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Altri autori (Persone)	CorreiaLuis M
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Nota di contenuto	Front cover; Title page; Copyright; Table of contents; Front matter; Preface; List of contributors and editors; List of acronyms; Body; 1 Introduction; Trends and evolution; Scope of the book; 2 Transmission techniques; Introduction; OFDM systems; Introduction; OFDM: a very dynamic signal; Enhancing OFDM systems; CDMA systems; Introduction; Wideband CDMA; Time division CDMA; Multicarrier CDMA; References; 3 Signal processing; Introduction; Modulation and coding; Advanced coding and modulation issues; Ultra wide bandwidth; System performance evaluation; Implementation issues; Equalisation IntroductionTransmission model; Pre-equalisation; SISO equalisation; MIMO equalisation; Synchronisation and channel state estimation; Iterative technique; Channel state estimation and prediction; Performance evaluation and fundamental limits; Sequence synchronisation technique; Multi-user systems and multi-user detection; Multi-user MIMO transmission; Multi-user detectors for DS-CDMA; Multi-user detection for MC-CDMA with spatial diversity; Link adaptation and rate-adaptive systems; Introduction to link adaptation; Impact of imperfect channel state information; Link adaptation in MIMO

systems

Link adaptation in OFDM systems Link adaptation in current and upcoming wireless standards; References; 4 Propagation modelling and channel characterisation; Introduction; EM theory and diffuse scattering; Integral methods; Differential equation methods; Ray methods; Deterministic propagation modelling; Introduction; Input database issues; Electromagnetic models; Ray models; Advanced techniques for ray models; Applications of ray models; Simplified or hybrid models; Channel measurements and parameter estimation; Measurement scenarios; Channel sounding techniques; Parameter estimation

Device performance and reliability of channel structure estimates Channel characterisation; Introduction; Statistical processing of measurements; Path loss and building penetration; Long-term fading; Narrowband short-term fading; Wideband short-term fading; Temporal and angular dispersion; Fading prediction; References; 5 Antennas and diversity: from narrow band to ultra wide band; Introduction; Antenna performance assessment of mobile handsets; Introduction; Figures of merit; Measurement methods; Factors influencing the measurement accuracy; Figure of merit comparisons; Handset design aspects

Diversity techniques Introduction: diversity, an old concept with renewed interest; Diversity on receivers; Diversity in the context of MIMO techniques; Ultra Wide Band; Introduction; Radio Channel Measurements; Radio channel models; Antenna aspects; References; 6 MIMO channel modelling; Introduction; Scenarios; Introduction; Concept; Indoor scenarios; Outdoor scenarios; Physically motivated MIMO channel modelling and simulation; Introduction; Radio channel modelling; Simulation; MIMO hardware channel emulators; Antenna configurations; Quality measures for MIMO antennas; Power considerations
Integration of MIMO antennas into handsets

Sommario/riassunto

Mobile Broadband Multimedia Networks: Techniques, Models and Tools for 4th Generation Communication Networks provides the main results of the prestigious and well known European COST 273 research project on the development of next generation mobile and wireless communication systems. Based on the applied research of over 350 participants in academia and industry, this book focuses on the radio aspects of mobile and wireless broadband multimedia communications, by exploring and developing new methods, models, techniques, strategies and tools towards the implementation of 4th generation
