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Sommario/riassunto

A practical guide to radio channel measurement techniques Whilst there are numerous books describing modern wireless communication systems that contain overviews of radio propagation and radio channel modelling, few contain detailed information on the design, implementation and calibration of radio channel measurement equipment, the planning of experiments and the in depth analysis of

measured data. This work redresses that balance. Beginning with an explanation of the fundamentals of radio wave propagation, the book progresses through a series of topics, including the measurement of radio channel characteristics, radio channel sounders, measurement strategies, data analysis techniques and radio channel modelling. Application of results for the prediction of achievable digital link performance are discussed with examples pertinent to single carrier, multi-carrier and spread spectrum radio links. It addresses specifics of communications in various different frequency bands for both long range and short range fixed and mobile radio links. Key features: . Focuses on radio channel measurements and characterization with analysis of MIMO channels. Discusses the physical and technical considerations involved in the proper assessment of radio channel characteristics for efficient radio system planning, design, and implementation. Provides in-depth information on the planning of experiments and the detailed analysis of measured data from radio propagation and channel modelling. Unique practical approach describing how to design and implement channel sounders.