

1. Record Nr.	UNINA9910829817103321
Autore	Fox Daniel
Titolo	Testing UMTS : assuring conformance and quality of UMTS user equipment // Dan Fox
Pubbl/distr/stampa	Chichester, England ; , : John Wiley, , c2008 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2008]
ISBN	1-282-35015-3 9786612350153 0-470-98777-4 0-470-98776-6
Descrizione fisica	1 online resource (277 p.)
Disciplina	621.3845 621.3845/6
Soggetti	Global system for mobile communications
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. [249]-253) and index.
Nota di contenuto	Preface -- Acknowledgements -- Part I: Testing Methodologies -- 1. Introduction -- 1.1. Important definitions -- 1.2. Scope -- 1.3. Overview of the Industry -- 2. Introduction to UMTS -- 2.1. The history of UMTS -- 2.2. The 3GPP -- 2.3. Organisation of 3GPP -- 2.4. Goals and Achievements -- 3. Types of Testing -- 3.1. The purposes of Testing -- 3.2. The Expectations on an Equipment Developer -- 3.3. Differences with Other Markets -- 3.4. Testing Through the Life-Cycle -- 4. Integration Testing -- 4.1. Definition -- 4.2. Getting Things working -- 4.3. Keeping Things working -- 5. Conformance Testing -- 5.1. History -- 5.2. Specifications -- 5.3. Conformance Specifications -- 5.4. RAN5 Specifications -- 5.5. Other Conformance Specifications -- 5.6. Main Organizations Involved and Their Aims -- 5.7. Process -- 5.8. Certification -- 6. Interoperability Testing -- 6.1. What is Interoperability Testing? -- 6.2. Interoperability and Certification -- 6.3. Ways in which Interoperability Testing is carried Out -- 6.4. Typical sources of Tests -- 7. Testing Beyond Development -- 7.1. Manufacturing Testing -- 7.2. Service Testing -- Part II: Testing by Layers -- 8. Testing the Physical Layer -- 8.1. Overview of the UMTS

Wideband CDMA Physical Layer -- 8.2. Transmitter Testing -- 8.3. Receiver Characteristics -- 8.4. Interactions with GSM Technology -- 8.5. Performance Testing -- 8.6. RF Conformance Test Systems -- 8.7. Testing the Baseband in Isolation -- 9. Testing of Layer 2 -- 9.1. Introduction -- 9.2. Testing the MAC Layer -- 9.3. Testing the RLC Layer -- 9.4. Packet Data Convergence Protocol -- 9.5. Broadcast/Multicast Control -- 10. Testing of Layer 3 -- 10.1. Overview of the Network Architecture -- 10.2. The RRC -- 10.3. Nonaccess Stratum -- 11. Testing Protocol -- 11.1. Protocol Test Systems (System Simulators) -- 11.2. Signalling Procedures -- 12. Testing System Aspects -- 12.1. Idle Mode Procedures -- 12.2. Measurements and RRM -- 12.3. Typical Test Systems -- 13. High Speed Packet Access. 13.1. Introduction -- 13.2. Physical Layer -- 13.3. RF Tests for HSPA -- Part III: The Future -- 14. Future Trends in Testing -- 14.1. Testing Earlier in the Development Cycle -- 14.2. IMS and Technology Convergence -- 14.3. Evolving Testing Technologies -- 14.4. Future Cellular Network Technologies -- Appendix. Tree and tabular Combined Notation -- Glossary -- Reference -- Index.

Sommario/riassunto

A modern mobile phone is a highly complex electronic system made up from a variety of diverse sub-systems, all of which must work seamlessly together. today's users have very high expectations which set tough demands on manufacturers as they introduce third generation technology. While quality, in terms of the phone's stability, performance and behaviour on the network, originate from good design, the only way to be sure of quality is by testing it. This makes testing a very important part of any mobile phone's life cycle, from development through to manufacture and beyond, touching a number of different disciplines and departments. Testing UMTS is divided into three sections: Section One provides an overview of major types of testing and the organisations and tasks involved. In particular it looks at what is involved in conformance testing and device certification. Section Two is more technical and looks at the UMTS standard itself, working through the protocol layers. Future trends and their impact on testing mobile devices are examined in Section Three, including the emergence of new technologies both in the access network and the core network and the evolution of new testing methodologies. . Examines UMTS and the testing of UMTS devices which are huge areas in the testing process . Provides essential information on processes and techniques for mobile phone testing . Operation of the UMTS standard is described from a test point of view . Focuses on most important areas of the 3rd-Generation Partnership Project (3GPP) standard from a test perspective . Offers advice on products, services and resources that aid the testing process. This book is an ideal text for engineers and managers who are either directly involved in the process of testing UMTS mobiles, or who are looking for an understanding of what is involved in testing. Professionals involved in the development of UMTS mobiles, integration and verification, conformance testing, operator acceptance testing, manufacturing and servicing will find this book indispensable.
