Barcodes for Mobile Devices

From inventory management in stores to automotive part tracking in assembly plants, barcodes are one of the most prevalent automatic identification and data capture technologies.

This book provides a complete introduction to barcodes for mobile devices where data captured in the device’s camera can be interpreted by signal processing algorithms. The most relevant and up-to-date information, previously unavailable elsewhere or difficult to obtain, is presented. The focus throughout is on recent developments and two-dimensional (2D) barcodes, including the research and development steps towards colour barcodes for mobile devices, helping readers to develop their own barcodes. The authors also provide design details for their own novel colour 2D barcode, the Mobile Multi-Colour Composite (MMCC™) barcode, plus a coverage of RFID technology and one-dimensional barcodes.

This book is ideal for professional developers of barcodes for mobile devices who need the latest technical details and information on how to develop barcodes. It is also a useful reference for graduate students researching the field of barcode technology and mobile computing.

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This book is dedicated to:
Hisanori, Masanori and Yukino by Hiroko Kato
Jo, Kylie and Andrea by Keng Tan
June, Ethan, Amber and Helen by Douglas Chai
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Preface

This book was written for scientists, researchers and those who are interested in the science and development of barcode technology for mobile devices. It is a comprehensive work covering the history and evolution of this technology. The book also presents a substantial compilation of different barcodes used or designed for mobile devices and mobile applications. Nonetheless, this collection will never stay complete for long as this is a rapidly evolving field, with new mobile barcodes being invented on almost a yearly basis. In fact, within this book, we have presented our very own novel two-dimensional (2D) barcode, designed especially for mobile devices such as camera mobile phones.

Also presented herein are the techniques and development process for our novel 2D barcode, the Mobile Multi-Colour Composite (MMCC™). Hence, we envision that this book will be a useful reference for those who are interested in designing and developing barcodes for mobile devices.

Finally, we do hope that this book will be the first of many to come that will fill the current gap in the publications in this area of interest.

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