802 11 Wireless Networks The Definitive Guide Enabling Lity With Wi Fi Networks

802.11 Wireless LAN Fundamentals gives you the background and practical details you need to select, design, install, and run your own WLAN. This book begins with an overview of Ethernet technologies, 802.11 standards, and physical layer technologies, providing you with a frame of reference for the rest o Subsequent chapters address challenges and solutions associated with security, mobility, and QoS. Radio frequency fundamentals are reviewed in detail, as are site-surveying methods. A series of case studies that highlight WLAN design considerations in various business environments helps place all the co book in the context of real-world applications.

This is Cisco's comprehensive practical guide to planning, designing, installing, testing, and supporting both 802.11ac and 802.11n wireless networks for enterprise-based applications. Fully updated for the new 802.11ac standard, this Second Edition delivers expert hands-on guidance for mastering 802.11ac's different design, site survey, implementation, and network configuration techniques. Designing and Deploying 802.11 Wireless Networks, Second Edition presents multiple examples using Cisco wireless products, while offering methodologies and tips that are applicable with any vendor's equipment. The autho coverage of building new wireless networks and migrating existing wireless networks (802.11a,b,g,n) to 802.11ac. After introducing fundamental wireless and 802.11 concepts, the authors present fully-updated coverage of all aspects of network design: requirements, architecture, performance, roaming, RF co security, and much more. Drawing on extensive field experience, they walk through installation and testing, and share comprehensive operational guidance for managing security, troubleshooting roaming and connections, and training support staff. This edition's revamped coverage ranges from new site surve practices for WPA authentication configuration; advanced design guidelines for city-wide deployments to the latest Cisco equipment. Simply put, you'll find all you need to succeed with your next wireless project -- in any environment, no matter how challenging.

The next frontier for wireless LANs is 802.11ac, a standard that increases throughput beyond one gigabit per second. This concise guide provides in-depth information to help you plan for 802.11ac, with technical details on design, network operations, deployment, and monitoring. Author Matthew Gast—an ind the development of 802.11-2012 and security task groups at the Wi-Fi Alliance—explains how 802.11ac will not only increase the speed of your network, but its capacity as well. Whether you need to serve more clients with your current level of throughput, or serve your existing client load with higher throughpu solution. This book gets you started. Understand how the 802.11ac protocol works to improve the speed and capacity of a wireless LAN Explore how beamforming increases speed capacity by improving link margin, and lays the foundation for multi-user MIMO Learn how multi-user MIMO increases capacity by to send data to multiple clients simultaneously Plan when and how to upgrade your network to 802.11ac by evaluating client devices, applications, and network connections

802.11 Wireless NetworksThe Definitive Guide"O'Reilly Media, Inc."

Security and Analysis

Building Secure Wireless Networks with 802.11

Throughput, Robustness, and Reliability in 802.11n

Broadband Access

Guide to Securing Legacy IEEE 802.11 Wireless Networks

802.11 (Wi-Fi)

The de facto standard for wireless networking is the 802.11 protocol, which includes Wi-Fi—the wireless standard based on 802.11b, 802.11g, and 802.11n protocols. 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, 3rd Edition is the perfect place to start. This thoroughly updated edition covers everything you ’ ll need to know about wireless technology. Designed with system administrators and serious home users in mind, this book is a no-nonsense guide for setting up 802.11 on Windows and Linux.

The purpose of this document is to provide guidance to organizations in securing their legacy IEEE 802.11 wireless local area networks (WLAN) that cannot use IEEE 802.11i. Details on securing WLANs capable of IEEE 802.11i can be found in NIST Special Publication (SP) 800-97. Recommendations for securely using external WLANs, such as public wireless access points, are outside the scope of this document.

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.

"Performing a wireless LAN (WLAN) site survey before installing a wireless network is the key to any successful WLAN deployment. Yet each location and company have unique needs that must be taken into account. 802.11 Wireless Network Site Surveying and Installation helps you understand the challenges associated with any site survey, including multipath mitigation, reflection, absorption, and radio wave interference, plus the added complexity of user and application demands. This book helps you identify obstacles to a successful deployment and guides your equipment decisions to ensure that your WLAN reaches its maximum potential."--BOOK JACKET.

