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Sommario/riassunto

Addressing the fundamental technologies and theories associated with designing complex communications systems and networks, Principles of Communications Networks and Systems provides models and analytical methods for evaluating their performance. Including both the physical layer (digital transmission and modulation) and networking topics, the quality of service concepts belonging to the different layers of the protocol stack are interrelated to form a comprehensive picture. The book is designed to present the material in an accessible but rigorous manner. It jointly addresses networking and transmission aspects following a unified approach and using a bottom up style of presentation, starting from requirements on transmission links all the way up to the corresponding quality of service at network and application layers. The focus is on presenting the material in an integrated and systematic fashion so that students will have a clear view of all the principal aspects and of how they interconnect with each other. . A comprehensive introduction to communications systems and networks, addressing both network and transmission topics . Structured for effective learning, with basic principles and technologies

being introduced before more advanced ones are explained. Features examples of existing systems and recent standards as well as advanced digital modulation techniques such as CDMA and OFDM. Contains tools to help the reader in the design and performance analysis of modern communications systems. Provides problems at the end of each chapter, with answers on an accompanying website.