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WiMAX **Broadband Fixed Wireless Access Wireless Access Networks Principles of Wireless Access and Localization** 5G NR: The Next Generation Wireless Access Technology **Resource Allocation in Next-Generation Broadband Wireless Access Networks Hacking Wireless Access Points Handbook of Research on Wireless Security Broadband Wireless Access and Local Networks** Broadband Wireless Access Networks for 4G: Theory, Application, and Experimentation **Broadband Wireless Access** Fixed Broadband Wireless Access Networks and Services **Linux Networking Cookbook Wireless Access Flexibility** *All in a Broadband Wireless Access Network Wireless Home Networking For Dummies* **Build Your Own Wi-Fi Network Absolute Beginner's Guide to Wi-Fi Wireless Networking** *Wireless Networks For Dummies* **Windows Server 2022 & PowerShell All-in-One For Dummies Building Wireless Community Networks Wireless Networking Absolute Beginner's Guide** *Learn Social Engineering* **OFDMA for Broadband Wireless Access Geeks On Call Wireless Networking Designing A Wireless Network Heterogeneous Wireless Access Networks Principles of Wireless Networks 802.11 Wireless Networks: The Definitive Guide** Wireless Internet Applications and Architecture **Wired and Wireless Seamless Access Systems for Public Infrastructure 802.11 Security Security in Fixed and Wireless Networks Wireless Network Hacks and Mods For Dummies How Secure is Your Wireless Network? Wireless Networks First-step Telematics Communication Technologies and Vehicular Networks: Wireless Architectures and Applications 802.11 Wireless Networks** *Controller-Based Wireless LAN Fundamentals* Broadband Access Networks

With the growing popularity of wireless networks in recent years, the need to increase network capacity and efficiency has become more prominent in society. This has led to the development and implementation of heterogeneous networks. Resource Allocation in Next-Generation Broadband Wireless Access Networks is a comprehensive reference source for the latest scholarly research on upcoming 5G technologies for next generation mobile networks, examining the various features, solutions, and challenges associated with such advances. Highlighting relevant coverage across topics such as energy efficiency, user support, and adaptive multimedia services, this book is ideally designed for academics, professionals, graduate students, and professionals interested in novel research for wireless innovations. This introductory volume provides a systematic overview of WiMAX technology, demystifing the technology and providing technical advice on various system trade-offs. Much of the material is based on the practical experiences of the authors in building new systems. Coverage includes the IEEE 802.16 standard, a tutorial on implementation and tips on controlling cost of WiMAX network ownership. This is a must read book for professionals involved in broadband fixed wireless access. This book constitutes the refereed proceedings of the First International Workshop on Wireless Access Flexibility, WiFlex 2013, held in Kaliningrad, Russia, in September 2013. The 13 full papers presented were carefully reviewed and selected for inclusion in this volume. The papers describe the latest results and novel research ideas in the field of flexible wireless access architecture design opening the door for innovative solutions significantly improving network performance. The following topics are covered in this volume: 4G and beyond, local area networks, multi-hop networks, sensor networks. All the essentials for administering Windows Server 2022 in one book Looking for a little help installing, configuring, securing, or running a network running Windows Server 2022? Windows Server 2022 & PowerShell All-in-One For Dummies delivers a thorough guide to network administration in a single, convenient book. Whether you need to start from scratch and install a new server or want to jump right into a more advanced topic like managing security or working in Windows PowerShell you'll find what you need right here. In this 8-books-in-1 compilation, you'll: Learn what you need to install and set up a brand-new Windows server installation Configure your Windows Server and customize its settings based on your needs and preferences Discover how to install, configure, and work with Containers The perfect book for server and system admins looking for a quick reference on Windows Server operation, this book is also a great resource for networking newcomers learning their way around the server software they'll encounter daily. Make the most of your wireless network...without becoming a technical expert! This book is the fastest way to connect all your wireless devices, get great performance with everything from streaming media to printing, stay safe and secure, and do more with Wi-Fi than you ever thought possible! Even if you've never set up or run a network before, this book will show you how to do what you want, one incredibly clear and easy step at a time. Wireless networking has never, ever been this simple! Who knew how simple wireless networking could be? This is today's best beginner's guide to creating, using, troubleshooting, and doing more with your wireless network...simple, practical instructions for doing everything you really want to do, at home or in your business! Here's a small sample of what you'll learn: • Buy the right equipment without overspending • Reliably connect Windows PCs, Macs, iPads, Android tablets, game consoles, Blu-ray players, smartphones, and more • Get great performance from all your networked devices • Smoothly stream media without clogging your entire network • Store music and movies so you can play them anywhere in your home • Keep neighbors and snoopers out of your network • Share the files you want to share–and keep