

1. Record Nr.	UNINA9910143704503321
Titolo	Next generation mobile systems [[electronic resource]] : 3G and beyond // edited by Minoru Etoh
Pubbl/distr/stampa	Chichester, England ; ; Hoboken, NJ, : John Wiley, c2005
ISBN	1-280-27634-7 9786610276349 0-470-09153-3 0-470-09152-5
Descrizione fisica	1 online resource (406 p.)
Altri autori (Persone)	EtohMinoru
Disciplina	621.3821 621.38456
Soggetti	Wireless communication systems - Technological innovations Cell phone systems - Technological innovations Mobile communication systems - Technological innovations Electronic books.
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	Next Generation Mobile Systems 3G and Beyond; Contents; Foreword; Preface; Acknowledgments; List of Contributors; I A Vision for the Next Generation; 1 Evolution of Mobile Networks and Services; 1.1 The Evolution of Mobile Networks; 1.2 Trends in Mobile Services; 1.3 Why Next-generation (XG) Mobile Systems?; 1.4 Next-generation Imperatives; 1.4.1 Radio Access Networks (RAN); 1.4.2 IP Backbone; 1.4.3 Ubiquitous Service Platform; 2 The All-IP Next-generation Network Architecture; 2.1 Introduction; 2.2 3G Architectures; 2.2.1 UMTS; 2.2.2 CDMA2000; 2.2.3 MWIF; 2.2.4 Limitations of 3G Architectures 2.3 Approach to a Next-generation Architecture 2.3.1 Rationale and Key Features; 2.3.2 Architecture Overview; 2.4 Conclusions; II Overview of Mobile Network Technologies; 3 Radio Access Technologies in Cellular Networks; 3.1 Introduction; 3.1.1 Current Radio Access Technologies; 3.1.2 Evolving Radio Access Technologies; 3.2 Background of Radio Access Technologies; 3.2.1 Propagation Characteristics in Mobile

Environments; 3.2.2 Basic Multiple Access Schemes in Cellular Systems; 3.2.3 Principles of DS-CDMA and IS-95; 3.3 Radio Access Technologies in Wideband CDMA; 3.3.1 W-CDMA
3.3.2 Spreading Codes and Asynchronous Operation 3.3.3 Orthogonal Multi-SF Downlink; 3.3.4 Turbo Codes; 3.3.5 Coherent Rake Combining; 3.3.6 Transmission Power Control; 3.4 High-speed Transmission Technologies in HSDPA; 3.4.1 Adaptive Modulation and Coding; 3.4.2 Hybrid ARQ; 3.4.3 Fast Cell Selection; 3.5 Radio Access Technologies for Next-generation Systems; 3.5.1 Technical Requirements; 3.5.2 Potential Solutions for Downlink Transmission; 3.5.3 Potential Solutions for Uplink Transmission; 3.6 Broadband Radio Access Schemes for XG Systems; 3.6.1 VSF-OFCDM for Downlink Transmission
3.6.2 VSCRF-CDMA for Uplink Transmissions 3.7 Conclusions; 4 Wireless LAN Evolution; 4.1 Introduction; 4.1.1 Overview of Current WLAN Standards; 4.2 Basic Technologies in IEEE 802.11 WLAN; 4.2.1 MAC Technologies; 4.2.2 PHY Technologies; 4.3 Evolution of WLAN; 4.3.1 Higher Data Rates and Low Power Consumption; 4.3.2 Extended Coverage Areas and Scalability; 4.3.3 Coexistence of Access Devices; 4.3.4 Seamless Mobility Support; 4.3.5 Location Estimation by WLAN; 4.3.6 Differentiated Services Support; 4.3.7 Quality of Service Assurance for Real-time Applications; 4.3.8 Enhanced Security
4.4 Mobility Support 4.4.1 Fast Channel Scanning; 4.4.2 Fast Authentication; 4.5 Quality of Service; 4.5.1 EDCA and HCCA; 4.6 Security; 5 IP Mobility; 5.1 Introduction; 5.2 The Internet Architecture; 5.2.1 The End-to-end Principle; 5.2.2 Internet Architectural Elements; 5.2.3 IP Addresses and Routing Topologies; 5.2.4 Fully Qualified Domain Names and DNS; 5.3 Network Layer Mobility in the Internet; 5.3.1 Basic Mobile IP; 5.3.2 Routing Inefficiencies; 5.3.3 Mobile IP Handover; 5.3.4 AAA and Security; 5.4 Achieving Seamless Mobility; 5.4.1 Header Compression; 5.4.2 Context Transfer
5.4.3 Intertechnology Handover

Sommario/riassunto

What will the future of wireless communications look like? What drives mobile communications systems beyond 3G? In Next Generation Mobile Systems the authors answer these questions and others surrounding the new technologies. The book examines the current research issues driving the wireless world and provides an inclusive overview of how established technologies will evolve to suit next generation mobile systems. While the term '4G' already dominates research in industry and academia, there are still numerous hurdles to take before this ambitious concept can become
