

# Preface

The quest for sustainable and intuitive interaction between humans and the technologies they habitually engage with vibrates throughout the plethora of publications currently available in the field of HCI research and development. The first flurry of research focusing on sustainability by the HCI community began around 2007, and by 2009, using the ACM guidelines, Goodman declared at least 120 papers to be related to sustainable HCI. Since then, this specialised field in HCI has flourished. Whilst such an intensity of interest might portend the development of numerous applications and possible solutions, the lack of appropriate support and guidance in the form of usable models for implementation in the business sector has hindered any real progression.

In an age where technologies are designed with a clean minimalist design edge, the reality is that the components used to develop ICT technologies such as phones, tablets, computers, etc. pose substantial risk to the health of our society and the environment in which we live. E-waste is quickly becoming our foremost solid-waste entity. Such issues are at the very nexus of the concerns expressed in this text. As a discipline, HCI focuses on the ways in which humans interact with technologies, and many textbooks have successfully engaged with the central precepts in the design, development, and usability of interactions. However, whilst perhaps devoting a few pages, maybe even a chapter, few HCI texts have hitherto considered sustainability and resource management essential to their remit. This text changes all that.

In amongst this surfeit of available texts, this book stands out as a useful ‘hand-book’ of information that is both explanatory and relevant to contemporary applications of HCI.

I am delighted to introduce the reader to this text. Here, in easily accessible language, the authors have offered the reader entry to a sometimes difficult conceptual world. Students in particular will find it possible to extend their research beyond the confines of the undergraduate classroom and the routine HCI textbook. However, this book will also assist those requiring a rather more rigorous and complex resource and those at the very interface of human-computer interaction and sustainable use, such as industry and design practitioners. In addition, academics seeking

critical evaluation of the potential and actual ramifications of our design and its impact on our use of technologies will encounter some useful methods for reflecting on their own research practice.

The authors consider not only the design and development issues routinely discussed in HCI texts but also propose a series of methodologies to assist the reader in developing applications that adhere to sustainable guidelines. Not content to merely offer ‘ideal’ solutions often impossible to implement, the authors proffer models designed for usability. Students in particular will benefit from the authors’ definition of the phases and activities required and, further, the most appropriate tools and techniques for development of sustainable interfaces.

In doing so, the authors discuss the ways in which technologies can still meet the needs of our society yet ensure that in the process, natural resources are neither damaged nor depleted. Consideration is also given to source reduction through reducing the wastage in the production and consumption of technology via exemplary HCI design.

This is the text we have been waiting for.

This is a text for our future.

Norway

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Sustainable Design

HCI, Usability and Environmental Concerns

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