The Definitive Guide

802.11 Security

Real 802.11 Security

Next Generation Wireless LANs

Networking Handbook

Implementing 802.11, 802.16, and 802.20 Wireless Networks

A handy resource for network engineers and administrators working with Cisco wireless technologies covers the fundamentals of designing, deploying, managing, optimizing, and troubleshooting a wireless network, furnishing easy-to-understand explanations and guidelines, description and analysis of Cisco wireless LAN devices, configuration essentials, and tuning and performance management. Original. (Intermediate)

Get in-depth technical guidance for deploying a security-enhanced wireless network for your corporate, public, or small business network—direct from the Microsoft Windows Networking and Communications team. This essential reference details the latest IEEE 802.11 and related technologies for public and private wireless LANs, including the new Wi-Fi Protected Access (WPA) standard. You'll learn how to design and deploy an authentication infrastructure—including how to configure clients, Internet Authentication Service (IAS) servers, Active Directory directory service users and groups, certificate services, wireless access points, and other components—using best practices and real-world troubleshooting tactics from the extensive wireless LAN deployment at Microsoft. Get the technical drill-down you need to: Configure wireless client support for Windows XP, Windows Server 2003, and Windows 2000 Build the authentication infrastructure—including IAS RADIUS servers and proxies, Active Directory users and groups, and a public key infrastructure (PKI) Determine the placement of wireless access points Configure a Windows PKI to issue certificates for authentication of wireless access Use the EAP-TLS or PEAP-MS-CHAP v2 authentication protocol to help maximize security for a wireless intranet Design wireless intranets for business partners, cross-forest authentication, or large-scale deployment Help mitigate network attacks by using the new Temporal Key Integrity Protocol (TKIP) and Michael features of WPA Troubleshoot Windows wireless clients, wireless access points, and the authentication infrastructure To learn about the changes in wireless standards and wireless support in Windows that have occurred since the publication of this book, download Updates to Deploying Secure 802.11 Wireless Networks with Microsoft Windows, a white paper by author Joseph Davies.

This exciting and comprehensive overview describes the underlying principles, implementation details, and key enhancing features of the new IEEE 802.11n standard, which has been created to significantly improve network throughput. A detailed discussion of important strength and reliability enhancing features is given in addition to a clear summary of any issues. Advanced topics are also covered. With numerous examples and simulation results included to highlight the benefits of the new features, this is an ideal reference for designers of Wireless Local Area Network (LAN) equipment, and network managers whose systems adopt the new standard. It is also a useful distillation of 802.11n technology for graduate students and researchers in the field of wireless communication.

The purpose of this document is to provide guidance toorganizations in securing their legacy Institute of Electrical and Electronics Engineers (IEEE) 802.11 wireless local area networks (WLAN) that cannot use IEEE 802.11i. The document provides an overview of legacy IEEE 802.11WLAN standards, components, and architectural models. It discusses the basics of WLAN security and examines the security capabilities provided by legacy IEEE 802.11 standards. The document also discusses threats andvulnerabilities involving legacy IEEE 802.11 WLANs, explains common countermeasures, and makes recommendations for their use.

Networks Untethered with 802. 11 Wireless Technology

Deploying Secure 802.11 Wireless Networks with Microsoft Windows

WLAN Standards: IEEE 802.11 Bgn, 802.11n, 802.11ac and 802.11ax

802.11 Wireless Networks

CompTIA A+ Rapid Review (Exam 220-801 and Exam 220-802)

Discusses the fundamentals of wireless security and of the popular wireless LAN protocol 802.11, covering topics including station security configurations, network weaknesses, access points, and client security.

The first generation 802.11 wireless market, once struggling to expand, has spread from largely vertical applications such as healthcare, point of sale, and inventory management to become much more broad as a general networking technology being deployed in offices, schools, hotel guest rooms, airport departure areas, airplane cabins, entertainment venues, coffee shops, restaurants, and homes. This has led to the tremendous growth of new sources of IEEE 802.11 devices. IEEE 802.11 equipment is now moving into its second stage, where the wireless LAN is being treated as a large wireless communication system. As a system, there is more to consider than simply the communication over the air between a single access point and the associated mobile devices. This has lead to innovative changes in the equipment that makes up a wireless LAN. The IEEE 802.11 Handbook: A Designer’s Companion, Second Edition is for the system network architects, hardware engineers and software engineers at the heart of this second stage in the evolution of 802.11 wireless LANs and for those designers that will take 802.11 to the next stage.

