DESCRIPTION

The impending advent of GSM in the early 1990s triggered massive investment that revolutionised the capability of DSP technology. A decade later, the vastly increased processing requirements and potential market of 3G has triggered a similar revolution, with a host of start-up companies claiming revolutionary technologies hoping to challenge and displace incumbent suppliers.

This book, with contributions from today's major players and leading start-ups, comprehensively describes both the new approaches and the responses of the incumbents, with detailed descriptions of the design philosophy, architecture, technology maturity and software support.

- Analysis of SDR baseband processing requirements of cellular handsets and basestations
- 3G handset baseband - ASIC, DSP, parallel processing, ACM and customised programmable architectures
- 3G basestation baseband - DSP (including co-processors), FPGA-based approaches, reconfigurable and parallel architectures
- Architecture optimisation to match 3G air interface and application algorithms
- Evolution of existing DSP, ASIC & FPGA solutions
- Assessment of the architectural approaches and the implications of the trends.
An essential resource for the 3G product designer, who needs to understand immediate design options within a wider context of future product roadmaps, the book will also benefit researchers and commercial managers who need to understand this rapid evolution of baseband signal processing and its industry impact.

ABOUT THE AUTHOR

Walter Tuttlebee, chief executive of the Virtual Centre of Excellence in Mobile & Personal Communications – Mobile VCE, heads up a unique, not-for-profit company established by the mobile communications industry and academia to undertake long-term, industry-steered, world-class, collaborative research www.mobilevce.com. Mobile VCE’s activities include software radio research, an area Walter helped to pioneer in Europe in the mid-1990s, with invited presentations at seminal European conferences organized by the European Commission and the SDR Forum. He has subsequently published and spoken widely in the field. Prior to Mobile VCE Walter led R&D teams in Second and Third generation mobile communications. Aside from his technical interests, Walter previously operated in a business development role and at Mobile VCE he is responsible to the Board for the company’s strategy and operations.


He holds an MBA from Cranfield and PhD from Southampton University, is a senior member of the IEEE, a fellow of the IEE and fellow of the RSA.

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