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Signaling System No. 7 (SS7/C7)Understanding Digital Signal ProcessingiOS Hacker's HandbookGenetic Algorithms in Java BasicsSoftware RadioHacking Exposed WirelessKivy – Interactive Applications and Games in PythonWireless Sensor NetworksLabyrinth13'Advances in Networks, Security and Communications, Vol. 1The Hardware HackerSoftware Defined RadioSoftware-Defined Radio for EngineersGetting Started with OpenBTSDiff in JuneAdvances in Bistatic Radar11th International Conference on Cyber Warfare and SecurityCognitive Radio-Oriented Wireless NetworksMobile Phone Security and ForensicsInside Radio: An Attack and Defense GuideData-Driven Modeling of Cyber-Physical Systems using Side-Channel AnalysisEcotrain Green Career GuideComputer Network SecurityICT Systems Security and Privacy ProtectionIndoor Geolocation Science and TechnologyHow to Cheat at VoIP SecurityConcepts In Submarine DesignGray Hat Hacking: The Ethical Hacker's Handbook, Fifth EditionThe Hobbyist's Guide to the RTL-SDRIoT Penetration Testing CookbookAdvances in Signal Processing and Intelligent Recognition SystemsTV White Space Spectrum TechnologiesApplied Cyber Security and the Smart GridDigital Signal Processing in Communications SystemsThe Lean StartupSolderSmokeWorld radio TV handbookSoftware Defined Radio Using MATLAB & Simulink and the RTL-SDRHardware HackingProgress in Intelligent Computing Techniques: Theory, Practice,

and Applications

Signaling System No. 7 (SS7/C7)

An engineer's introduction to concepts, algorithms, and advancements in Digital Signal Processing. This lucidly written resource makes extensive use of real-world examples as it covers all the important design and engineering references.

Understanding Digital Signal Processing

Precise and accurate localization is one of the fundamental scientific and engineering technologies needed for the applications enabling the emergence of the Smart World and the Internet of Things (IoT). Popularity of localization technology began when the GPS became open for commercial applications in early 1990's. Since most commercial localization applications are for indoors and GPS does not work indoors, the discovery of opportunistic indoor geolocation technologies began in mid-1990's. Because of complexity and diversity of science and technology involved in indoor Geolocation, this area has emerged as its own discipline over the past two decades. At the time of this writing, received signal strength (RSS) based Wi-Fi localization is dominating the commercial market complementing cell tower localization and GPS technologies using the time of arrival (TOA) technology. Wi-Fi localization technology takes advantage of the random deployment of Wi-Fi devices worldwide to support indoor and urban area

localization for hundreds of thousands of applications on smart devices. Public safety and military applications demand more precise localization for first responders and military applications deploy specialized infrastructure for more precise indoor geolocation. To enhance the performance both industries are examining hybrid localization techniques. Hybrid algorithms use a variety of sensors to measure the speed and direction of movement and integrate them with the absolute radio frequency localization. Indoor Geolocation Science and Technology is a multidisciplinary book that presents the fundamentals of opportunistic localization and navigation science and technology used in different platforms such as: smart devices, unmanned ground and flying vehicles, and existing cars operating as a part of intelligent transportation systems. Material presented in the book are beneficial for the Electrical and Computer Engineering, Computer Science, Robotics Engineering, Biomedical Engineering or other disciplines who are interested in integration of navigation into their multi-disciplinary projects. The book provides examples with supporting MATLAB codes and hands-on projects throughout to improve the ability of the readers to understand and implement variety of algorithms. It can be used for both academic education, as a textbook with problem sets and projects, and the industrial training, as a practical reference book for professionals involved in design and performance evaluation. The author of this book has pioneering research experience and industrial exposure in design and performance evaluation of indoor geolocation based on empirical measurement and modeling of the behavior of the

radio propagation in indoor areas and inside the human body. The presentation of the material is based on examples of research and development that his students have performed in his laboratory, his teaching experiences as a professor, and his experiences as a technical consultant to successful startup companies.