everything else private • Automatically back up your data across the network • Print from anywhere in the house–or from anywhere on Earth • Extend your network to work reliably in larger homes or offices • Set up a "guest network" for visiting friends and family • View streaming videos and other web content on your living room TV • Control your networked devices with your smartphone or tablet • Connect to Wi-Fi hotspots and get online in your car • Find and log onto hotspots, both public and hidden • Quickly troubleshoot common wireless network problems Michael Miller is the world's #1 author of beginning computer books. He has written more than 100 best-selling books over the past two decades, earning an international reputation for his friendly and easy-to-read style, practical real-world advice, technical accuracy, and exceptional ability to demystify complex topics. His books for Que include Computer Basics Absolute Beginner's Guide; Facebook for Grown-Ups; My Pinterest; Ultimate Digital Music Guide; Speed It Up! A Non-Technical Guide for Speeding Up Slow PCs, and Googlepedia: The Ultimate Google Resource. Category: Networking Covers: Wireless Networking User Level: Beginning The perennial bestseller shows you how share your files and Internet connection across a wireless network Fully updated for Windows 7 and Mac OS X Snow Leopard, this new edition of this bestseller returns with all the latest in wireless standards and security. This fun and friendly guide shows you how to integrate your iPhone, iPod touch, smartphone, or gaming system into your home network. Veteran authors escort you through the various financial and logisitical considerations that you need to take into account before building a wireless network at home. Covers the basics of planning, installing, and using wireless LANs Reviews essential information on the latest security issues Delivers valuable tips on how to stay current with fast-moving technology Discusses how to share resources such as printers, scanners, an Internet connection, files, and more with multiple computers on one network Wireless Home Networking For Dummies, 4th Edition skips the technical jargon and gets you connected with need-to-know information on building a wireless home network. Mention wireless networks, and the question of security will soon follow. It's not surprising that in spite of compelling business arguments for going wireless, many companies are holding back

because of security concerns. But, while it's true that wireless networks create security issues that don't exist in wired networks, the issues are not insurmountable. 802.11 Security shows how you can plan for and successfully contend with security obstacles in your wireless deployment. This authoritative book not only explains the security issues, but shows you how to design and build a your own secure wireless network. 802.11 Security covers the entire process of building secure 802.11-based wireless networks, in particular, the 802.11b ("Wi-Fi") specification. The authors provide detailed coverage of security issues unique to wireless networking, such as Wireless Access Points (WAP), bandwidth stealing, and the problematic Wired Equivalent Privacy component of 802.11. You'll learn how to configure a wireless client and to set up a WAP using either Linux or Free BSD. You'll also find thorough information on controlling network access and encrypting client traffic. Beginning with an introduction to 802.11b in general, the book gives you a broad basis in theory and practice of wireless security, dispelling some of the myths along the way. In doing so, they provide you with the technical grounding required to think about how the rest of the book applies to your specific needs and situations. Next, the book details the technical setup instructions needed for both the Linux and FreeBSD operating systems. Some of the topics covered include: Station Security for Linux, FreeBSD, Open BSD, Mac OS X and Windows Setting Up Access Point Security Gateway Security, including building Gateways, firewall Rules, Auditing, etc. Authentication and Encryption FreeBSD IPsec client and gateway configuration Linux IPsec client and gateway configuration 802.1x authentication 802.11 Security is a book whose time has come. If you are a network, security, or systems engineer, or anyone interested in deploying 802.11b-based systems, you'll want this book beside you every step of the way. With transfer speeds up to 11 Mbps the 802.11 wireless network standard is set to revolutionize wireless LANs. Matthew Gast's definitive guide to the standard is aimed at administrators, architects and security professionals. This innovative resource presents comprehensive and detailed information on wired and wireless seamless access systems consisting of various types of transmission media including microwave, millimeter-wave, THz wave, and lightwave in fibers. This book explains heterogenous networks consisting of various transmission media with many media converters. Applications of seamless access networks for public infrastructure such as airports, railways and information and communications systems are described. The book focuses on two important features of seamless access systems, including high-capacity transmission capacity limitation due to economics as well as physics, and low-latency transmission. Latency has significant impact on applications including financial transactions and online gaming. Low-latency data is very important for self-driving cars as well. This book presents the concept of sensor-over-fiber, where many antenna units are connected through optical fibers to gather sensor responses coherently. This book provides possible scenarios of future mobile networks which have many antenna units and opto-electric device technologies. Readers will learn about basic and state-of-the-art signal estimation techniques