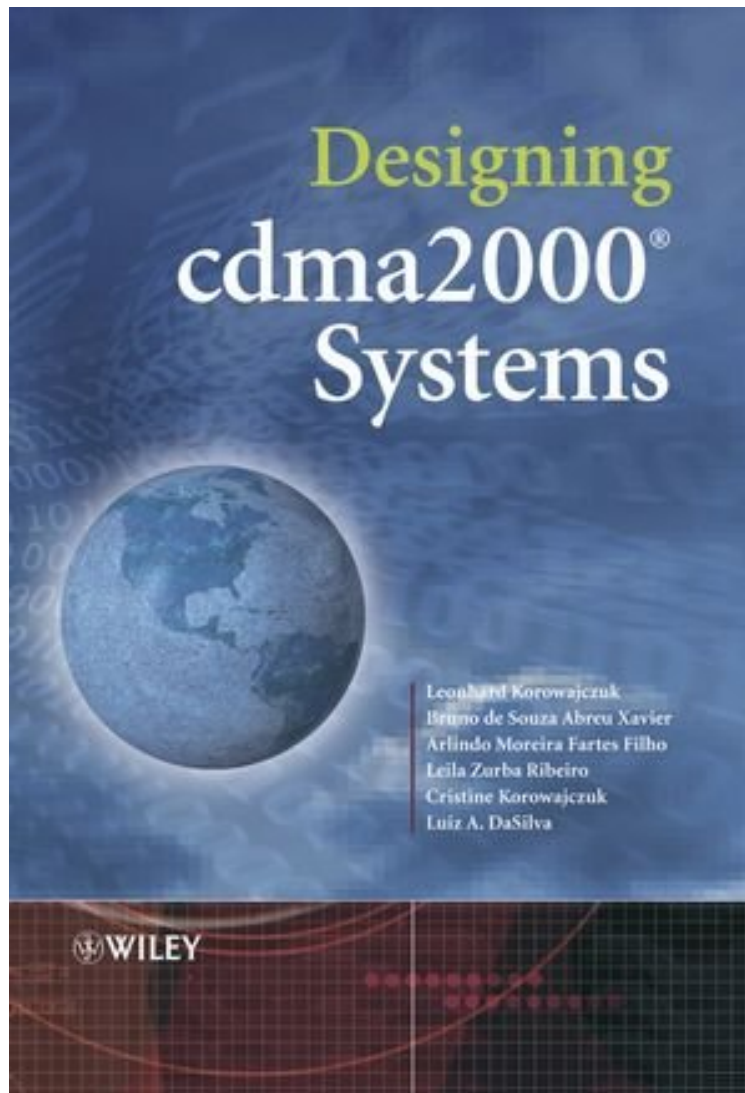


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Designing cdma2000 Systems

*Leonhard Korowajczuk, Bruno de Souza Abreu Xavier
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Leonhard Korowajczuk, Bruno de Souza Abreu Xavier : Designing cdma2000 Systems before purchasing it in order to gage whether or not it would be worth my time, and all praised Designing cdma2000 Systems:

1 of 3 people found the following review helpful. Waste of moneyBy benlm54I can't believe how little useful information is found in this 900+ page book. I was particularly disappointed with the content of chapters 4 5. These chapters are supposed to outline the architecture of CDMA forward and reverse link channels. However, only the transmission of these channels is presented. The chapter on the forward channels describes the architecture from the perspective of the base-station while the chapter on the reverse channels is from the perspective of the mobile station. Transmission of these channels is essentially the same in both directions. The receiver architecture is far more

complicated and a critical component that is completely left out of this huge expensive book. Another complaint, this book is titled "Designing cdma200 Systems". To design a system one must understand both standards and theory. This book devotes a lot of pages to describing the standards (which can be found in freely available standards documents). But very little to theory. Chapters 1 and 3 contain good theoretical content. However, this is a mere 30 pages. Overall, this book touches on the easy parts of CDMA, leaves out the hard parts, and fills the rest with rehashed standards documents. The result is a massive book that costs far more than it is worth.