Wireless has finally come of age. With a significant jump in throughput over previous standards, 802.11n is the first wireless technology that doesn’t trade speed for mobility, and users have stormed onto wireless networks with a passion. In this concise guide, Matthew Gast—chair of the IEEE group that produced revision 802.11-2012—shows you why wireless has become the default method of connecting to a network, and provides technical details you need to plan, design, and deploy 802.11n today. Building a network for the multitude of new devices is now a strategic decision for network engineers everywhere. This book gives you an in-depth look at key parts of 802.11n, and shows you how to achieve an Ethernet-free wireless office. Learn how MIMO’s multiple data streams greatly increase wireless speed Discover how 802.11n modifications improve MAC efficiency Examine advanced PHY features such as beanforming and space-time code block Use advanced MAC features to maintain interoperability with older devices Plan an 802.11n network by determining traffic demand, key applications, power requirements, and security Choose the architecture, select hardware, and plan coverage to design and build your network

'The WiFi Networking Book: WLAN Standards: IEEE 802.11 bgn, 802.11n, 802.11ac and 802.11ax' starts from the ground up for a new user and does a gradual progression into the technical details around IEEE 802.11 Wireless Lan communications standard. The book details the 'legacy' 802.11 stack (a/b/g) and also goes into the latest wave of 802.11 standards - 802.11n, ac and ax. Introduction A wireless LAN (WLAN) is a data transmission system designed to provide location-independent network access between computing devices by using radio waves rather than a cable infrastructure . In the corporate enterprise, wireless LANs are usually implemented as the final link between the existing wired network and a group of client computers, giving these users wireless access to the full resources and services of the corporate network across a building or campus setting. The widespread acceptance of WLANs depends on industry standardization to ensure product compatibility and reliability among the various manufacturers. The 802.11 specification as a standard for wireless LANS was ratified by the Institute of Electrical and Electronics Engineers (IEEE) in the year 1997. This version of 802.11 provides for 1 Mbps and 2 Mbps data rates and a set of fundamental signaling methods and other services. Like all IEEE 802 standards, the 802.11 standards focus on the bottom two levels the ISO model, the physical layer and link layer. Any LAN application, network operating system, protocol, including TCP/IP and Novell NetWare, will run on an 802.11-compliant WLAN as easily as they run over Ethernet. What is inside Overview on Wireless Technologies, Usage Scenarios and related Taxonomy Wireless LAN and 802.11 WiFi: Architecture, 802.11 Physical Layer, 802.11 Data Link Layer, 802.11 Security 802.11 Standards: 802.11b, 802.11a, 802.11g, 802.11n MIMO, 802.11ac - Wave 1 and Wave 2, 802.11ax WiMax Networks: Forum, WiMax Protocol, WiMax Architecture

A Study of IEEE 802.11, 802.15, 802.16

802.11n: A Survival Guide

802.11 Wireless Networking Resource Guide

Cisco 802.11 Wireless Networking Quick Reference

802.11ac: A Survival Guide

Guide to Securing Legacy IEEE 802. 11 Wireless Networks [NIST SP (800-48 Revision 1)]

In recent years, IEEE 802.11 Wireless LAN (WLAN) has emerged as a prevailing technology for the broadband wireless networking. Along with many emerging applications and services over WLANs, the demands for faster and higher-capacity WLANs have been growing fast. However, MAC layer restrains the performance improvement due to its different overhead. We proposed an efficient MAC scheme 'Frame Aggregation Method' that would mitigate the overhead inefficiency. The principle of 'Frame Aggregation Method' is to aggregate as many as possible packets from the upper layer into large frames. Thus, the frames will be very large as long as there are enough packets to be aggregated. To support various functionalities provided by 'Frame Aggregation Method', new MAC frame formats and the corresponding dynamic logic such as queuing mechanisms are designed. The main contribution of this project is the exact calculation of the theoretical maximum throughput for a variety of IEEE 802.11 technologies. This formula is important to researchers as well as system designers. It is a strict barrier that cannot be overcome by any means while remaining standard-compliant.

This unique and practical text introduces the principles of WLANs based upon the IEEE 802.11 standards, demonstrating how to configure equipment in order to implement various network solutions. The text is supported by examples and detailed instructions.