iOS Hacker's Handbook

A comprehensive guide to the RTL2832U RTL-SDR software defined radio by the authors of the RTL-SDR Blog. The RTL-SDR is a super cheap software defined radio based on DVB-T TV dongles that can be found for under $20. This book is about tips and tutorials that show you how to get the most out of your RTL-SDR dongle. Most projects described in this book are also compatible with other wideband SDRs such as the HackRF, Airspy and SDRPlay RSP. What's in the book? Learn how to set up your RTL-SDR with various free software defined radio programs such as SDR#, HDSDR, SDR-Radio and more. Learn all the little tricks and oddities that the dongle has. A whole chapter dedicated to improving the RTL-SDR's performance. Dozens of tutorials for fun RTL-SDR based projects such as ADS-B aircraft radar, AIS boat radar, ACARS decoding, receiving NOAA and Meteor-M2 weather satellite images, listening to and following trunked radios, decoding digital voice P25/DMR signals, decoding weather balloon telemetry, receiving DAB radio, analysing GSM and listening to TETRA signals, decoding pagers, receiving various HF signals such as ham radio modes, weatherfax and DRM radio,

decoding digital D-STAR voice, an introduction to GNU Radio, decoding RDS, decoding APRS, measuring filters and SWR with low cost equipment, receiving Inmarsat, Outernet and Iridium L-Band satellite data, and many many more projects! Guide to antennas, cables and adapters. Third Edition Released 20 December 2016.

Genetic Algorithms in Java Basics

This book constitutes the refereed proceedings of the 7th International Conference on Mathematical Methods, Models, and Architectures for Computer Network Security, MMM-ACNS 2017, held in Warsaw, Poland, in August 2017. The 12 revised full papers, 13 revised short presentations, and 3 invited papers were carefully reviewed and selected from a total of 40 submissions. The papers are organized in topical sections on Critical Infrastructure Protection and Visualization; Security and Resilience of Network Systems; Adaptive Security; Anti-malware Techniques: Detection, Analysis, Prevention; Security of Emerging Technologies; Applied Cryptography; New Ideas and Paradigms for Security.

Software Radio

"Diff in June" tells a day in the life of a personal computer, written by itself in its own language, as a sort of private log or intimate diary focused on every single change to the data on its hard disk. Using a small custom script, for the entire month of June 2011 Martin Howse registered each chunk of data which

had changed within the file system from the previous day's image. Excluding binary data, one day's sedimentation has been published in this book, a novel of data archaeology in progress tracking the overt and the covert, merging the legal and illegal, personal and administrative, source code and frozen systematics. Martin Howse (London 1969 - www.1010.co.uk) is a programmer, writer, performer and explorer. He is a co-founder of micro-research, a mobile platform for psychogeophysical research with ongoing projects in Berlin, London, Suffolk and Peenemuende. Over the last ten years he has workshopped, performed, lectured and exhibited worldwide.

Hacking Exposed Wireless

This book provides a new perspective on modeling cyber-physical systems (CPS), using a data-driven approach. The authors cover the use of state-of-the-art machine learning and artificial intelligence algorithms for modeling various aspect of the CPS. This book provides insight on how a data-driven modeling approach can be utilized to take advantage of the relation between the cyber and the physical domain of the CPS to aid the first-principle approach in capturing the stochastic phenomena affecting the CPS. The authors provide practical use cases of the data-driven modeling approach for securing the CPS, presenting novel attack models, building and maintaining the digital twin of the physical system. The book also presents novel, data-driven algorithms to handle non- Euclidean data. In summary, this book

presents a novel perspective for modeling the CPS.

Kivy – Interactive Applications and Games in Python

The Perfect Reference for the Multitasked SysAdmin This is the perfect guide if VoIP engineering is not your specialty. It is the perfect introduction to VoIP security, covering exploit tools and how they can be used against VoIP (Voice over IP) systems. It gives the basics of attack methodologies used against the SIP and H.323 protocols as well as VoIP network infrastructure. * VoIP Isn't Just Another Data Protocol IP telephony uses the Internet architecture, similar to any other data application. However, from a security administrator's point of view, VoIP is different. Understand why. * What Functionality Is Gained, Degraded, or Enhanced on a VoIP Network? Find out the issues associated with quality of service, emergency 911 service, and the major benefits of VoIP. * The Security Considerations of Voice Messaging Learn about the types of security attacks you need to protect against within your voice messaging system. * Understand the VoIP Communication Architectures Understand what PSTN is and what it does as well as the H.323 protocol specification, and SIP Functions and features. * The Support Protocols of VoIP Environments Learn the services, features, and security implications of DNS, TFTP, HTTP, SNMP, DHCP, RSVP, SDP, and SKINNY. * Securing the Whole VoIP Infrastructure Learn about Denial-of-Service attacks, VoIP service disruption, call hijacking and interception, H.323-specific attacks, and