CDMA is the second most widely deployed technology in the world with more than 100 million subscribers worldwide and is projected to reach 280 million subscribers by 2006. CDMA 2000 1x was deployed in year 2000 and CDMA 2000 1xEVDO is being deployed this year. CDMA 2000 is the natural migration for CDMA IS-95 networks and some of the TDMA networks. CDMA technology is complex to design due to its inherent adaptive characteristic and the introduction of data requires a complete new way of analysing the network from traffic characteristics to performance requirements. The authors bring a wealth of experience in developing solutions for wireless design at CelPlan Technologies, Inc. since 1992. They followed up the evolution of the wireless technology providing innovative solutions at each step. In this book they summarize the description of the CDMA 2000 technology, revisit basic design concepts and propose new solutions to design and optimise these complex networks. Many of the design issues covered in this book apply also to the novel WCDMA networks that are proposed as the evolution of GSM networks. Designing CDMA 2000 Systems: Describes in detail the structure of CDMA 2000 systems and provides guidelines for their design and optimisation Fills a major gap in the information available today serving as a comprehensive reference for designers and operators Provides coverage from introductory to specialist level Designing CDMA 2000 Systems is highly relevant for engineers involved in the design or operation of CDMA systems, as well as providing a broad understanding of the area for researchers, professors and students in the field

From the Back Cover Over the past few years the wireless technology industry has seen massive growth with ever increasing mobile subscriber rates. Simple analog radio tools have evolved into sophisticated adaptive technologies. These now employ advanced hardware, modulation and coding techniques and processing solutions, unimaginable a decade ago. Network designs based on CDMA 2000 are becoming extremely complex and highly standardized. Designing CDMA 2000 Systems provides engineers with the background information needed to understand the CDMA 2000 technology, by describing design techniques and available algorithms. This book: Covers the main standards involved in the technology specification whilst focussing on those aspects required for the design of CDMA systems. Describes in detail the structure of CDMA 2000 systems and provides guidelines for their optimisation. Written in a thorough and knowledgeable manner this book fills a gap in the information available today and will serve as a reference for designers and operators. Its specialist coverage from introductory to advanced level serves as an excellent 'how to' manual for all those looking for one complete source on CDMA 2000. About the Author Leonhard Korowajczuk CelPlan Technologies, Inc. He graduated from the Universidade Federal do Rio de Janeiro in 1969, and has 34 years experience in the telecommunications RD field. Previous experience include ITT telecommunication engineering departments (Brazil, England, Belgium and Spain). He was one of the founders of the Brazilian Telecommunications Research Center (Telebras-CPqD), Switching department manager and wireless division director at Elebra Telecomunicaes/Alcatel, CEO and CTO of CellPlan Technologies, Inc., and also one of its founders in 1992. Was responsible for the design and deployment of wireless networks as early as 1988 and headed the team that developed an advanced MTSO and base station for Comsat-Plexsys from 1993 to 1996. Since then he has led the development of the family of planning and design tools provided by CellPlan Technologies, Inc. Holds several patents in the telecom field and is a member of IEEE. Bruno de Souza Abreu Xavier CelTec Tecnologia de Telecomunicaes. Ltda. Telecommunications and RF engineers; he graduated as electrical engineer from the Federal University of Minas Gerais (UFMG) in 1996 and did MS from the University of Campinas (UNICAMP), researching on land-satellite CDMA performance analysis. He is responsible for the design of several wireless networks in South America and for training classes on planning, deployment and commissioning of wireless equipment infrastructure. Arlindo Moreira Fartes Filho CelTec Tecnologia de Telecomunicaes. Ltda. Senior systems engineer; graduated as an electrical engineer from the University of Campinas (UNICAMP) in 1975 and completed MS in 1978. He has several years experience in the telecommunications RD field, covering system specifications and software, He participated in the design and development of several telecom equipments (hardware and software). He planned and supervised the design of nationwide telecommunication networks, covering transmission, switching and wireless elements. Dr. Leila Zurba Ribeiro CelPlan Technologies, Inc. Director of Systems Engineering at CelPlan Technologies, Inc.; she received her Ph.D. in Electrical engineering from Virginia Tech in May 2003. She joined CelPlan Technologies, Inc., in 1993, and her work experience includes the design, traffic dimensioning and optimization of wireless communication systems in several countries. She has also taught graduate courses as an adjunct professor at the Electrical and Computer Engineering Department of George Mason University. She is a member of IEEE. Cristine Korowajczuk CelPlan Technologies, Inc. She graduated in 1999 in computer engineering from PUCC (Pontificia Universidade

Catlica de Campinas), and has more than 10 years experience in the wireless field with CelTec and CelPlan. She has designed and optimized several wireless networks covering all main technologies. She is responsible for customer support, documentation and training at CelPlan Technologies, Inc. Dr. Luiz A. DaSilva Virginia Tech He joined Virginia Tech as an assistant professor at the Bradley Department of Electrical and Computer Engineering in 1998, after receiving his Ph.D. in electrical engineering at the University of Kansas. He has previously worked for IBM for six years. His research interests currently focus on performance and resource management in wireless mobile networks and Quality of Service (QoS) issues. He is a member of the Center for Wireless Communications (CWT) and associated faculty at the Mobile and Personal Radio Group (MPRG) at Virginia Tech. He is a senior member of IEEE and a member of ASEE.