Assess your readiness for CompTIA A+ Exams 220-801 and 220-802—and quickly identify where you need to focus and practice. This practical, streamlined guide walks you through each exam objective, providing "need to know" checklists, review questions, tips, and links to further study—all designed to help bolster your preparation. Reinforce your exam prep with a Rapid Review of these objectives: Exam 220-801: PC Hardware Networking Laptops Printers Operational Procedures Exam 220-802: Operating Systems Security Mobile Devices Troubleshooting This book is an ideal complement to the in-depth training of the Microsoft Press Training Kit and other exam-prep resources for CompTIA A+ Exams 220-801 and 220-802.

This book describes new approaches to wireless security enabled by the recent development of new core technologies for Wi-Fi/802.11. It shows how the new approaches work and how they should be applied for maximum effect. For system administrators, product designers, or advanced home users.

Secure Roaming in 802.11 Networks

A Practical Guide to Implementing 802. 11n and 802. 11ac Wireless Networks for Enterprise-Based Applications

Implementing 802.11 with Microcontrollers: Wireless Networking for Embedded Systems Designers

802.11 Wireless Networks: The Definitive Guide: Enabling Mobility with Wi-Fi Networks

Wi-Fi Handbook

Designing and Deploying 802. 11 Wireless Networks

Gain a practical understanding of the underlying concepts of the 802.11n standard and the methodologies for completing a successful wireless network installation Practical, start-to-finish guidance for successful deployment of 802.11n wireless LANs With the ratification of the 802.11n wireless LAN standard, thousands of companies are moving rapidly toward implementation. However, 802.11n is very different from legacy 802.11a, 802.11b, and 802.11g wireless standards, and successful deployment requires new knowledge and techniques. In this book, leading wireless expert Jim Geier systematically presents all the information and guidance that network architects, engineers, administrators, and managers need to maximize the performance and business value of new 802.11n networks. Drawing on extensive experience with real-world 802.11n deployments, Geier guides you through the entire project lifecycle: planning, design, installation, testing, monitoring, and support. Each phase of wireless LAN deployment is organized into clearly defined steps, and multiple case studies and hands-on exercises show how to apply each technique. You’ll find practical guidance for deploying in enterprises without existing wireless infrastructure, as well as migrating from legacy 802.11a, 802.11b, or 802.11g networks. For convenient reference, Geier also provides an extensive, up-to-date wireless networking glossary. Understanding 802.11n MAC, physical layer, and related standards Designing 802.11n wireless networks for diverse scenarios: considering architecture, range, performance, roaming, and RF issues Migrating from 802.11a, 802.11b, and 802.11g wireless networks Choosing the right tools and equipment, and using them effectively Planning effectively: scoping projects; creating work breakdown structures; organizing teams, schedules, and budgets; defining requirements, and more Securing WLANs via encryption, authentication, rogue access point detection, RF shielding, and polices Performing site surveys and identifying optimum access point locations Installing and configuring wireless LANs: planning, staging, deployment, documentation, and more Systematic testing to improve signal coverage, performance, and security Managing wireless LANs: help desk support, network monitoring, maintenance, engineering, configuration management, security, tools, and more Troubleshooting 802.11n networks: identifying issues with connectivity, performance, and more

IP in Wireless Networksis the first network professional's guide to integrating IP in 2G, 2.5G, and 3G wireless networks. It delivers systematic, expert implementation guidance for every leading wireless network, including 802.11, Bluetooth, GSM/GPRS, W-CDMA, cdma2000, and i-mode. In-depth coverage encompasses architecture, technical challenges, deployment and operation strategies, mobility models, routing, and applications. The book presents future evolution of the Wireless IP Networks with emerging applications and the role of standardization bodies.

This is not another book about installing a home or “hobby Wi-Fi system. Instead, this book shows you how to plan, design, install, and operate WLAN systems in businesses, institutions, and public settings such as libraries and hotels. In other words, this book is packed with serious information for serious professionals responsible for implementing robust, high performance WLANs covering areas as small as a coffee shop or as large as entire communities. Ron Olexa provides a solid foundation in RF/wireless theory as it applies to WLANs. His detailed, thorough coverage of propagation at GHz frequencies helps you understand the mysteries of WLAN coverage (such as how it can change from season to season due to foliage). You’ll also learn about antenna radiation patterns and gain so you can design you WLAN to have the coverage you need without causing interference to (or suffering interference from) other WLANs. Covers the widely used 802.11 family, as well as the new 802.16 and 802.20 standards Focuses on big commercial network implementations, such as in public buildings and businesses Author has over 25 years of experience with cellular systems and wireless networks