SIP-specific attacks. * Authorized Access Begins with Authentication Learn the methods of verifying both the user identity and the device identity in order to secure a VoIP network. * Understand Skype Security Skype does not log a history like other VoIP solutions; understand the implications of conducting business over a Skype connection. * Get the Basics of a VoIP Security Policy Use a sample VoIP Security Policy to understand the components of a complete policy. Provides system administrators with hundreds of tips, tricks, and scripts to complete administration tasks more quickly and efficiently Short on theory, history, and technical data that ultimately is not helpful in performing their jobs Avoid the time drains associated with securing VoIP

Wireless Sensor Networks

This Edited Volume gathers a selection of refereed and revised papers originally presented at the Third International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS'17), held on September 13–16, 2017 in Manipal, India. The papers offer stimulating insights into biometrics, digital watermarking, recognition systems, image and video processing, signal and speech processing, pattern recognition, machine learning and knowledge-based systems. Taken together, they offer a valuable resource for all researchers and scientists engaged in the various fields of signal processing and related areas.

Labyrinth13

Discover all the security risks and exploits that can threateniOS-based mobile devices iOS is Apple's mobile operating system for the iPhone and iPad.With the introduction of iOS5, many security issues have come tolight. This book explains and discusses them all. The award-winningauthor team, experts in Mac and iOS security, examines thevulnerabilities and the internals of iOS to show how attacks can bemitigated. The book explains how the operating system works, itsoverall security architecture, and the security risks associatedwith it, as well as exploits, rootkits, and other payloadsdeveloped for it. Covers iOS security architecture, vulnerability hunting,exploit writing, and how iOS jailbreaks work Explores iOS enterprise and encryption, code signing and memoryprotection, sandboxing, iPhone fuzzing, exploitation, ROP payloads,and baseband attacks Also examines kernel debugging and exploitation Companion website includes source code and tools to facilitateyour efforts iOS Hacker's Handbook arms you with the tools needed toidentify, understand, and foil iOS attacks.

'Advances in Networks, Security and Communications, Vol. 1

This guide to radio engineering covers every technique DSP and RF engineers need to build software radios for a wide variety of wireless systems using DSP techniques. Included are practical guidelines for choosing DSP microprocessors, and systematic, object-oriented software design techniques.

The Hardware Hacker

Advances in Bistatic Radar updates and extends bistatic and multistatic radar developments since the publication of Willis' Bistatic Radar in 1991. New and recently declassified military applications are documented, civil applications are detailed including commercial and scientific systems and leading radar engineers provide expertise to each of these applications. Advances in Bistatic Radar consists of two major sections: Bistatic/Multistatic Radar Systems and Bistatic Clutter and Signal Processing. Starting with a history update, the first section documents the early and now declassified military AN/FPS-23 Fluttar DEW-Line Gap-filler, and high frequency (HF) bistatic radars developed for missile attack warning. It then documents the recently developed passive bistatic and multistatic radars exploiting commercial broadcast transmitters for military and civilian air surveillance. Next, the section documents scientific bistatic radar systems for planetary exploration, which have exploited data link transmitters over the last forty years; ionospheric measurements, again exploiting commercial broadcast transmitters; and 3-D wind field measurements using a bistatic receiver hitchhiking off doppler weather radars. This last application has been commercialized. The second section starts by documenting the full, unclassified bistatic clutter scattering coefficient data base, along with the theory and analysis supporting its development. The section then details two major clutter-related developments, spotlight bistatic synthetic aperture radar (SAR), which can now

generate high resolution images using bistatic autofocus and related techniques; and adaptive moving target indication (MTI), which allows cancellation of nonstationary clutter generated by moving (i.e. airborne) platforms through the use of bistatic space-time adaptive processing (STAP).

Software Defined Radio

The 11thInternational Conference on Cyber Warfare and Security (ICCWS 2016) is being held at Boston University, Boston, USA on the 17-18th March 2016. The Conference Chair is Dr Tanya Zlateva and the Programme Chair is Professor Virginia Greiman, both from Boston University. ICCWS is a recognised Cyber Security event on the International research conferences calendar and provides a valuable platform for individuals to present their research findings, display their work in progress and discuss conceptual and empirical advances in the area of Cyber Warfare and Cyber Security. It provides an important opportunity for researchers and managers to come together with peers to share their experiences of using the varied and expanding range of Cyberwar and Cyber Security research available to them. The keynote speakers for the conference are Daryl Haegley from the Department of Defense (DoD), who will address the topic Control Systems NetworksWhat's in Your Building? and Neal Ziring from the National Security Agency who will be providing some insight to the issue of Is Security Achievable? A Practical Perspective. ICCWS received 125 abstract submissions this year. After the double

blind, peer review process there are 43 Academic Research Papers 8 PhD papers Research papers, 7 Masters and 1 work-in-progress papers published in these Conference Proceedings. These papers represent work from around the world, including: Australia, Canada, China, Czech Republic, District of Columbia, Finland, France, Israel, Japan, Lebanon, Netherlands, Pakistan, Russian Federation, Saudi Arabia, South Africa, Turkey, United Arab Emirates, UK, USA.

