

Book Reviews - First Edition

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"In Telecommunications Essentials, Goleniewski guides us through the ever-changing world of telecommunications with much sense and a great deal of style. Her wide-ranging and in-depth study into this complex field is superbly researched and written. Its emphasis on learning and technology is thought-provoking and never fails to be relevant to the field today. It is essential reading."

—Chris Barclay, Director of Strategy and Planning, Retail, Telstra

"Lillian Goleniewski has a gift in presenting the complexity of telecommunications to her audiences. The careers of countless people in Australia have benefited from their contact with her. Her material is now captured in this book, which should rightfully grace any self-respecting technical collection."

—Dr. Bob Horton, Deputy Chairman, Australian Communications Authority

"Lili Goleniewski is a gifted communicator and educator who combines clear explanation of complex technologies with a firm grasp of the dynamic commercial environment in which those technologies are being deployed. The author's extensive international experience in communicating to an audience drawn from diverse cultures and differing levels of familiarity with technical concepts and the English language enables her to enliven subject matter that otherwise can be dauntingly unapproachable. I commend this book to anyone seeking to develop their understanding of developing communications technologies, regardless of their technical background."

—Peter Leonard, Managing Partner, Technology and Communications, Gilbert & Tobin Lawyers

"Telecommunications Essentials provides a thorough overview of all aspects of the telecommunications network. Whether you are new to telecom or have years of experience, this well-organized and detailed reference will help you learn what you need to know or remember what you have forgotten."

—David West, Vice President, Equinox Information Systems

"Here is a book that demystifies a technical world. Lili applies a matter-of-fact style and laces this with humor and the occasional wonder to weave all the complex building blocks of the telecommunications industry into a readable book. The book will be a permanent fixture on my 'go to find an answer' reference list."

—Kiron Chatterjee, Koshen Holdings, and former CEO of Asia Online

"Telecommunications Essentials is an excellent high-level view of telecom. It provides interesting examples of actual and potential applications in telecom. This is an extraordinarily useful and timely book."

—Natasha K. Zaslove, Lawyer

"Telecommunications Essentials by Lillian Goleniewski is an excellent introductory book to the field of telecommunications networks. The book presents an overview of telecommunications and discusses major telecommunications infrastructures including the PSTN, the Internet, and wireless. The author, who is internationally reputable, explains both the traditional and emerging technologies very well.

The book is in three major parts and fifteen chapters; each part contains five chapters. Part I focuses on the fundamental concepts of telecommunications. It discusses from understanding the telecommunications revolution to the PSTN. Part II focuses on the basics of data networking covering from the basics to WAN, LAN, and the Internet. Part III explores the next-generation networks such as broadband, security, and wireless communications.

I have used this book as the textbook in my course in telecommunications networks over a year. My students have found the book easy to read and understand. The price of the book is not expensive unlike some other books I have used in the past. This is an attractive feature to the students! The multimedia series are great with respect to the coordination between the audio, visual and textual delivering.

"Telecommunications Essentials, multimedia series and the web site is very highly recommended."

—C.S. Rani, Ph.D., Assistant Professor, Dept. of Computer Information Systems, BMCC CUNY

"Since it was published, I have used this book as the text in my graduate course in networking and telecommunications management. This book is the perfect combination of high-level concepts, sufficient explanatory detail and access to an online site rich with additional resources, including current updates keyed to the chapters. Students from a wide variety of backgrounds, computer science, management and engineering have found this book understandable, current and easy to understand. Over the years, I have used many different texts, some very detailed, some very verbose, and most extremely expensive. None them provide me with what, in this book, I feel is the most comprehensive and forward-looking treatment of networking and telecommunications yet accomplished in a single volume

Another significant feature of the book is that its author is an internationally acclaimed author and presenter and the creator of the eLearning series. This is a magnificent multimedia course covering all of the topics in the book. The visuals are stunning and the coordination between the audio, visual and textual presentation is flawless.

The book, web site and multimedia series is very highly recommended.”
 —Dr. Art St. George, University of New Mexico

“I am a grad student at Wharton and we used this text for our Advanced Telecom class. Using this text made our class fun and helped us learned the cutting edge principles of telecom in an exciting way. The author explains the traditional and emerging areas of the field, and has a unique writing style which teaches technical details in an understandable manner. I would reccomend this book to anyone, including business people, academics, or anyone generally interested in learning more about telecommunication. Five stars!”
 —Dan Goldman, Philadelphia, PA

“Lili covers Telecom issues from A to Z. I have been in this business for 25+ years and find this book to be an excellent choice for managers to use as a reference. No one is perfect and this book can offer valuable guidance when dealing with telecom issues. It would make a GREAT read when planning for growth and looking for options. Once you complete it you have the knowledge you will need when dealing with vendors and provisioners. My ONLY drawback is that now that it is in print, we MUST have a second edition, after all, the advances MAY make this edition obsolete in a scant few months, Lili has a lot of hard work into this book and it is difficult to keep abreast of a subject that changes as much as the IT field does. THANKS for taking the time and effort into writing such a top shelf edition on a difficult field of study!”