and concludes with exploration of social issues on future information and communication (ICT) infrastructure. Building Wireless Community Networks is about getting people online using wireless network technology. The 802.11b standard (also known as WiFi) makes it possible to network towns, schools, neighborhoods, small business, and almost any kind of organization. All that's required is a willingness to cooperate and share resources. The first edition of this book helped thousands of people engage in community networking activities. At the time, it was impossible to predict how quickly and thoroughly WiFi would penetrate the marketplace. Today, with WiFi-enabled computers almost as common as Ethernet, it makes even more sense to take the next step and network your community using nothing but freely available radio spectrum. This book has showed many people how to make their network available, even from the park bench, how to extend high-speed Internet access into the many areas not served by DSL and cable providers, and how to build working communities and a shared though intangible network. All that's required to create an access point for high-speed Internet connection is a gateway or base station. Once that is set up, any computer with a wireless card can log onto the network and share its resources. Rob Flickenger built such a network in northern California, and continues to participate in network-building efforts. His nuts-and-bolts guide covers: Selecting the appropriate equipment Finding antenna sites, and building and installing antennas Protecting your network from inappropriate access New network monitoring tools and techniques (new) Regulations affecting wireless deployment (new) IP network administration, including DNS and IP Tunneling (new) His expertise, as well as his sense of humor and enthusiasm for the topic, makes Building Wireless Community Networks a very useful and readable book for anyone interested in wireless connectivity. Provides research on security issues in various wireless communications, recent advances in wireless security, the wireless security model, and future directions in wireless security. Controller-Based Wireless LAN Fundamentals An end-to-end reference guide to design, deploy, manage, and secure 802.11 wireless networks As wired networks are increasingly replaced with 802.11n wireless connections, enterprise users are shifting to centralized, next-generation architectures built around Wireless LAN Controllers (WLC). These networks will increasingly run business-critical voice, data, and video applications that once required wired Ethernet. In Controller-Based Wireless LAN Fundamentals, three senior Cisco wireless experts bring together all the practical and conceptual knowledge professionals need to confidently design, configure, deploy, manage, and troubleshoot 802.11n networks with Cisco Unified Wireless Network (CUWN) technologies. The authors first introduce the core principles, components, and advantages of next-generation wireless networks built with Cisco offerings. Drawing on their pioneering experience, the authors present tips, insights, and best practices for network design and implementation as well as detailed configuration examples. Next, they illuminate key technologies ranging from WLCs to Lightweight Access Point Protocol (LWAPP) and Control and Provisioning of Wireless Access Points (CAPWAP), Fixed Mobile Convergence to WiFi Voice. They also show how to take advantage of the CUWN’s end-to-end security, automatic configuration, self-healing, and integrated management capabilities. This book serves as a practical, hands-on reference for all network administrators, designers, and engineers through the entire project lifecycle, and an authoritative learning tool for new wireless certification programs. This is the only book that Fully covers the principles and components of next-generation wireless networks built with Cisco WLCs and Cisco 802.11n AP Brings together real-world tips, insights, and best practices for designing and implementing next-generation wireless networks Presents start-to-finish configuration examples for common deployment scenarios Reflects the extensive first-hand experience of Cisco experts Gain an operational and design-level understanding of WLAN Controller (WLC) architectures, related technologies, and the problems they solve Understand 802.11n, MIMO, and protocols developed to support WLC architecture Use Cisco technologies to enhance wireless network reliability, resilience, and scalability while reducing operating expenses Safeguard your assets using Cisco Unified Wireless Network’s advanced security features Design wireless networks capable of serving as an enterprise’s primary or only access network and supporting advanced mobility services Utilize Cisco Wireless Control System (WCS) to plan, deploy, monitor, troubleshoot, and report on wireless networks throughout their lifecycles Configure Cisco wireless LANs for multicasting Quickly troubleshoot problems with Cisco controller-based wireless LANs This book is part of the Cisco Press® Fundamentals Series. Books in this series introduce networking professionals to new networking technologies, covering network topologies, sample deployment concepts, protocols, and management techniques. Category: Wireless Covers: Cisco Controller-Based Wireless LANs Introduces aspects on security threats and their countermeasures in both fixed and wireless networks, advising on how countermeasures can provide secure communication infrastructures. Enables the reader to understand the risks of inappropriate network security, what mechanisms and protocols can be deployed to counter these risks, and how these mechanisms and protocols work. As we all know by now, wireless networks offer many advantages over fixed (or wired) networks. Foremost on that list is mobility, since going wireless frees you from the tether of an Ethernet cable at a desk. But that's just the tip of the cable-free iceberg. Wireless networks are also more flexible, faster and easier for you to use, and more affordable to deploy and maintain.The de facto standard for wireless networking is the 802.11 protocol, which includes Wi-Fi (the wireless standard known as 802.11b) and its faster cousin, 802.11g. With easy-to-install 802.11 network hardware available everywhere you turn, the choice seems simple, and many people dive into wireless computing with less thought and planning than they'd give to a wired network. But it's wise to be