Software-Defined Radio for Engineers

A complete, practical guide to the world's most popular signaling system, including SIGTRAN, GSM-MAP, and Intelligent Networks. Provides in-depth coverage of the SS7 protocols, including implementation details Covers SS7 over IP (SIGTRAN) using real-world examples Covers SS7/C7 from both a North American and European perspective, providing a broad international understanding of the technology and associated standards Explains mobile wireless concepts and signaling, including mobile application part (MAP) Provides a thorough explanation of the Intelligent Network (IN) and associated protocols (INAP/AIN) Signaling System No. 7 (SS7) is a signaling network and protocol that is used globally to bring telecommunications networks, both fixed-line and cellular, to life. SS7 has numerous applications and is at the very heart of telecommunications. Setting up phone calls, providing cellular roaming and messaging, and supplying converged voice and data services are only a few of the ways that SS7 is used in

the communications network. SS7 also provides the point of interconnection between converging voice and data networks. This transition, which affects everyone who works with the data network, has bolstered the need for practical and applied information on SS7. In short, anyone who is interested in telecommunications should have a solid understanding of SS7. Signaling System No. 7 (SS7/C7): Protocol, Architecture, and Services will help you understand SS7 from several perspectives. It examines the framework and architecture of SS7, as well as how it is used to provide today's telecommunications services. It also examines each level of the SS7 protocol-all the way down to the bit level of messages. In addition, the SIGTRAN standards are discussed in detail, showing the migration from SS7 to IP and explaining how SS7 information is transported over IP.

Getting Started with OpenBTS

Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio

frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.

Diff in June

Ecotrain Green Career Guide Ecotrain Media Group presents the most comprehensive green career and business guide in the world. Co-founder provides 17 years of personal interest in ?sustainability,? and green research into a green career resource with over 125 pages of useful information, directories, and green industry contacts. Our guide will save you thousands of hours of personal research, time and money allowing you to spend your time landing that green job, green career, or green project first. Ecotrain Green Career Guide is for Individuals, Educators, Business, and Entrepreneurs. Ecotrain Green Career Guide provides 3 sections vital to your success no matter who, what, when, how, and where you are at in your transition to a GREEN future. Green Industry and Employment Breakdowns pp. 6-65 This

comprehensive section will step you through a non biased approach and summary background to the growing cleantech economy, and five industry sectors: the 1) Green Economy as a whole, 2) Renewable Energy, 3) Green Building

Advances in Bistatic Radar

"If I had this book 10 years ago, the FBI would never have found me!" -- Kevin Mitnick This book has something for everyone---from the beginner hobbyist with no electronics or coding experience to the self-proclaimed "gadget geek." Take an ordinary piece of equipment and turn it into a personal work of art. Build upon an existing idea to create something better. Have fun while voiding your warranty! Some of the hardware hacks in this book include: * Don't toss your iPod away when the battery dies! Don't pay Apple the $99 to replace it! Install a new iPod battery yourself without Apple's "help" * An Apple a day! Modify a standard Apple USB Mouse into a glowing UFO Mouse or build a FireWire terabyte hard drive and custom case * Have you played Atari today? Create an arcade-style Atari 5200 paddle controller for your favorite retro videogames or transform the Atari 2600 joystick into one that can be used by left-handed players * Modern game systems, too! Hack your PlayStation 2 to boot code from the memory card or modify your PlayStation 2 for homebrew game development * Videophiles unite! Design, build, and configure your own Windows- or Linux-based Home Theater PC * Ride the airwaves! Modify a wireless PCMCIA NIC to include an external antenna connector

or load Linux onto your Access Point * Stick it to The Man! Remove the proprietary barcode encoding from your CueCat and turn it into a regular barcode reader * Hack your Palm! Upgrade the available RAM on your Palm m505 from 8MB to 16MB · Includes hacks of today's most popular gaming systems like Xbox and PS/2. · Teaches readers to unlock the full entertainment potential of their desktop PC. · Frees iMac owners to enhance the features they love and get rid of the ones they hate.

11th International Conference on Cyber Warfare and Security

The book focuses on both theory and applications in the broad areas of communication technology, computer science and information security. This two volume book contains the Proceedings of 4th International Conference on Advanced Computing, Networking and Informatics. This book brings together academic scientists, professors, research scholars and students to share and disseminate information on knowledge and scientific research works related to computing, networking, and informatics to discuss the practical challenges encountered and the solutions adopted. The book also promotes translation of basic research into applied investigation and convert applied investigation into practice.

