1. Record Nr. UNINA9910139789003321 Autore Cai Lin <1973-> Titolo Multimedia services in wireless internet: modeling and analysis / / Lin Cai, Xuemin (Sherman) Shen, Jon W. Mark Chichester, U.K.:,: Wiley,, 2009 Pubbl/distr/stampa [Piscatagay, New Jersey]:,: IEEE Xplore,, [2009] **ISBN** 1-282-29167-X 9786612291678 0-470-74775-7 0-470-74774-9 Descrizione fisica 1 online resource (291 p.) Collana Wireless communications and mobile computing;; 16 Altri autori (Persone) ShenX <1958-> (Xuemin) MarkJon W Disciplina 621.382 621.3821 Soggetti Wireless Internet - Mathematical models Multimedia communications - Simulation methods Wireless communication systems - Quality control 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 and index. Nota di contenuto About the Series Editors -- About the Authors -- Preface -- 1 Introduction -- 1.1 Convergence of Wireless Systems and the Internet -- 1.2 Main Challenges in Supporting Multimedia Services -- 1.3 Organization of the Text -- 2 Packet-level Wireless Channel Model --2.1 Introduction -- 2.2 Finite-state Markov Model for Fast Fading Channels -- 2.3 Channel Model for Frequency-selective Fading Wireless Channels -- 2.4 Channel Model for Indoor UWB Wireless Channels with Shadowing -- 2.5 Summary -- 2.6 Problems -- 3 Multimedia Traffic Model -- 3.1 Modeling VoIP Traffic -- 3.2 Modeling Video Traffic --3.3 Performance Study of Video over Wired and Wireless Links -- 3.4 Scalable Source Coding -- 3.5 Summary -- 3.6 Problems -- 4 AIMD Congestion Control -- 4.1 Introduction -- 4.2 AIMD Protocol Overview -- 4.3 TCP-friendly AIMD Parameters -- 4.4 Properties of AIMD -- 4.5

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Sommario/riassunto

Learn how to provide seamless, high quality multimedia for the wireless Internet This book introduces the promising protocols for multimedia services and presents the analytical frameworks for measuring their performance in wireless networks. Furthermore, the book shows how to fine-tune the parameters for Quality of Service (QoS) provisioning in order to illustrate the effect that QoS has upon the stability, integrity and growth of next generation wireless Internet. In addition, the authors provide the tools required to implement this understanding. These tools are particularly useful for design and engineering network architecture and protocols for future wireless Internet. Additionally, the book provides a good overview of wireless networks, while also appealing to network researchers and engineers. Key Features: . Provides a comprehensive and analytical understanding of the performance of multimedia services in wireless Internet, and the tools to implement such an understanding. Addresses issues such as IEEE 802.11. AIMD/RED (Additive Increase-Multiplicative Decrease/ Random Early Detection), multimedia traffic models, congestion control and random access networks. Investigates the impact of wireless characteristics on QoS constraint multimedia applications. Includes a case study on AIMD for multimedia playback applications. Features numerous examples, suggested reading and review questions for each chapter This book is an invaluable resource for postgraduate students undertaking courses in wireless networks and multimedia services. students studying advanced graduate courses in electrical engineering and computer science, and researchers and engineers in the field of wireless networks.