familiar with both the capabilities and risks associated with the 802.11 protocols. And 802.11 Wireless Networks: The Definitive Guide, 2nd Edition is the perfect place to start.This updated edition covers everything you'll ever need to know about wireless technology. Designed with the system administrator or serious home user in mind, it's a no-nonsense guide for setting up 802.11 on Windows and Linux. Among the wide range of topics covered are discussions on: deployment considerations network monitoring and performance tuning wireless security issues how to use and select access points network monitoring essentials wireless card configuration security issues unique to wireless networks With wireless technology, the advantages to its users are indeed plentiful. Companies no longer have to deal with the hassle and expense of wiring buildings, and households with several computers can avoid fights over who's online. And now, with 802.11 Wireless Networks: The Definitive Guide, 2nd Edition, you can integrate wireless technology into your current infrastructure with the utmost confidence. The author takes a detailed look at the technologies and techniques needed to operate fixed broadband wireless access networks. With this comprehensive guide, readers discover the technologies required for FBW and learn how to plan, deploy, and manage an access network. You've probably heard the expression, "It's timeto cut the cord." Well, it may be time to "cut thecables" at your office and free yourself from your desk andcomputer. Wireless networks are the waves of thefuture—literally. Wireless Networks For Dummies guidesyou from design through implementation to ongoing protection ofyour system and your information so you can: Remain connected to the office in airports and hotels Access the Internet and other network resources in thelunchroom, conference room, or anywhere there's an accesspoint Use your PDA or laptop to query your database from thewarehouse or the boardroom Check e-mail wirelessly when you're on the road Get rid of the cable clutter in your office Wireless Networks For Dummies was coauthored by Barry D.Lewis, CISSP, and Peter T. Davis, who also coauthored ComputerSecurity For Dummies. Barry Lewis is president of aninformation security consulting firm and an internationally knownleader of security seminars. Peter Davis is founder of a firmspecializing in the security, audit, and control of information.Together, they cut through the cables, clutter, and confusion andhelp you: Get off to a quick start and get mobile with IrDA (InfraredData Association) and Bluetooth Perform a site survey and select the right standard, mode,access point, channel and antenna Check online to verify degree of interoperability of devicesfrom various vendors Install clients and set up roaming Combat security threats such as war driving, jamming,hijacking, and man-in-the-middle attacks Implement security and controls such as MAC (Media AccessControl) and protocol filtering, WEP (Wireless Equivalent Privacy),WPA, (Wi-Fi Protected Access), EAP (Extensible AuthenticationProtocol), and VPN (Virtual Private Network) Set up multiple access points to form a larger wirelessnetwork Complete with suggestions of places to get connected, Web siteswhere you can get more information, tools you can use to monitorand improve security, and more, Wireless Networks ForDummies helps you pull the plug and go wireless! Provides information on wireless networking, covering such topics as 802.11 standards, hotspots, and setting up a wireless network. Improve information security by learning Social Engineering. Key Features Learn to implement information security using social engineering Get hands-on experience of using different tools such as Kali Linux, the Social Engineering toolkit and so on Practical approach towards learning social engineering, for IT security Book Description This book will provide you with a holistic understanding of social engineering. It will help you to avoid and combat social engineering attacks by giving you a detailed insight into how a social engineer operates. Learn Social Engineering starts by giving you a grounding in the different types of social engineering attacks,and the damages they cause. It then sets up the lab environment to use different toolS and then perform social engineering steps such as information gathering. The book covers topics from baiting, phishing, and spear phishing, to pretexting and scareware. By the end of the book, you will be in a position to protect yourself and your systems from social engineering threats and attacks. All in all, the book covers social engineering from A to Z , along with excerpts from many world wide known security experts. What you will learn Learn to implement information security using social engineering Learn social engineering for IT security Understand the role of social media in social engineering Get acquainted with Practical Human hacking skills Learn to think like a social engineer Learn to beat a social engineer Who this book is for This book targets security professionals, security analysts, penetration testers, or any stakeholder working with information security who wants to learn how to use social engineering techniques. Prior