Cognitive Radio-Oriented Wireless Networks

Mobile Phone Security and Forensics

This book discusses the security issues in a wide range of wireless devices and systems, such as RFID, Bluetooth, ZigBee, GSM, LTE, and GPS. It collects the findings of recent research by the UnicornTeam at 360 Technology, and reviews the state-of-the-art literature on wireless security. The book also offers detailed case studies and theoretical treatments – specifically it lists numerous laboratory procedures, results, plots, commands and screenshots from real-world experiments. It is a valuable reference guide for practitioners and researchers who want to learn more about the advanced research findings and use the off-the-shelf tools to explore the wireless world.

Inside Radio: An Attack and Defense Guide

Software defined radio (SDR) is a hot topic in the telecommunications field, with regard to wireless technology. It is one of the most important topics of research in the area of mobile and personal communications. SDR is viewed as the enabler of global roaming and a platform for the introduction of new technologies and services into existing live networks. It therefore gives networks a greater flexibility into mobile communications. It bridges the inter-disciplinary gap in the field as SDR covers two areas of development, namely software development and digital signal processing and the internet. It extends well beyond the simple re-configuration of air interface parameters to cover the whole system from

the network to service creation and application development. Reconfigurability entails the pervasive use of software reconfiguration, empowering upgrades or patching of any element of the network and of the services and applications running on it. It cuts across the types of bearer radio systems (Paging to cellular, wireless local area network to microwave, terrestrial to satellite, personal communications to broadcasting) enable the integration of many of today's disparate systems in the same hardware platform. Also it cuts across generation (second to third to fourth). This volume complements the already published volumes 1 and 2 of the Wiley Series in Software Radio. The book discusses the requirements for reconfigurability and then introduces network architectures and functions for reconfigurable terminals. Finally it deals with reconfiguration in the network. The book also provides a comprehensive view on reconfigurability in three very active research projects as CAST, MOBIVAS and TRUST/SCOUT. Key features include: Presents new research in wireless communications Summarises the results of an extensive research program on software defined radios in Europe Provides a comprehensive view on reconfigurability in three very active research projects as CAST (Configurable radio with Advanced Sodftware Technology), MOBIVAS (Downloadable MOBIle Value Added Services through Software Radio and Switching Integrated Platforms), TRUST (Transparently Re-configurable Ubiquitous Terminal) and SCOUT (Smart User-Centric Communciation Environment).

Data-Driven Modeling of Cyber-Physical

Systems using Side-Channel Analysis

SolderSmoke is the story of a secret, after-hours life in electronics. Bill Meara started out as a normal kid, from a normal American town. But around the age of 12 he got interested in electronics, and he has never been the same. To make matters worse, when he got older he became a diplomat. His work has taken him to Panama, Honduras, El Salvador, the Spanish Basque Country, the Dominican Republic, the Azores islands of Portugal, London, and, most recently, Rome. In almost all of these places his addiction to electronics caused him to seek out like-minded radio fiends, to stay up late into the night working on strange projects, and to build embarrassingly large antennas above innocent foreign neighborhoods. SolderSmoke takes you into the basement workshops and electronics parts stores of these exotic foreign places, and lets you experience the life of an expatriate geek. If you are looking for restaurant or hotel recommendations, look elsewhere. But if you need to know where to get an RF choke re-wound in Santo Domingo, SolderSmoke is the book for you. SolderSmoke is no ordinary memoir. It is a technical memoir. Each chapter contains descriptions of Bill's struggles to understand (really understand) radio-electronic theory. Why does P=IE? Do holes really flow through transistors? What is a radio wave? How does a frequency mixer produce sum and difference frequencies? If these are the kinds of questions that keep you up at night, this book is for you. Finally, SolderSmoke is about brotherhood. International, cross-border brotherhood. Through the SolderSmoke

podcast we have discovered that all around the world, in countries as different as Sudan and Switzerland, there are geeks just like us, guys with essentially the same story, guys who got interested in radio and electronics as teenagers, and who have stuck with it ever since. Our technical addiction gives us something in common, something that transcends national differences. And our electronics gives us the means to communicate. United by a common interest in radio, and drawn closer together by means of the internet, we form an "International Brotherhood of Electronic Wizards."

