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Nota di contenuto	The history of DSP based architecture in second generation cellular handsets / Alan Gatherer, Trudy Stetzler and Edgar Auslander -- The role of programmable DSPs in dual mode (2G and 3G) handsets / Chaitali Sengupta ... [et al.] -- Programmable DSPs for 3G base station modems / Dale Hockover .. [et al.] -- The use of programmable DSPs in antenna array processing / Matthew Bromberg and Donald R. Brown -- The challenges of software-defined radio / Carl Panasik and Chaitali Sengupta -- Enabling multimedia applications in 2.5G and 3G wireless terminals : challenges solutions / Edgar Auslander -- A flexible distributed Java environment for wireless PDA architecture based on DSP technology / Gilbert Cabillic -- Speech coding standards in mobile communications / Erdal Paksoy, Vishu Viswanathan, Alan McCree -- Speech recognition solutions for wireless devices / Yeshwant Muthusamy, Yu-Hung Kao and Yifan Gong -- Video and audio coding for mobile applications / Jennifer Webb and Chuck Lueck -- Security paradigm for mobile terminals / Edgar Auslander .. [et al.] -- Biometric systems applied to mobile communications / Dale R. Setlak and Lorin

Netsch -- The role of programmable DSPs in digital radio / Trudy Stetzler and Gavin Ferris -- Benchmarking DSP architectures for low power applications / David Hwang, Cimarron Mittelsteadt and Ingrid Verbauwhede -- Low power sensor networks / Alice Wang ... [et al.] -- The pleiades architecture / Arthur Abnous -- Application specific instruction set architecture extensions for DSPs / Jean-Pierre Giacalone -- The pointing wireless device for delivery of location based applications / Pamela Kerwin, John Ellenby and Jeffery Jay.

Sommario/riassunto

With the introduction of WAP in Europe and I-mode in Japan, mobile terminals took their first steps out of the world of mobile telephony and into the world of mobile data. At the same time, the shift from 2nd generation to 3rd generation cellular technology has increased the potential data rate available to mobile users by tenfold as well as shifting data transport from circuit switched to packet data. These fundamental shifts in nature and the quantity of data available to mobile users has led to an explosion in the number of applications being developed for future digital terminal devices. Though these applications are diverse they share a common need for complex Digital Signal Processing (DSP) and in most cases benefit from the use of programmable DSPs (Digital Signal Processors). * Features contributions from experts who discuss the implementation and applications of programmable DSPs * Includes detailed introductions to speech coding, speech recognition, video and audio compression, biometric identification and their application for mobile communications devices * Discusses the alternative DSP technology which is attempting to unseat the programmable DSP from the heart of tomorrow's mobile terminals * Presents innovative new applications that are waiting to be discovered in the unique environment created when mobility meets signal processing The Application of Programmable DSPs in Mobile Communications provides an excellent overview for engineers moving into the area of mobile communications or entrepreneurs looking to understand state of the art in mobile terminals. It is also a must for students and professors looking for new application areas where DSP technology is being applied.
