

Art, Design, and Entertainment in Pervasive Environments



In this special issue, we focus on research that aims to use ubiquitous computing technologies to enrich the quality of our lives through contributions in art, design, and entertainment. Most ubiquitous computing research aims to improve efficiency in work and living tasks; in contrast, the articles in this issue consider far less utilitarian applications.

The first theme article, “Culturally Embedded Computing,” provides an opportunity to reflect on ubiquitous computing systems design. The authors are members of Cornell’s Culturally

Embedded Computing Group—a multidisciplinary group that considers the design of computing systems that are embedded “not only in physical environments but also in culture, society, and history.” By describing a series of experiments, the authors provide insight into the design process of ubiquitous computing technologies that are

thought-provoking and relevant to all researchers attempting to create artifacts that will play a role in future pervasive environments.

The authors of “Gust of Me: Reconnecting Mother and Son” describe one such artifact: the Gustbowl. In technological terms, Gustbowls are relatively straightforward; pairs of networked bowls exchange information (specifically pictures) about their contents. The team from Delft University of Technology created the system to help parents and children living apart recreate the everyday experience of children returning home.

Using focus groups, the team identified that parents whose children have flown the nest sorely miss these moments and that existing communication systems such as the telephone don’t provide an appropriate substitute. Gustbowls provide one solution to the problem. Through careful design and attention to detail, the team created a communications system that both parents and children have enthusiastically embraced and that can offer moments of quality time to families who live physically separate lives.

The final article, “Garden Variety Pervasive Computing,” considers the design of a ubiquitous computing system that resides beyond the normal boundaries of home, office, and car. The system resides in a garden specially created as part of the International Garden Festival of Grand Métis. It uses ubiquitous computing technology to help garden visitors appreciate their environment in new ways. We can view the system as a combination of technological stimuli, art installation, and garden design. It operated for several months and attracted over 90,000 visitors, letting the authors accumulate a significant amount of user data and experience building reliable outdoor pervasive systems. Such experience will likely be increasingly important as other researchers look to extend their ubiquitous computing environments into the great outdoors.

For ubiquitous computing researchers with science and engineering backgrounds, these articles’ topics might seem removed from their own spheres of research. However, for ubiquitous computing to become widespread and the vision to become a reality, careful attention to design in

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Selected candidates will be asked to interview at Carnegie Mellon University

the broadest sense of the word will likely be critical. Moreover, as we continue searching for the killer ubiquitous computing productivity application, improving the quality rather than the efficiency of our lives might provide ubiquitous computing users with the greatest benefits. 

the AUTHORS



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initiative that is investigating the interweaving of physical and digital interaction for everyday life. Contact him at the Dept. of Computer Science, Univ. of Nottingham, Jubilee Campus, Wollaton Rd., Nottingham NG8 1BB, UK; sdb@cs.nott.ac.uk.



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