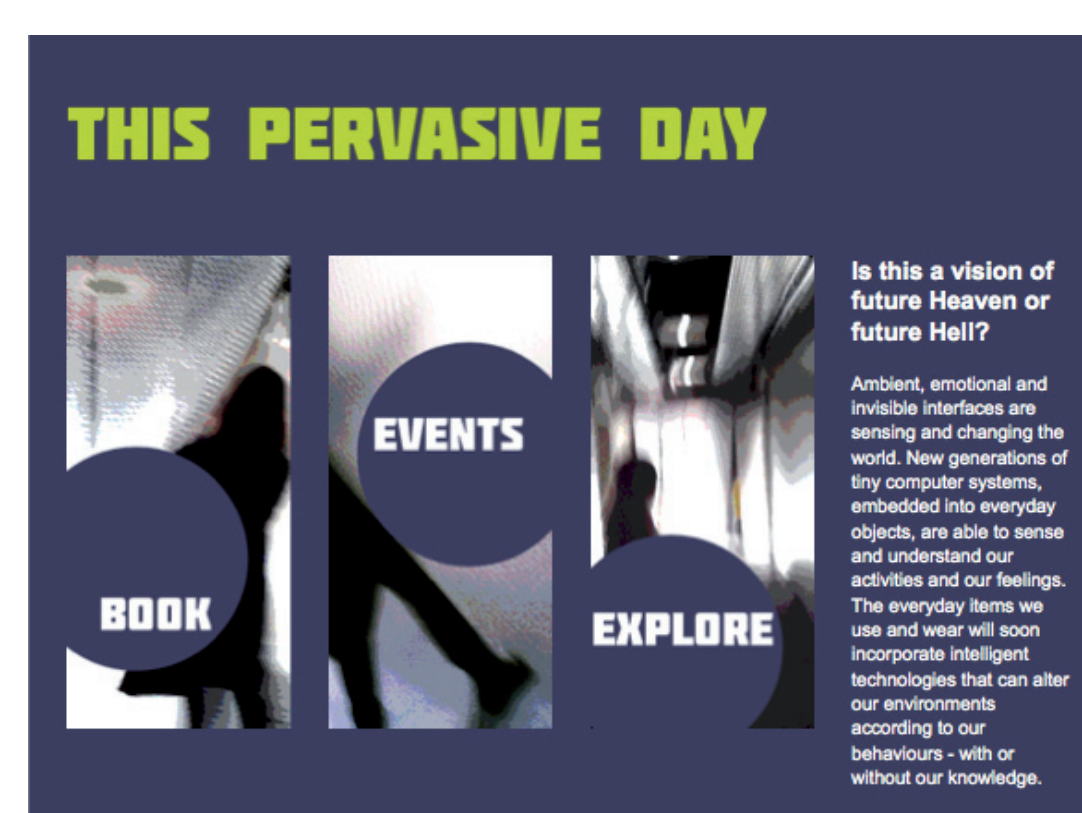
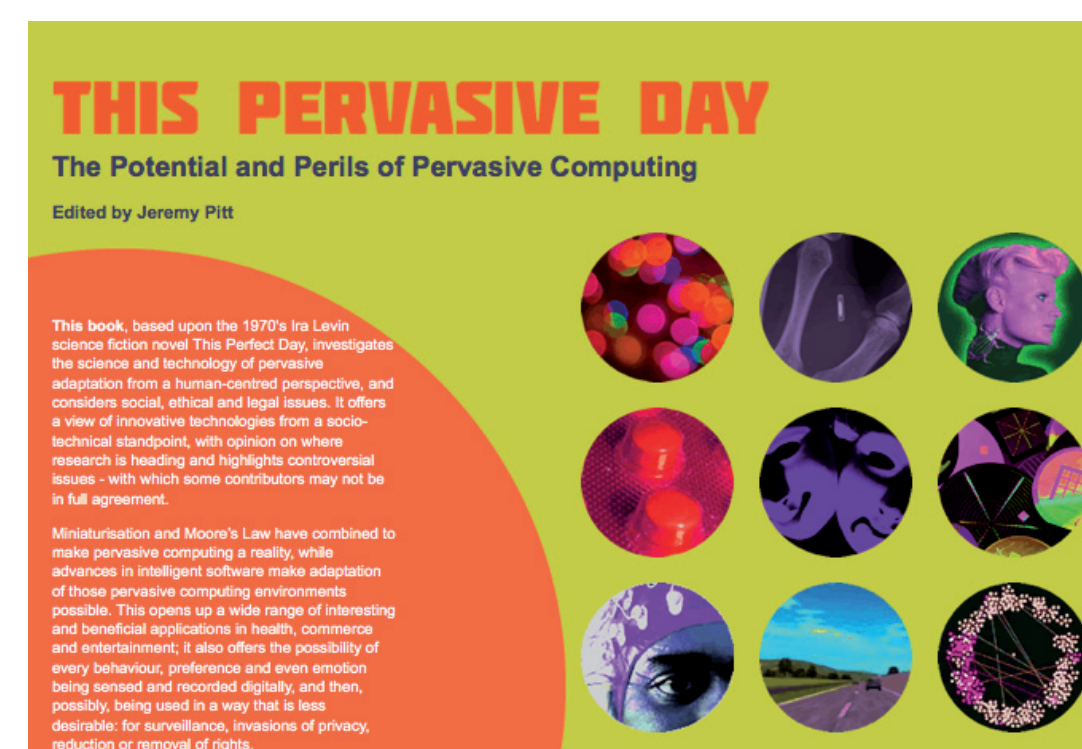
- the **book**,
- the **events**, which include the exhibition and also public talks and debates,
- the **interactive documentary** which can be experienced both on the website, and as an installation within the exhibition.

