

Book Description

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Telecommunications Essentials, Second Edition, provides a comprehensive overview of the rapidly evolving world of telecommunications. Providing an in-depth, one-stop reference for anyone wanting to get up to speed on the \$1.2 trillion telecommunications industry, this book not only covers the basic building blocks but also introduces the most current information on new technologies. This edition features new sections on IP telephony, VPNs, NGN Architectures broadband access alternatives, and broadband wireless applications, and it describes the technological and political forces at play in the world of telecommunications around the globe.

Goleniewski's clear approach to current and emerging technologies - starting with important terms and definitions, and moving to systems, networks, and the latest applications, products, and services - is based on the very successful worldwide LIDO Telecommunications Essentials seminar and e-Learning series. This approach makes Telecommunications Essentials a must-have resource for any reader, whether new to the field of telecommunications or a seasoned professional

Topics include

- * Communications fundamentals, from traditional transmission media, to establishing communications channels, to the PSTN
- * Data networking and the Internet, including the basics of data communications, local area networking, wide area networking, and the Internet and IP infrastructures
- * Next-generation networks—, including the applications, characteristics, and requirements of the new generation of networks that are being built to carry the ever-increasing network traffic, focusing on IP services, network infrastructure, optical networking, and broadband access alternatives.
- * Wireless networking, including the basics of wireless networking and the technologies involved in wireless WWANs, WMANs, WLANs, and WPANs

Technologies covered include

- * IP protocols, including IPv4 and IPv6 and IP QoS
- * IP telephony, including VoIP, softswitches, SIP, H.323, Megaco and MGCP, and ENUM.
- * Virtual private networks, including IPsec, BGP-MPLS, VPWS and VPLS VPNs, and VPN security mechanisms
- * Digital video and TV standards, including DTV, HDTV, ATSC, DVB, and ISDB
- * Convergence and NGNs, IMS, MSPPs, QoS, and MPLS
- * Optical networking, including WDM/DWDM/CWDM, ROADMs, optical switches, OTN, ASON and ASTN, GigE/10GigE/EFM and RPR, and GMPLS
- * Broadband access, including DSL, DOCSIS, PacketCable, and OpenCable, FTTx and PONs, broadband PLT, and HANs
- * 3G/4G/5G networks, including WCDMA, HSDPA/HSUPA/HSOPA, OFDM, and MIMO
- * Broadband wireless standards, including Wi-Fi, WiMax, WiBro, Bluetooth, UWB, and RFID

As an added bonus, Telecommunications Essentials, Second Edition, is augmented by a dynamic online telecommunications learning center, www.telecomessentials.com. The Telecom Essentials Learning Center includes access to: self-tests and quizzes to put your knowledge to the test, links to hundreds of Web sites and educational resources that help build your telecommunications knowledge, and a comprehensive glossary with over 1,500 key telecommunications terms.

Educational products from the LIDO Organization, Inc., are further supported by a unique telecommunications knowledge portal, LIDO Telecom WebCentral (www.telecomwebcentral.com), which provides access to up-to-the-minute information on the latest technologies, infrastructures, regulations and applications. The Learning Center includes blogs, newsfeeds, podcasts, whitepapers, and links to thousands of ICT resources.

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