knowledge of Kali Linux is an added advantage This guide for developers and architects presents a technical overview of wireless Internet technology, applications, and content issues. The text begins with a discussion of basic wireless concepts and technological trends. Next, the construction of messaging, browsing, and interactive and conversational voice portal applications is described. The final section is devoted to the architecture of the wireless Internet. Coverage extends to a discussion of mCommerce servers. Annotation copyrighted by Book News Inc., Portland, OR. With the increased functionality demand for mobile speed and access in our everyday lives, broadband wireless networks have emerged as the solution in providing high data rate communications systems to meet these growing needs. Broadband Wireless Access Networks for 4G: Theory, Application, and Experimentation presents the latest trends and research on mobile ad hoc networks, vehicular ad hoc networks, and routing algorithms which occur within various mobile networks. This publication smartly combines knowledge and experience from enthusiastic scholars and expert researchers in the area of wideband and broadband wireless networks. Students, professors, researchers, and other professionals in the field will benefit from this book's practical applications and relevant studies. Discussing OFDMA radio resource management in the context of broadband wireless access systems such as WiMAX, this unique resource serves as an excellent reference for OFDMA system design work and provides expert guidance on emerging enhancements to WiMAX technology. "This book examines critical issues involved with telematics such as vehicular network infrastructure, vehicular network communication protocols, and vehicular services and applications"--Provided by publisher. This guide explains how professional and home users can take advantage of Wi-Fi to achieve their mobility goals around the house or in the office. It features step-by-step processes, tips, sidebars, illustrations and screenshots to convey information visually. Readers will learn about the components of a wireless network including access points, and network cards. Plus how to choose, install and configure them for use in a new or existing network. A guide to implementing a realistic, successful game plan for safe and secure wireless LANs, this volume has step-by-step guidelines and best practices for deploying secure wireless LANs in an enterprise or home environment and also within community networks. This authoritative resource offers you complete, state-of-the-art coverage of wireless broadband access networks. The book provides you with a thorough introduction to wireless access and local networks, covers broadband mobile wireless access systems, and details mobile and broadband wireless local area networks. This forward-looking reference focuses on cutting-edge mobile WiMax, WiFi, and WiBro technologies, including in-depth design and implementation guidance. Collecting the most recent experience and knowledge of design and field engineers from leading organizations like Samsung Electronics, Korea Telecom (KT) Corporation and Philips Electronics, the book introduces the network technologies adopted by Mobile WiMAX for the implementation of IP-based broadband mobile wireless access. Moreover, it covers the Wi-Fi technologies that have steadily evolved over the past decade, establishing a firm foundation for IP-based wireless local network access. Hacking Wireless Access Points: Cracking, Tracking, and Signal Jacking provides readers with a deeper understanding of the hacking threats that exist with mobile phones, laptops, routers, and navigation systems. In addition, applications for Bluetooth and near field communication (NFC) technology continue to multiply, with athletic shoes, heart rate monitors, fitness sensors, cameras, printers, headsets, fitness trackers, household appliances, and the number and types of wireless devices all continuing to increase dramatically. The book demonstrates a variety of ways that these vulnerabilities can be—and have been—exploited, and how the unfortunate consequences of such exploitations can be mitigated through the responsible use of technology. Explains how the wireless access points in common, everyday devices can expose us to hacks and threats Teaches how wireless access points can be hacked, also providing the techniques necessary to protect and defend data Presents concrete examples and real-world guidance on how to protect against wireless access point attacks 5G NR: The Next Generation Wireless Access Technology follows the authors' highly celebrated books

on 3G and 4G by providing a new level of insight into 5G NR. After an initial discussion of the background to 5G, including requirements, spectrum aspects and the standardization timeline, all technology features of the first phase of NR are described in detail. Included is a detailed description of the NR physical-layer structure and higher-layer protocols, RF and spectrum aspects and co-existence and interworking with LTE. The book provides a good understanding of NR and the different NR technology components, giving insight into why a certain solution was selected. Content includes: Key radio-related requirements of NR, design principles, technical features Details of basic NR transmission structure, showing where it has been inherited from LTE and where it deviates from it, and the reasons why NR Multi-antenna transmission functionality Detailed description of the signals and functionality of the initial NR access, including signals for synchronization and system information, random access and paging LTE/NR co-existence in the same spectrum, the benefits of their interworking as one system The different aspects of mobility in NR RF requirements for NR will be described both for BS and UE, both