

Preface

The worldwide popularisation of mobile communication technologies and the increasing awareness of usability issues since 1990's have been urging map designers to specialise and extend cartographic semiotics, visualisation styles and map use techniques for mobile contexts and small display devices. As a follow-up to the first book "Map-based Mobile Services – Theories, Methods and Implementations" published in 2005, this new one is devoted to design strategies, user interactions and usability issues. It addresses methods and techniques for topics that range from design and rendering, context modelling, personalisation, multimodal interaction to usability test. Instead of striving for a seamless coverage of all essential theoretical and technical issues with an equal depth and extent, we attempt to pinpoint a number of research highlights and representative development activities at universities, research institutions and software industry. The operational prototypes and platforms reported in the book are on the one hand outcome and feasibility proof of various approaches. On the other hand, they serve as a new starting point for the refinement of user interfaces and iterative usability tests.

The book is intended not only for cartographers, surveying engineers and geo-information scientists engaged in the development of location-based services, but also for software engineers and cognitive scientists working with interface design and usability assessment. In addition, we try to provide a number of real-life case studies for students, academics and practitioners from GIS, computer graphics and other relevant disciplines.

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