



Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice

From Wiley

[Download now](#)

[Read Online](#) 

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley

This book sets out to provide the theoretical foundations that will enable radio network planners to plan model and optimize radio networks using state-of-the-art findings from around the globe. It adopts a logical approach, beginning with the background to the present status of UMTS radio network technology, before devoting equal coverage to planning, modelling and optimization issues. All key planning areas are covered, including the technical and legal implications of network infrastructure sharing, hierarchical cell structure (HCS) deployment, ultra-high-site deployment and the benefits and limitations of using computer-aided design (CAD) software. Theoretical models for UMTS technology are explained as generic system models, stand-alone services and mixed services. Business modelling theory and methods are put forward, taking in propagation calculations, link-level, UMTS static and UMTS dynamic simulations. The challenges and goals of the automated optimization process are explored in depth using cutting-edge cost function and optimization algorithms. This theory-based resource containing prolific illustrative case studies explains the reasons for UMTS radio networks performance issues and how to use this foundational knowledge to model, plan and optimize present and future systems.



[Download Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice](#)



[Read Online Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice](#)

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice

From Wiley

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley

This book sets out to provide the theoretical foundations that will enable radio network planners to plan model and optimize radio networks using state-of-the-art findings from around the globe. It adopts a logical approach, beginning with the background to the present status of UMTS radio network technology, before devoting equal coverage to planning, modelling and optimization issues. All key planning areas are covered, including the technical and legal implications of network infrastructure sharing, hierarchical cell structure (HCS) deployment, ultra-high-site deployment and the benefits and limitations of using computer-aided design (CAD) software. Theoretical models for UMTS technology are explained as generic system models, stand-alone services and mixed services. Business modelling theory and methods are put forward, taking in propagation calculations, link-level, UMTS static and UMTS dynamic simulations. The challenges and goals of the automated optimization process are explored in depth using cutting-edge cost function and optimization algorithms. This theory-based resource containing prolific illustrative case studies explains the reasons for UMTS radio networks performance issues and how to use this foundational knowledge to model, plan and optimize present and future systems.

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley Bibliography

- Sales Rank: #6886675 in Books
- Published on: 2006-06-16
- Original language: English
- Number of items: 1
- Dimensions: 9.90" h x 1.40" w x 6.80" l, 2.52 pounds
- Binding: Hardcover
- 544 pages

 [Download Understanding UMTS Radio Network Modelling, Planni ...pdf](#)

 [Read Online Understanding UMTS Radio Network Modelling, Plan ...pdf](#)

Download and Read Free Online Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley

Editorial Review

Review

"...this book really fills a gap in the existing literature ...it really helps one understand the WCDMA network..." (*IEEE Communications magazine*, August 2007)

From the Back Cover

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice sets out to provide the theoretical foundations that will enable radio network planners to plan, model and radio networks using state-of-the-art findings from around the globe. Adopting a logical approach, it begins with the background to the present status of UMTS radio network technology, before devoting equal coverage to planning, modelling and optimisation issues. A broad-based supply of information is given, gleaned from cutting-edge research by worldwide experts in academia and industry. All key planning areas are covered, including the technical and legal implications of network infrastructure sharing, hierarchical cell structure (HCS) deployment, ultra-high-site deployment and the benefits and limitations of using computer-aided design (CAD) software. In addition, theoretical models for UMTS technology are explained as generic system models, stand-alone services and mixed services. Business modelling theory and methods are also put forward, taking in propagation calculations, link-level, UMTS static and UMTS dynamic simulations.

- Offers a solid theoretical background in the areas of modelling automatic and manual optimisation, which differs from the more practical guides available.
- Covers all the key technologies: UMTS (Universal Mobile Telecommunications Service) FDD (Frequency Division Duplex) with UHS (Ultra-High-Site) and UTRAN LMDS/WiMAX backhaul systems.
- Avoids explanations on a case-by-case basis, providing instead general mathematical tools that can be applied to understand, analyze and optimize complex system performance.
- The challenges and goals of the automated optimization process are explored in depth using cutting-edge cost function and optimization algorithms.

Highly relevant to radio network operators (planning and optimization staff, system marketing, technical managers) and telecommunications equipment providers, this book will also appeal to postgraduate and research students in the field of telecommunications and radio networking.

About the Author

Maciej J. Nawrocki currently works for the Centre for Telecommunications Research at King's College London. His areas of interest include WCDMA based cellular networks, CDMA network planning methods, optimization methods for 3G systems radio planning and, latterly, efficient modeling algorithms for UMTS radio network organization.

Mischa Dohler has a PhD from Kings College London where he has also held a lecturing post. His areas of interest include propagation, coding, transceiver design and link level simulations.

Hamid Aghvami is presently Director of the Centre for Telecommunications Research at King's College London. He is considered a world expert in the field of personal and mobile radio communications and is a fellow of the Royal Academy of Engineering, a fellow member of the IEE and senior member of the IEEE.

Users Review

From reader reviews:

Kathryn Glover:

Typically the book Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice will bring you to the new experience of reading a new book. The author style to clarify the idea is very unique. In the event you try to find new book to read, this book very suitable to you. The book Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice is much recommended to you you just read. You can also get the e-book from the official web site, so you can easier to read the book.

Jennifer Newhouse:

A lot of e-book has printed but it differs from the others. You can get it by web on social media. You can choose the most beneficial book for you, science, amusing, novel, or whatever by searching from it. It is referred to as of book Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice. You can add your knowledge by it. Without making the printed book, it might add your knowledge and make a person happier to read. It is most crucial that, you must aware about book. It can bring you from one location to other place.

Lynn Bailey:

What is your hobby? Have you heard that will question when you got pupils? We believe that that concern was given by teacher for their students. Many kinds of hobby, Every individual has different hobby. And also you know that little person just like reading or as reading through become their hobby. You must know that reading is very important and also book as to be the factor. Book is important thing to increase you knowledge, except your own teacher or lecturer. You get good news or update concerning something by book. Numerous books that can you take to be your object. One of them is Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice.

Nancy Herman:

A number of people said that they feel weary when they reading a guide. They are directly felt the idea when they get a half portions of the book. You can choose the book Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice to make your personal reading is interesting. Your own skill of reading proficiency is developing when you similar to reading. Try to choose straightforward book to make you enjoy to read it and mingle the sensation about book and looking at especially. It is to be first opinion for you to like to available a book and study it. Beside that the e-book Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice can to be your friend when you're truly feel alone and confuse in doing what must you're doing of the time.

Download and Read Online Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley #AIY82PZ0CQJ

Read Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley for online ebook

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley books to read online.

Online Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley ebook PDF download

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley Doc

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley MobiPocket

Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley EPub

AIY82PZ0CQJ: Understanding UMTS Radio Network Modelling, Planning and Automated Optimisation: Theory and Practice From Wiley