Make informed decisions about planning and installing 802.11 'Wi-Fi' wireless networks. This book helps you tackle the challenge, whether installing Wi-Fi within an existing corporate network or setting up a wireless network from scratch in any business

802.11 Wireless LAN Fundamentals

IP in Wireless Networks

Designing and Deploying 802.11 Wireless Networks

The WiFi Networking Book

Building 802.11b Wireless Networks

A Designer's Companion

If you've been searching for a way to get up to speed on IEEE 802.11n and 802.11ac WLAN standards without having to wade through the entire specification, then look no further. This comprehensive overview describes the underlying principles, implementation details and key enhancing features of 802.11n and 802.11ac. For many of these features the authors outline the motivation and history behind their adoption into the standard. A detailed discussion of key throughput, robustness, and reliability enhancing features (such as MIMO, multi-user MIMO, 40/80/160 MHz channels, transmit beamforming and packet aggregation) is given, plus clear summaries of issues surrounding legacy interoperability and coexistence. Now updated and significantly revised, this 2nd edition contains new material on 802.11ac throughput, including revised chapters on MAC and interoperability,

plus new chapters on 802.11ac PHY and multi-user MIMO. An ideal reference for designers of WLAN equipment, network managers, and researchers in the field of wireless communications.
Aims to help you break free with the wireless networking capabilities of 802.11. This guide provides hardware advice, radio frequency fundamentals, performance tips, architecture requirements, and more. It also aims to provide clarity on connectivity issues for laptop computers, personal digital assistants (PDAs), and peripherals.
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
Wireless Communications Standards: A Study of IEEE 802.11, 802.15, and 802.16 is one of the latest books in the IEEE Standards Wireless Networks Series, and it is the only book of its kind that covers all of the current 802 wireless standards! Presented in a clear style, by Dr. Todor Cooklev of San Francisco State University, the book is accessible to a wide audience. It is aimed at engineers, computer scientists, managers, and marketing specialists. It can also be used as the primary textbook for a one-semester advanced undergraduate/graduate level course on wireless communication standards, or as a complementary textbook for a course in wireless communications.
Fundamental Concepts on Wireless LAN and the IEEE 802. 11 Protocol
Wi-Fi Protected Access and 802.11i
Designing and Deploying 802.11n Wireless Networks
802.11 Wireless Network Site Surveying and Installation
Wireline and Wireless - Alternatives for Internet Services
Planning, Troubleshooting, and Operations

Written for network engineers by highly experienced wireless and Ethernet experts, this title is one of the first to provide the know-how for enterprise implementations.
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.
Designing and Deploying 802.11 Wireless Networks Second Edition A Practical Guide to Implementing 802.11n and 802.11ac Wireless Networks For Enterprise-Based Applications Plan, deploy, and operate high-performance 802.11ac and 802.11n wireless networks The new 802.11ac standard enables WLANs to deliver significantly higher performance. Network equipment manufacturers have refocused on 802.11ac- and 802.11n-compliant solutions, rapidly moving older versions of 802.11 toward "legacy" status. Now, there's a complete guide to planning, designing, installing, testing, and supporting 802.11ac and 802.11n wireless networks in any environment, for virtually any application. Jim Geier offers practical methods, tips, and recommendations that draw on his decades of experience deploying wireless solutions and shaping wireless standards. He carefully introduces 802.11ac's fundamentally different design, site survey, implementation, and network configuration techniques, helping you maximize performance and avoid pitfalls. Geier organizes each phase of WLAN deployment into clearly defined steps, making the entire planning and deployment process easy to understand and execute. He illuminates key concepts and methods through realistic case studies based on current Cisco products, while offering tips and techniques you can use with any vendor's equipment. To build your skills with key tasks, you'll find several hands-on exercises relying on free or inexpensive tools. Whether you're deploying an entirely new wireless network or migrating from older equipment, this guide contains all the expert knowledge you'll need to succeed. Jim Geier has 30 years of experience planning, designing, analyzing and implementing communications, wireless, and mobile systems. Geier is founder and Principal Consultant of Wireless-Nets, Ltd., providing wireless analysis and design services to product manufacturers. He is also president, CEO, and co-founder of Health Grade Networks, providing wireless network solutions to hospitals, airports, and manufacturing facilities. His books include the first edition of Designing and Deploying 802.11n Wireless Networks (Cisco Press); as well as Implementing 802.1X Security Solutions and Wireless Networking Handbook. Geier has been active in the IEEE 802.11 Working Group and Wi-Fi Alliance; has chaired the IEEE Computer Society (Dayton Section) and various conferences; and served as expert witness in patent litigation related to wireless and cell ...
Wireless networking is poised to have a massive impact on communications, and the 802.11 standard is to wireless networking what Ethernet is to wired networking. There are already over 50 million devices using the dominant IEEE 802.11 (essentially wireless Ethernet) standard, with astronomical growth predicted over the next 10 years. New applications are emerging every day, with wireless capability being embedded in everything from electric meters to hospital patient tracking systems to security devices. This practical reference guides readers through the wireless technology forest, giving them the knowledge, the hardware and the software necessary to design a wireless embedded device rapidly, inexpensively, and effectively. Using off-the-shelf microcontrollers from Microchip and Atmel, the author provides step-by-step instructions for designing the hardware and firmware for a fully operational wireless networking device. The book gives a thorough introduction to 802.11 technology and puts it into perspective against the other wireless standard options. Just enough theory and mathematics is provided to give the depth of understanding needed for practical design work. The book thoroughly covers: * Laptop wireless Ethernet card introduction and theory *Introduction to CompactFlash-to-microcontroller interfacing * Implementing the laptop wireless Ethernet card in an embedded environment Covers the hottest new embedded market area- wireless networking Shows designers how to save money and time by using microcontrollers in their embedded wireless designs instead of expensive, complex prefab boards
Wireless Communication Standards
802.11n and 802.11ac
IEEE 802.11 Handbook
Going Wi-Fi
Controller-Based Wireless LAN Fundamentals
Ieee 802 11 Wireless Lan