Ecotrain Green Career Guide

Genetic Algorithms in Java Basics is a brief introduction to solving problems using genetic algorithms, with working projects and solutions written in the Java programming language. This brief book will guide you step-by-step through various implementations of genetic algorithms and some of their common applications, with the aim to give you a practical understanding allowing you to solve your own unique, individual problems. After reading this book you will be comfortable with the language specific issues and concepts involved with genetic algorithms and you'll have everything you need to start building your own. Genetic algorithms are frequently used to solve highly complex real world problems and with this book you too can harness their problem solving capabilities. Understanding how to utilize and implement genetic algorithms is an essential tool in any respected software developers

toolkit. So step into this intriguing topic and learn how you too can improve your software with genetic algorithms, and see real Java code at work which you can develop further for your own projects and research. Guides you through the theory behind genetic algorithms Explains how genetic algorithms can be used for software developers trying to solve a range of problems Provides a step-by-step guide to implementing genetic algorithms in Java

Computer Network Security

Although sophisticated wireless radio technologies make it possible for unlicensed wireless devices to take advantage of un-used broadcast TV spectra, those looking to advance the field have lacked a book that covers cognitive radio in TV white spaces (TVWS). Filling this need, TV White Space Spectrum Technologies: Regulations, Standards and Applications explains how white space technology can be used to enable the additional spectrum access that is so badly needed. Providing a comprehensive overview and analysis of the topics related to TVWS, this forward-looking reference contains contributions from key industry players, standards developers, and researchers from around the world in TV white space, dynamic spectrum access, and cognitive radio fields. It supplies an extensive survey of new technologies, applications, regulations, and open research areas in TVWS. The book is organized in four parts: Regulations and Profiles—Covers regulations, spectrum policies, channelization, and system requirements Standards—Examines TVWS standards

efforts in different standard-developing organizations, with emphasis on the IEEE 802.22 wireless network standard Coexistence—Presents coexistence techniques between all potential TVWS standards, technologies, devices, and service providers, with emphasis on the Federal Communications Commission's (FCC) recent regulations and policies, and IEEE 802.19 coexistence study group efforts Important Aspects—Considers spectrum allocation, use cases, and security issues in the TVWS network This complete reference includes coverage of system requirements, collaborative sensing, spectrum sharing, privacy, and interoperability. Suggesting a number of applications that can be deployed to provide new services to users, including broadband Internet applications, the book highlights potential business opportunities and addresses the deployment challenges that are likely to arise.

ICT Systems Security and Privacy Protection

Labyrinth13 is packed with tales of unsolved murders, bizarre coincidences and strange occult experiments, including: a look at the possible solution to a Da Vinci Code-type occult cryptogram over 100 year old; odd paranormal events, including phantom black dogs, American vampires, a house that dripped blood, and a haunted island; weird hippie cults, LSD murders, mind control, and infamous crimes, including investigations into the Zodiac, Manson, and Son of Sam murders This book also contains detailed endnotes, fully cited resources, and highly readable appendixes --

including interviews with key figures in some of the most unusual events in paranormal and true crime history.

Indoor Geolocation Science and Technology

The 1st volume of new 'Advances in Networks, Security and Communications: Reviews' Book Series contains 15 chapters submitted by 42 contributors from 13 countries. The book is divided into 3 parts: Networks, Security and Communication. The book provides focused coverage of these 3 main technologies. Chapters are written by experts in the field and address the immediate and long-term challenges in the authors' respective areas of expertise. Coverage includes wireless sensor network routing improvement; connectivity recovery, augmentation and routing in wireless Ad Hoc networks; advanced modeling and simulation approach for the sensor networks management; security aspects for mobile agent and cloud computing; various communication aspects and others. This book ensures that readers will stay at the cutting edge of the field and get the right and effective start point and road map for the further researches and developments.

How to Cheat at VoIP Security

Kivy – Interactive Applications and Games in Python Second Edition, will equip you with all the necessary knowledge to create interactive, responsive, and

cross-platform applications and games. This book introduces the Kivy language and the necessary components so you can implement a graphical user interface (GUI) and learn techniques to handle events, detect gestures, and control multi-touch actions. You will learn strategies to animate your applications, and obtain interactive, professional-looking, and responsive results. You will be applying this knowledge throughout the book by developing three applications and tackling their diverse programming challenges.

