1. Record Nr. UNINA9910784354403321 Autore Alexander Tom Titolo Optimizing and testing WLANs [[electronic resource]]: proven techniques for maximum performance / / by Tom Alexander Amsterdam; Boston, Elsevier Newnes, c2007 Pubbl/distr/stampa 1-281-03654-4 **ISBN** 9786611036546 0-08-055112-2 Edizione [1st edition] Descrizione fisica 1 online resource (268 p.) Communications engineering series Collana Disciplina 004.6/8 Soggetti Wireless LANs - Security measures Local area networks (Computer networks) - Security measures Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. 245-248) and index. Front cover; Optimizing and Testing WLANs; Copyright page; Contents; Nota di contenuto Preface; Introduction; Chapter 1: IEEE 802.11 WLAN Systems; 1.1 IEEE 802.11 Wireless Local Area Networks; 1.2 WLAN Standards Today; 1.3 Inside WLAN Devices; 1.4 The RF Layer; Chapter 2: Metrology, Test Instruments, and Processes; 2.1 Metrology: the Science of Measurement; 2.2 The Nomenclature of Measurement; 2.3 Measurement Quality Factors; 2.4 The WLAN Engineer's Toolbox; 2.5 Test Setups and Test Processes; 2.6 Repeatability; Chapter 3: WLAN Test Environments; 3.1 Wired vs. Wireless; 3.2 Types of Environments 3.3 Outdoor and Indoor OTA3.4 Chambered OTA Testing; 3.5 Conducted Test Setups; 3.6 Repeatability; Chapter 4: Physical Layer Measurements; 4.1 Types of PHY Layer Measurements; 4.2 Transmitter Tests: 4.3 Receiver Tests: 4.4 Electromagnetic Compatibility Testing: 4.5 System Performance Tests; 4.6 Getting the DUT to Respond; Chapter 5: Protocol Testing: 5.1 An Introduction to Protocol Testing: 5.2 Conformance and Functional Testing; 5.3 Interoperability Testing; 5.4 Performance Testing; 5.5 Standardized Benchmark Testing; Chapter 6: Application-Level Measurements: 6.1 System-level Measurements

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Sommario/riassunto

As WLANs (Wireless Local Area Networks) become increasingly common, it's becoming vital to be able to test them for proper performance and to optimize their operation. This book, written by a member of the IEEE committee that develops WLAN standards, is the first book addressing that need. It covers test equipment and methods for the RF (wireless) and physical layers of WLAN, protocols, the application layer, and manufacturing testing. The emphasis throughout is on underlying engineering principles along with modern metrics and methodologies, ensuring this book gives both a solid theoretical b