Written by experts in the field, this book provides an overview of all forms of broadband subscriber access networks and technology, including fiber optics, DSL for phone lines, DOCSIS for coax, power line carrier, and wireless. Each technology is described in depth, with a discussion of key concepts, historical development, and industry standards. The book contains comprehensive coverage of all broadband access technologies, with a section each devoted to fiber-based technologies, non-fiber wired technologies, and wireless technologies. The four co-authors’ breadth of knowledge is featured in the chapters comparing the relative strengths, weaknesses, and prognosis for the competing technologies. Key Features: Covers the physical and medium access layers (OSI Layer 1 and 2), with emphasis on access transmission technology Compares and contrasts all recent and emerging wired and wireless standards for broadband access in a single reference Illustrates the technology that is currently being deployed by network providers, and also the technology that has recently been or will soon be standardized for deployment in the coming years, including vectoring, wavelength division multiple access, CDMA, OFDMA, and MIMO Contains detailed discussion on the following standards: 10G-EPON, G-PON, XG-PON, VDSL2, DOCSIS 3.0, DOCSIS Protocol over EPON, power line carrier, IEEE 802.11 WLAN/WiFi, UMTS/HSPA, LTE, and LTE-Advanced
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 book explores the fundamental concepts, basic theory, and key principles of 802.11 networks with roaming capabilities. Today, we increasingly expect to find public Wide Local Area Network (WLAN) 802.11 access in our airports, public spaces, and hotels, and we want to maintain our connections when we're mobile and using 802.11 WLANs. However, 802.11 was not originally designed with roaming capabilities and can't, in its “pure? form, support seamless roaming between different hotspots and other 802.11 access points. This book details the theory behind various 802.11 extensions to permit roaming and describes how these extensions can be successfully implemented in 802.11 WLANs. Coverage of User Authentication in 802.11 is reviewed as is roaming between 802.11 and other wireless technologies. Wireless technologies and application programming interfaces are given their due with generous coverage as well. * Offers a comprehensive treatise on Wi-Fi 802.11 roaming by comparing/contrasting it to cellular roaming theory and techniques * Emerges as a "one stop" resource for design engineers charged with fulfilling the market need for seamless 802.11 device roaming capabilities * Builds upon the knowledge base of a professional audience without delving into long discussions of theory long since mastered
A Practical Guide to Implementing 802.11n and 802.11ac Wireless Networks, Second Edition
802.11 Wireless Networks: The Definitive Guide
Wi-Fi at Gigabit and Beyond
Wi-Fi Above 100 Mbps
An end-to-end reference guide to design, deploy, manage, and secure 802.11 wireless networks