

Foreword

WHAT'S IN A NAME IF IT IS ALL IN THE GAME?

When reading through the manuscript of this novel volume I was struck by the heroic attempt of the editors to position their book as a holistic approach to the subject of ubiquitous computing. I found their strong stand especially striking in this respect with respect to the use of nomenclature in the domain of ubiquitous computing. The editors acknowledge that there are many different notions presented in the literature addressing similar concepts as that of ubiquitous computing, but they argue that all these notions should be considered as a single approach to the topic of the disappearing computer. More specifically, the editors refuse to identify and describe the borderlines between different notions such as ubiquitous computing, pervasive computing, and ambient intelligence, following their strong conviction that it makes not much sense to quarrel about thin borderlines between major overlapping fields as their exploration is still open to a large extent.

As a convert to the concept of ambient intelligence for almost ten years now I must admit that I continuously have felt the need in the past to explain these differences in an attempt to mark the borderlines. Evidently, most of these notions, which were developed during the late nineties of the past century, are rooted in the early ideas expressed by the late Mark Weiser, who was dreaming of a world that would be flooded with embedded devices, note pads, and electronic dust, which would soon become feasible as a result of the remarkable advances in the manufacturing of semiconductor devices and micro-systems. However, the developments that have been achieved over the past ten years have shown that there can be no doubt about the question whether or not Mark's dream will come true; it surely will. The remaining question however is related to the issue of which form it will take and how it can be configured in such a way that society and its participants maximally benefit from it. On the other hand, some of the innovation directions have changed in the meantime, which has opened new venues for research. Great inventions, such as ambient atmospheres through distributed solid-state lighting devices, virtual environments applying 3D interactive words such as Second Life, and ultimately "The Internet of Things" have made the discussion about the differences between the various notions artificial and esoteric. More interesting therefore is the question how far the advances in this domain have stretched the boundaries of what is currently feasible. And again the editors deserve a compliment as they have addressed this question in a most original way. Their S.C.A.L.E. classification provides a simple and most practical reference model for the description of the relevant topics in the field of ubiquitous computing. Furthermore, they have succeeded in combining in the present book a most remarkable collection of research results representative of the advances in this domain. The many high-quality contributions reflect the scholarship and expertise of their authors. The book is definitely a mandatory reading for anyone who is professionally active in the field of ubiquitous computing, as it can be seen as a landmark approach to the description of the advances in this domain.

After more than ten years of breakthrough developments, ubiquitous computing can now live up to its expectation that it can change peoples' lives for the better through the promise of the disappearing computer.

Finally, I would like to thank the editors for providing me with the insight that the true progress achieved in our field if investigation is not reflected by names we attribute to our inventions, but merely by the games we play with it.

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Emile Aarts holds an MSc and a PhD degree in physics. For more than 20 years he has been active as a research scientist in computing science. Since 1991 he has held a teaching position at the Eindhoven University of Technology as a part-time professor of computing science. He also serves on numerous scientific and governmental advisory boards. He holds a part-time position of senior consultant with the Center for Quantitative Methods in Eindhoven, The Netherlands. Aarts is the author of 10 books and more than 150 scientific papers on a diversity of subjects including nuclear physics, VLSI design, combinatorial optimization and neural networks. In 1998 he launched the concept of ambient intelligence, and in 2001 he founded Philips' HomeLab. His current research interests include intelligent systems and interaction technology.