Preface

The shaping of digital artifacts is an act of design. Design of information technology is not only one of many design processes in society today, but one of the most prominent. In many ways and in many contexts, the design of digital artifacts influences the functions of workplaces, the structure and forms of schools and educational systems, how people communicate and use their leisure time, how organizations develop, and how social and cultural structures evolve. The role and importance of information technology is becoming increasingly visible and acknowledged.

Most digital artifacts around us originate in the information technology (IT) industry, dominated by companies developing hardware, software, and telecommunications. In the academic world, the core fields concerned with the development of digital artifacts include information systems development, software engineering, and computer science. Our aim is to *introduce a design perspective on the creation and shaping of digital artifacts;* our claim is that it is both necessary and rewarding to consider the development of digital artifacts as a design discipline akin to, for example, architecture or industrial design. In our experience, this perspective is quite uncommon in the IT industry as well as in IT academia.

The intention behind this book is to provide material that will stimulate a discussion on how to design digital artifacts and how to think about the design process and the designed product. The fundamental question underlying our work is what kind of knowledge the aspiring interaction designer needs. We want to emphasize the importance of what we call *interaction design* and the responsibility that practicing and future interaction designers have. We discuss interaction design in rather broad terms, including the responsibility for ethical and aesthetical (as well as functional) qualities of digital artifacts. This is at variance with many contemporary job descriptions where interaction design is more narrowly defined in terms of usability and usefulness. This discrepancy is intentional, since we feel that the design perspective we outline has rather far-reaching implications for the everyday practice of developing digital artifacts in the IT industry and in academia.

Furthermore, we argue that the discipline of developing digital artifacts requires a new perspective on design—*thoughtful design*. Thoughtful design is needed since the design challenges we face today are more complex than ever. Research and experience provides us with more and more knowledge and information. But rapid technological development prevents us from experimenting with and learning about all the new possibilities created by new technology and new knowledge. Consequently, designers today have to deal with a reality marked by complexity and change. It is essential that members of the design discipline collectively find appropriate forms for growing and nurturing design knowledge. We believe such a demand can only be met by an approach based on a foundation of design *thoughtfulness*.

We—the authors—have been involved for quite some time in the interaction design training of professionals and students in information systems, computer science, and human-computer interaction. It has been important for us to open up wider perspectives on the design of digital artifacts than those provided by the technical craft view that dominates the field. Of course, a field such as ours needs a literature with a technical focus and an emphasis on methods and techniques for design and development, but we have learned that this technical literature alone is not sufficient. Our aim is to write a book that can help students and professionals think about and reflect on the field using reasonably well-grounded ideas and concepts based on a design perspective. The approach we have chosen is to write a book for thoughtful and critical reflections.

A thoughtful book is not intended to be read as a presentation of self-contained knowledge or practical approaches; rather, it should be seen as fuel for the reader's own thoughts and reflections. We aim to critically examine and challenge prevailing ideas in the IT industry and IT academia on what interaction design is and what it ought to be. When we write about the "how" of interaction design, we do not address *how to do* interaction design but rather *how to think about* interaction design. Hence, this book is not a complete manual on interaction design. It has to be complemented with other material where necessary skills, methods, and techniques are introduced.

In the interplay between author and reader, the better part of the work falls on the reader. The reader has to relate the material presented to her own ideas and experience. In other words, the reader's knowledge is constructed through active effort. The work of knowledge construction consists of reading and thinking, as well as discussion and debate. It is our hope that this book can stimulate discussions on digital artifacts and interaction design processes.

The field of interaction design has strong relations to several established academic fields concerned with information technology, including human-computer interaction, systems development, information systems, computer science, and software engineering.

We aim at a level of generality that makes our ideas relevant to readers from all these fields. There are, of course, differences among the fields, which, among other things, entail different understandings of design and design practice. Again, we pass on the work of doing the necessary adaptations to the reader.

We envision that this book will be used primarily in higher education, particularly within information technology–related disciplines. It may also be used in other academic fields where the aim is to develop an understanding of interaction design and digital artifacts in general. Finally, we also hope to provide IT professionals with an interesting read and some grounds for reflection on their practice.

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