

Preface

This book came about from my own exploration (together with collaborators) of a range of topics in mobile and pervasive computing. Particular themes tend to occur often in mobile and pervasive computing research, including context-awareness, cooperative systems, crowd computing, smart things and cloud computing, calling for a book that tries to identify key concepts and synergise ideas in one place, under *crowd-powered mobile computing and smart things*. Much of the work discussed in this book draws from my own published work (with collaborators) and references are given where applicable—there are also many sentences in the book prefixed by ‘might’, ‘can be’ and ‘could be’ which tend to state unexplored ideas or food for thought, rather than prescribing solutions. If current technological and end-user trends are to continue, there are only going to be more smart things, smarter things, more people with such things, larger crowds with such things as the densities of living spaces increase, and greater interconnections among them, yielding an unprecedented Web of synergistic links and innovation possibilities.

The book is intended for researchers, students or anyone interested in the topics outlined in the first chapter, from mobile cloud computing, Internet of Things, drones to swarm cooperative systems. The book does not aim to be a deep treatise on these topics, but aims to be an overview, and to connect ideas, so that some topics are only touched on. There are still many relevant topics including data science, human-computer interaction, and cybersecurity implications, not discussed, but the idea of a brief is to be brief, so that some topics are inevitably left out.

I would like to acknowledge the many collaborators, including researchers and doctoral students, with whom a lot of the work discussed in this book has been explored, and to them and to readers: ‘may there be more voyages of discovery!’. At the end of the day, a book is only one perspective on the area.

Deakin University
Melbourne, Australia
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Seng W. Loke

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Loke, S.

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