—y2kdreyer, Albuquerque, MN

“Lillian Goleniewski has done the IT community a service. She's written a coherent, comprehensive guide to the telecommunications world. "Telecommunications Essentials" doesn't omit technical details. It frames them within a business and historical context that similar books lack. I've read and reviewed three other recently published telecom titles, and this one is clearly the best. Some of the details I enjoyed were descriptions of how fiber is manufactured, the number of wire pairs associated with various transmission media, and specifications for various global television standards.

The telecom world is full of agencies, standards, and products, each referenced by a three- or four-letter acronym. Lillian guides the reader through this technology jungle, offering clear descriptions and historical background. She also provides a thorough glossary (87 pages) and index. Another of the book's impressive features is its global focus, with attention given to E- and J- carrier, as well as T-carrier, systems. Other examples include cellular telephone frequencies used worldwide. Numerous diagrams and figures illustrate the author's main points.

The book is not perfect enough to merit five stars. It suffers from minor typos and at least one technical error. Sadly, like many networking books, "Telecommunications Essentials" states that TCP sequence numbers count individual packets. This is false; TCP sequence numbers count bytes of data. Although I am not qualified to critique the accuracy of the phone-related information, I was pleased to see the remainder of the networking material was correct.

"Telecommunications Essentials" is a must-buy if you want to learn about the telecom world. Although the author devotes too many words to describing the use of technology, and future trends, overall the book is excellent.”
 —Richard Bejtlich, TaoSecurity.com, Washington, D.C.

“Lillian Goleniewski had touched almost all basic foundations of telecommunication. The explanation is very clear, brief and easy to digest. She managed to explain all the concepts in her own style, which is free from complicated terms and jargons. I would say the book itself can be read by non-technical person or a very busy management person who would like to know about telecommunication. My conclusion, this book is for every level of people regardless their background. As for network planner and network administrator, this book is good for them to read so that they would understand how the network works from end to end.”
 —Hizkal Avus, Kuala Lumpur, Malaysia

“The field of telecommunications is one of those seemingly endless black holes, filed with ambiguity, wrong turns, too many questions and not enough answers, widely divergent opinions, and somewhat intimidating technical (and sometimes mundane) mechanics. This author manages to deal head on with the telecommunications industry, not shrinking from her responsibilities to tell the whole story, and allowing the reader, finally, to find some clarity of vision and understanding of what telecommunications is and where the industry could be headed.”
 —A Reader, Amazon.com

From IEEE Distributed Systems Online

"Book Review: Telecom Foundations (A review of Telecommunications Essentials by Lillian Goleniewski)."

Telecommunication Essentials offers a jump-start introduction to the ever-expanding telecommunications field. It is a guide to communication fundamentals, data networking, the Internet, and next-generation networks.

It provides a high-level overview of the terminology and issues that comprise telecommunications, ensuring that even readers with no telecommunications knowledge understand the concepts introduced. Another noteworthy feature is that, although the chapters maintain continuity in form and content, readers can often jump to any part of the book and learn key terms and concepts without reading the whole book. In addition, the book includes an excellent glossary.

Telecommunications Fundamentals

The book is divided in three parts, and the first section, Telecommunications Fundamentals, explains the basics of telecom technology. Goleniewski begins by explaining the factors that have contributed to the telecom revolution and talks about exciting new technologies on the horizon. She also discusses processes involved in establishing communication channels, examines differences between circuit-switched and packet-switched networks, and explores the nature of the Public Switched Telephone Network.

Part 1 gives readers a good grounding on telecommunications basics and covers transmission media characteristics and their uses.

Data Networking Basics

Part 2, Data Networking Basics, introduces the basics of data communications and networking. It discusses Wide Area Networks and Local Area Networks and the structuring of the Internet. It also explores next generation services such as Virtual Private Networks, Voice over IP, and streaming media.

Goleniewski explains data communications fundamentals in the most lucid manner with the help of numerous diagrams. The graphs and diagrams also help ground the concepts of Circuit Switched Networks, Packet Switched Networks, and LANs.

Next Generation Networks

Part 3, Next Generation Networks, explores the realm of broadband networking and emerging technologies, including the near and distant future of communications and its convergence with related InfoTech industries. Goleniewski also covers next generation network architectures, optical networking, broadband access alternatives, home area networking, and wireless communications.

Part 3 offers a good overview of new emerging networks. Hardcore technologists might not appreciate this section because of its brief coverage of most new technologies such as VoIP, Wireless, and Broadband. However, general readers will likely appreciate the overall content Goleniewski presents here. Although this section doesn't sufficiently cover as many concepts as the author intended, interested readers can visit

www.telecomessentials.com/learningcenter for more information. The site offers access to a dynamic online telecom learning center featuring self-tests and quizzes, links to recommended sites, and discussion forums.

Although no book can address every aspect of a broad topic such as that of the ever-changing telecommunications field, Goleniewski has made a wonderful effort in covering the fundamentals of telecommunications in a clear and concise manner. This book will serve as a good reference for anyone interested in telecommunications. For undergraduate students, it provides an overview of telecom technology and prepares them for taking more in-depth telecommunications courses. For professionals, it provides a clear approach to most telecom terminology.

—Dharmendra Lingaiah is a software engineer at Cranes Software International Limited in Bangalore.

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