for the legacy bands and for the new mm-wave bands Gives a concise and accessible explanation of the underlying technology and standards for 5G NR radio-access technology Provides detailed description of the NR physical-layer structure and higher-layer protocols, RF and spectrum aspects and co-existence and interworking with LTE Gives insight not only into the details of the NR specification but also an understanding of why certain solutions look like they do Wireless provides a means for effective, efficient and rapid deployment of new access networks in areas previously without telecommunications service or short of capacity. Fixed wireless access networks and Wireless Local Loop (WLL) technology are, therefore, playing an important role in the restructuring of the public telecommunications industry. Written in a highly accessible, well-illustrated and simple-to-read format, this book presents the economics, the practicalities, the technical and operational aspects of planning and maintaining fixed wireless access networks, and explains when and why they are attractive. Topics covered include: ? Design of radio systems and their basic functionality ? Point-to-point (PTP) and point-to-multipoint (PMP) radio ? Calculation of radio system range and reliability ? Fixed wireless applications and their network integration Wireless Access Networks is an invaluable and complete reference for all involved in fixed wireless access and wireless local loop, including business strategists, marketing, technical, planning and operations staff of public network operators, as well as students. This soup-to-nuts collection of recipes covers everything you need to know to perform your job as a Linux network administrator, whether you're new to the job or have years of experience. With Linux Networking Cookbook, you'll dive straight into the gnarly hands-on work of building and maintaining a computer network. Running a network doesn't mean you have all the answers. Networking is a complex subject with reams of reference material that's difficult to keep straight, much less remember. If you want a book that lays out the steps for specific tasks, that clearly explains the commands and configurations, and does not tax your patience with endless ramblings and meanderings into theory and obscure RFCs, this is the book for you. You will find recipes for: Building a gateway, firewall, and wireless access point on a Linux network Building a VoIP server with Asterisk Secure remote administration with SSH Building secure VPNs with OpenVPN, and a Linux PPTP VPN server Single sign-on with Samba for mixed Linux/Windows LANs Centralized network directory with OpenLDAP Network monitoring with Nagios or MRTG Getting acquainted with IPv6 Setting up hands-free networks installations of new systems Linux system administration via serial console And a lot more. Each recipe includes a clear, hands-on solution with tested code, plus a discussion on why it works. When you need to solve a network problem without delay, and don't have the time or patience to comb through reference books or the Web for answers, Linux Networking Cookbook gives you exactly what you need. Fun projects and valuable content join forces to enable readers to turn their wireless home network into a high-performance wireless infrastructure capable of entertainment networking and even home automation Step-by-step instructions help readers find, buy, and install the latest and greatest wireless equipment The authors are home tech gurus and offer detailed discussion on the next-generation wireless gear that will move the wireless LAN beyond computers and into telephony, entertainment, home automation/control, and even automotive networking The number of wireless LAN users in North America is expected to grow from 4.2 million current users to more than 31 million by 2007 Taking the worry out of wireless Once you get your wireless network up and running, you'll wonder how you got along without it. And you'll wonder how home and small business users survived before Geeks On Call. This book is jam-packed with simple steps, quick solutions, and basic information to make setting up and using your wireless network easier and safer than ever before. The Geeks give you the most efficient ways to build, secure, and troubleshoot a network that meets all your needs. Know what you need before you buy Set up and connect your network Install and configure wireless components Protect your wireless network Make the most of network features Add printers, video game adapters, and digital media players Maintain and troubleshoot your network Solve common problems Geeks On Call is the premier provider of on-site computer services. The certified, trained and tested technicians from Geeks On Call provide expert computer installation and networking services, on-site repairs, security solutions and system upgrades for residential and commercial customers numbering in the hundreds of thousands each year. Founded in 1999, Geeks On Call began franchising in 2001. For more information, call 1-800-905-GEEK or visit www.geeksoncall.com. Geeks On Call franchises are independently owned and operated. (c)2005 Geeks On Call America, Inc. A comprehensive, encompassing and accessible text examining a wide range of key Wireless Networking and Localization technologies This book provides a unified treatment of issues related to all wireless access and wireless localization techniques. The book reflects principles of design and deployment of infrastructure for wireless access and localization for wide, local, and personal networking. Description of wireless access methods includes design and deployment of traditional TDMA and CDMA technologies and emerging Long Term Evolution (LTE) techniques for wide area cellular networks, the IEEE 802.11/WiFi wireless local area networks as well as IEEE 802.15 Bluetooth, ZigBee, Ultra