Concepts In Submarine Design

Cutting-edge techniques for finding and fixing critical security flaws Fortify your network and avert digital catastrophe with proven strategies from a team of security experts. Completely updated and featuring 13 new chapters, Gray Hat Hacking, The Ethical Hacker's Handbook, Fifth Edition explains the enemy's current weapons, skills, and tactics and offers field-tested remedies, case studies, and ready-to-try testing labs. Find out how hackers gain access, overtake network devices, script and inject malicious code, and plunder Web applications and browsers. Android-based exploits, reverse engineering techniques, and cyber law are thoroughly covered in this state-of-the-art resource. And the new topic of exploiting the Internet of things is introduced in this edition. •Build and launch spoofing exploits with Ettercap •Induce error conditions and crash software using fuzzers •Use advanced reverse engineering to exploit Windows and Linux software •Bypass Windows

Access Control and memory protection schemes •Exploit web applications with Padding Oracle Attacks •Learn the use-after-free technique used in recent zero days •Hijack web browsers with advanced XSS attacks •Understand ransomware and how it takes control of your desktop •Dissect Android malware with JEB and DAD decompilers •Find one-day vulnerabilities with binary diffing •Exploit wireless systems with Software Defined Radios (SDR) •Exploit Internet of things devices •Dissect and exploit embedded devices •Understand bug bounty programs •Deploy next-generation honeypots •Dissect ATM malware and analyze common ATM attacks •Learn the business side of ethical hacking

Gray Hat Hacking: The Ethical Hacker's Handbook, Fifth Edition

Outlines a revisionist approach to management while arguing against common perceptions about the inevitability of startup failures, explaining the importance of providing genuinely needed products and services as well as organizing a business that can adapt to continuous customer feedback.

The Hobbyist's Guide to the RTL-SDR

This new edition provides both theoretical and practical background of security and forensics for mobile phones. The author discusses confidentiality, integrity, and availability threats in mobile telephones to provide background for the rest of the book. Security and secrets of mobile phones are discussed

including software and hardware interception, fraud and other malicious techniques used “against” users. The purpose of this book is to raise user awareness in regards to security and privacy threats present in the use of mobile phones while readers will also learn where forensics data reside in the mobile phone and the network and how to conduct a relevant analysis. The information on denial of service attacks has been thoroughly updated for the new edition. Also, a major addition to this edition is a section discussing software defined radio and open source tools for mobile phones.

IoT Penetration Testing Cookbook

Deploy your own private mobile network with OpenBTS, the open source software project that converts between the GSM and UMTS wireless radio interface and open IP protocols. With this hands-on, step-by-step guide, you’ll learn how to use OpenBTS to construct simple, flexible, and inexpensive mobile networks with software. OpenBTS can distribute any internet connection as a mobile network across a large geographic region, and provide connectivity to remote devices in the Internet of Things. Ideal for telecom and software engineers new to this technology, this book helps you build a basic OpenBTS network with voice and SMS services and data capabilities. From there, you can create your own niche product or experimental feature. Select hardware, and set up a base operating system for your project Configure, troubleshoot, and use performance-tuning techniques Expand to a true

multinode mobile network complete with Mobility and Handover Add general packet radio service (GPRS) data connectivity, ideal for IoT devices Build applications on top of the OpenBTS NodeManager control and event APIs

Advances in Signal Processing and Intelligent Recognition Systems

This book constitutes the refereed proceedings of the 33rd IFIP TC 11 International Conference on Information Security and Privacy Protection, SEC 2018, held at the 24th IFIP World Computer Congress, WCC 2018, in Poznan, Poland, in September 2018. The 27 revised full papers presented were carefully reviewed and selected from 89 submissions. The papers present novel research on theoretical and practical aspects of security and privacy protection in ICT systems. They are organized in the following topical sections: authentication, failures of security management, security management/forensic, and software security/attacks.

TV White Space Spectrum Technologies

The availability of the RTL-SDR device for less than $20 brings software defined radio (SDR) to the home and work desktops of EE students, professional engineers and the maker community. The RTL-SDR can be used to acquire and sample RF (radio frequency) signals transmitted in the frequency range 25MHz to 1.75GHz, and the MATLAB and Simulink environment can be used to develop receivers using

first principles DSP (digital signal processing) algorithms. Signals that the RTL-SDR hardware can receive include: FM radio, UHF band signals, ISM signals, GSM, 3G and LTE mobile radio, GPS and satellite signals, and any that the reader can (legally) transmit of course! In this book we introduce readers to SDR methods by viewing and analysing downconverted RF signals in the time and frequency domains, and then provide extensive DSP enabled SDR design exercises which the reader can learn from. The hands-on SDR design examples begin with simple AM and FM receivers, and move on to the more challenging aspects of PHY layer DSP, where receive filter chains, real-time channelisers, and advanced concepts such as carrier synchronisers, digital PLL designs and QPSK timing and phase synchronisers are implemented. In the book we will also show how the RTL-SDR can be used with SDR transmitters to develop complete communication systems, capable of transmitting payloads such as simple text strings, images and audio across the lab desktop.

