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Sommario/riassunto

Comprehensive guide to hybrid communication systems using visible light communication, radio over fiber, and auto channel switching technologies Hybrid Communication Systems for Future 6G and Beyond explores the future of wireless communication and discusses how we can create more efficient and reliable ways to communicate by unlocking the potential of three specific technologies: visible light communication (VLC), radio over fiber (RoF) technology, and auto channel switching. This book begins by exploring the potential of VLC technology, which is currently considered the best alternative to wireless communication. It then moves on to describe how RoF technology can provide a powerful backhaul solution for VLC. Later chapters cover auto channel switching and how it can facilitate data traffic sharing between WiFi and LiFi technologies. Case studies of successful hybrid communication system implementations are included throughout the text to showcase real-world applications and aid in reader comprehension. Written by a highly qualified author with experience in both academia and industry, Hybrid Communication Systems for Future 6G and Beyond includes information on: * The evolution, advantages, and disadvantages of hybrid systems, as well as their current limitations and potential solutions to these limitations * RoF modulation techniques, including direct and external modulation, and RoF configuration, including intermediate frequency over fiber, baseband over fiber, and millimeter-wave signal generation * RoF system level analysis, covering encoding formats, PIN and APD photodiodes, and various experiments and simulations * Hybrid communication technology that incorporates wireless Wi-Fi and Visible Light Communication (VLC) such as Li-Fi, to support the upcoming 6G and beyond high-speed communication networks Hybrid Communication Systems for Future 6G and Beyond is an invaluable resource for students, researchers, and professionals in the fields of telecommunications and electronic networking who are interested in designing and implementing hybrid communication systems.