Wideband (UWB), RF Microwave and body area networks used for sensor and ad hoc networks. The principles of wireless localization techniques using time-of-arrival and received-signal-strength of the wireless signal used in military and commercial applications in smart devices operating in urban, indoor and inside the human body localization are explained and compared. Questions, problem sets and hands-on projects enhances the learning experience for students to understand and appreciate the subject. These include analytical and practical examples with software projects to challenge students in practically important simulation problems, and problem sets that use MatLab. Key features: Provides a broad coverage of main wireless technologies including emerging technical developments such as body area networking and cyber physical systems Written in a tutorial form that can be used by students and researchers in the field Includes practical examples and software projects to challenge students in practically important simulation problems Considering the key evolutions within the access network technologies as well as the unprecedented levels of bandwidth demands by end users, this book condenses the relentless research, design, and deployment experience of state-of-the-art access networks. Furthermore, it shares the critical steps and details of the developments and deployment of these emergent technologies; which is very crucial particularly as telecommunications vendors and carriers are looking for cost-effective ultra-broadband “last-mile” access solutions to stay competitive in the “post bubble” era. The book is written to provide a comprehensive overview of the major broadband access technologies and deployments involving internationally recognized authors and key players. Due to its scope and depth, the proposed book is able to fill an important gap of today’s available literature. Bing (satellite and hybrid communication networks, U. of Maryland) discusses the design and development of wireless access protocols, emphasizing how such protocols can efficiently support disparate classes of multimedia traffic. After introducing and surveying the evolution of wireless access protocols, he describes many important protocols that are deployed or experimented with in various broadband wireless environments, such as asynchronous transfer mode, satellite networks, mobile cellular and personal communications systems, local loops, and local-area and home networks. Seeking a broad audience ranging from novices to veterans who are undertaking research in the area, he does discuss engineering aspects but focuses on the physical understanding and keeps the mathematics to a minimum. Annotation copyrighted by Book News, Inc., Portland, OR Assuming no previous experience of the subject, this user-friendly,

step-by-step guide will enable readers to gain an understanding of wireless networking basics. Heterogeneous wireless networking, which is sometimes referred to as the fourth-generation (4G) wireless, is a new frontier in the future wireless communications technology and there has been a growing interest on this topic among researchers and engineers in both academia and industry. This book will include a set of research and survey articles featuring the recent advances in theory and applications of heterogeneous wireless networking technology for the next generation (e.g., fourth generation) wireless communications systems. With the rapid growth in the number of wireless applications, services and devices, using a single wireless technology such as a second generation (2G) and third generation (3G) wireless system would not be efficient to deliver high speed data rate and quality-of-service (QoS) support to mobile users in a seamless way. Fourth generation (4G) wireless systems are devised with the vision of heterogeneity in which a mobile user/device will be able to connect to multiple wireless networks (e.g., WLAN, cellular, WMAN) simultaneously. This book intends to provide a unified view on the state-of-the-art of protocols and architectures for heterogeneous wireless networking. The contributed articles will cover both the theoretical concepts and system-level implementation issues related to design, analysis, and optimization of architectures and protocols for heterogeneous wireless access networks. Broadband wireless access is the third wireless revolution, after cellphones (1990s) and Wi-Fi (2000s). It is viewed by many carriers and cable operators as a disruptive technology and rightly so. The broadcast nature of wireless transmission offers ubiquity and immediate access for both fixed and mobile users. Unlike wired access (copper, coax, fiber), a large portion of the deployment costs is incurred only when a subscriber signs up for service. The U.S. is poised to exploit new wireless access technologies capable of pervasive high-speed connectivity despite lagging behind developed Asian countries in broadband access deployment for many years.All in a Broadband Wireless Access Network is a workbook designed to fill the need for a comprehensive yet compact and easy-to-use reference, specifically for anyone who wish to study the principles underpinning many promising wireless access solutions. It provides a comparative assessment of the key issues and technologies such as 802.16 (Wi-Max), long-range/multihop 802.11 (Wi-Fi), wireless DOCSIS, 3G/4G, 802.20 (mobile broadband) and the emerging 802.22 (wireless regional area networks) standard. The workbooks unique teaching style sets itself apart from other books. Quantitative concepts are explained visually while the bullet text brings out the key ideas in a manner that is self-contained, concise, and to the point. Whether you are an ambitious entrepreneur, a CTO, a business executive or a scientist, you will discover that the thought-provoking exercises