Co-ordination Action Outreach

It is accepted that the outreach work of CAs within FET-Proactive adds great value to the work of research projects by reaching out to the scientific community and beyond to a wider section of public society in order to:

- build multi-disciplinary, collaborative communities,**
- promote technological developments,**
- debate new future directions for research focus.**

The PerAda outreach team believes that the approaches to public dissemination work that are discussed here can be further developed in future research projects in ways that will complement and strengthen the impact of Framework Programme initiatives.



Interactive Exhibits

The interactive exhibits have all been designed to address particular application areas and themes of pervasive computing. They give quick and rewarding feedback to the visitor.

Interactive Documentary

Interview footage from research projects is incorporated into a scenario-based video documentary that is interspersed with questions allowing viewers to input their opinions and reactions to what has been seen. This information is incorporated into a database, and a visual overview of aggregated opinions is projected onto a large screen.

Puffersphere

Geo-located global live Twitter messages are graphically visualized on a spherical display, along with thought-provoking messages about how much personal data is voluntarily given out by individuals to pervasive, connected systems.

Face Detection and Identity Assignment

Webcams detect the human face and assign random identity data in an intriguing manner. This is intended to provoke users to consider how their personal data can be captured, used and stored by pervasive computing systems.

Augmented Reality Badges

As a simple promotional tool, a small badge printed with an augmented reality tag is given out to visitors. Using a webcam, 3D imagery is superimposed onto the visitor's badge, demonstrating the potential for digital content to become integrated with lightweight wearable devices and clothing.

PerAda Project

PerAda supports research into pervasive adaptation in computing - work that has far reaching implications for society and individuals. While the PerAda team aims to increase public knowledge and understanding of this domain, it is equally important for scientists and researchers to be aware of public attitudes towards the potential applications of their research. In order to address this "feedback loop" aspect of public engagement, the PerAda team has designed and developed an activity-based interactive exhibition as part of the Edinburgh International Science Festival, alongside an online interactive documentary.

Integrated into these projects are creative and entertaining methods of eliciting audience reactions to pervasive technologies and their potential impacts.

References

- PERADA: Towards Pervasive Adaptation 2011 www.perada.eu
- Holliman, R; Collins, T; Jensen, E and Taylor, P. 2009. ISOTOPE: Informing Science Outreach and Public Engagement. Final Report of the NESTA-funded ISOTOPE Project. The Open University, Milton Keynes.
- Delgado, A; Kjolberg, K, L; Wickson, F; 2010. Public engagement coming of age: From theory to practice in sts encounters with nanotechnology. Public Understanding of Science. <http://pus.sagepub.com/content/early/2010/05/11/0963662510363054>
- Report on FET Coordination Action Workshop, 26-27 October 2010. http://cordis.europa.eu/fp7/ict/fet-proactive/ca-ws-oct2010_en.html

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