at the end of the book not only help you master the subject but also serve as a rich source of interesting ideas. A companion website is available exclusively for users of this book, providing updates, related websites, and additional learning resources and supplements, including an on-demand training CD.The workbook provides valuable insights on a broad range of topics:* Licensed and unlicensed spectrum consideration* Reliable physical layer transmission using multiple antennas * Multichannel medium access protocols with QoS provisioning* Wireless access topologies: point-to-point, point-to-multipoint, peer-to-peer multihop (mesh)* Wireless multimedia services: wireless IP-TV, wireless VoIP* Cognitive radio technologies* Advanced wireless security*Wireless/wireline integrationBenny Bing is a research faculty member with the School of Electrical and Computer Engineering at the Georgia Institute of Technology (Georgia Tech), USA. He is also an associate director of the Georgia Tech Broadband Institute. He has published over 40 papers, 8 books, and was cited in over 100 research publications. His publications have also appeared in the IEEE Spectrum. His books on wireless networks are highly regarded by many technology visionaries. They contain forewords from both chairmen of the IEEE 802.11 Working Group since its inception, the inventor of Internet technology, and the inventor of the first wireless protocol. In early 2000, his groundbreaking book on wireless LANs was adopted by Cisco Systems to launch the Cisco-Aironet Wi-Fi product. He was subsequently invited by Qualcomm Inc. in San Diego, CA to conduct a customized course on wireless LANs for its engineering executives. In 2002, his edited book on wireless LANs was extensively reviewed by the IEEE Communications Magazine, IEEE Network, and ACM Networker, the first time a book has been reviewed by all three journals. He is currently an editor for the IEEE Wireless Communications Magazine, and has also guest edited for the IEEE Communications Magazine and the IEEE Journal on Selected Areas on Communications. In addition, he was featured in the MIT Technology Review in a special issue on wired and wireless technologies as well as the Atlanta Business Chronicle. He has served on the wireless networking panel for National Science Foundation (NSF) and was selected as one of the 10 best wireless designers in the United States by Building Industry Consulting Services International (BICSI), a 22,000-industry member telecommunication association based in Tampa, Florida. In October 2003, he was invited by NSF to participate in an NSF-sponsored workshop on Residential Broadband Revisited: Research Challenges in Residential Networks, Broadband Access and Applications. He is a senior member of IEEE. WiMAX Broadband Wireless Access Technology, based on the IEEE 802.16 standard, is at the origin of great promises for many different markets covering fixed wireless Internet Access, Backhauling and Mobile cellular networks. WiMAX technology is designed for the transmission of multimedia services (voice, Internet, email, games and others) at high data rates (of the order of Mb/s per user). It is a very powerful but sometimes complicated technique. The WiMAX System is described in thousands of pages of IEEE 802.16 standard and amendments documents and WiMAX Forum documents. WiMAX: Technology for Broadband Wireless Access provides a global picture of WiMAX and a large number of details that makes access to WiMAX documents much easier. All the aspects of WIMAX are covered. Illustrations and clear explanations for all the main procedures of WiMAX are pedagogically presented in a succession of relatively short chapters Topics covered include WiMAX genesis and framework, WiMAX topologies, protocol layers, MAC layer, MAC frames, WiMAX multiple access, the physical layer, QoS Management, Radio Resource Management, Bandwidth allocation, Network Architecture, Mobility and Security Features a glossary of abbreviations and their definitions, and a wealth of explanatory tables and figures Highlights the most recent changes, including the 802.16e amendment of the standard, needed for Mobile WiMAX Includes technical comparisons of WiMAX vs. 802.11 (WiFi) and cellular 3G technologies This technical introduction to WiMAX, explaining the rather complex standards (IEEE 802.16-2004 and 802.16e) is a must read for engineers, decision-makers and students interested in WiMAX, as well as other researchers and scientists from this evolving field. Business is on the move - mobile computing must keep up! Innovative technology is making the communication between computers a cordless affair. Mobile computing with laptops, hand helds and mobile phones is increasing the demand for reliable and secure wireless networks. Network engineers and consultants need to create and build cutting-edge wireless networks in both the small business and multi-million dollar corporations. Designing Wireless Networks provides the necessary information on how to design and implement a wireless network. Beginning with detailed descriptions of the various implementations and architectures of wireless technologies and moving to the step-by-step instructions on how to install and deploy a fixed wireless network; this book will teach users with no previous wireless networking experience how to design and build their own wireless network based on the best practices of the Enhanced Services from Lucent Technologies. * Timely coverage of new technologies: Communication without cables is the future of netwoking * Advocates wireless networking solutions for any user, regardless of location, device or connection. * Written by Experts. The authors are leading WAN authorities at Lucent Technologies. * No previous wireless experience is assumed, however, readers should have a basic understanding of networking and TCP/IP protocols