Applied Cyber Security and the Smart Grid

Digital Signal Processing in Communications Systems

Amazon.com’s Top-Selling DSP Book for Seven Straight Years—Now Fully Updated! Understanding Digital Signal Processing, Third Edition, is quite simply

the best resource for engineers and other technical professionals who want to master and apply today's latest DSP techniques. Richard G. Lyons has updated and expanded his best-selling second edition to reflect the newest technologies, building on the exceptionally readable coverage that made it the favorite of DSP professionals worldwide. He has also added hands-on problems to every chapter, giving students even more of the practical experience they need to succeed. Comprehensive in scope and clear in approach, this book achieves the perfect balance between theory and practice, keeps math at a tolerable level, and makes DSP exceptionally accessible to beginners without ever oversimplifying it. Readers can thoroughly grasp the basics and quickly move on to more sophisticated techniques. This edition adds extensive new coverage of FIR and IIR filter analysis techniques, digital differentiators, integrators, and matched filters. Lyons has significantly updated and expanded his discussions of multirate processing techniques, which are crucial to modern wireless and satellite communications. He also presents nearly twice as many DSP Tricks as in the second edition—including techniques even seasoned DSP professionals may have overlooked. Coverage includes New homework problems that deepen your understanding and help you apply what you've learned Practical, day-to-day DSP implementations and problem-solving throughout Useful new guidance on generalized digital networks, including discrete differentiators, integrators, and matched filters Clear descriptions of statistical measures of signals, variance reduction by averaging, and real-world signal-to-noise ratio (SNR) computation

A significantly expanded chapter on sample rate conversion (multirate systems) and associated filtering techniques New guidance on implementing fast convolution, IIR filter scaling, and more Enhanced coverage of analyzing digital filter behavior and performance for diverse communications and biomedical applications Discrete sequences/systems, periodic sampling, DFT, FFT, finite/infinite impulse response filters, quadrature (I/Q) processing, discrete Hilbert transforms, binary number formats, and much more

The Lean Startup

Secure Your Wireless Networks the Hacking Exposed Way Defend against the latest pervasive and devastating wireless attacks using the tactical security information contained in this comprehensive volume. Hacking Exposed Wireless reveals how hackers zero in on susceptible networks and peripherals, gain access, and execute debilitating attacks. Find out how to plug security holes in Wi-Fi/802.11 and Bluetooth systems and devices. You'll also learn how to launch wireless exploits from Metasploit, employ bulletproof authentication and encryption, and sidestep insecure wireless hotspots. The book includes vital details on new, previously unpublished attacks alongside real-world countermeasures. Understand the concepts behind RF electronics, Wi-Fi/802.11, and Bluetooth Find out how hackers use NetStumbler, WiSPY, Kismet, KisMAC, and AiroPeek to target vulnerable wireless networks Defend against WEP key brute-force, aircrack, and

traffic injection hacks Crack WEP at new speeds using Field Programmable Gate Arrays or your spare PS3 CPU cycles Prevent rogue AP and certificate authentication attacks Perform packet injection from Linux Launch DoS attacks using device driver-independent tools Exploit wireless device drivers using the Metasploit 3.0 Framework Identify and avoid malicious hotspots Deploy WPA/802.11i authentication and encryption using PEAP, FreeRADIUS, and WPA pre-shared keys

SolderSmoke

This book shows how the engineering and architectural aspects of submarine design relate to each other, and describes the operational performance required of a vessel. The authors explain concepts of hydrodynamics, structure, powering and dynamics, in addition to architectural considerations that bear on the submarine design process. They pay particular attention to the interplay among these aspects of design, and devote a final chapter to the generation of the concept design for the submarine as a whole. Submarine design makes extensive use of computers, and the authors give examples of algorithms used in concept design. They provide engineering insight as well as an understanding of the intricacies of the submarine design process. The book will serve as a text for students and as a reference manual for practicing engineers and designers in marine and naval engineering.

World radio TV handbook

Over 80 recipes to master IoT security techniques. About This Book Identify vulnerabilities in IoT device architectures and firmware using software and hardware pentesting techniques Understand radio communication analysis with concepts such as sniffing the air and capturing radio signals A recipe based guide that will teach you to pentest new and unique set of IoT devices. Who This Book Is For This book targets IoT developers, IoT enthusiasts, pentesters, and security professionals who are interested in learning about IoT security. Prior knowledge of basic pentesting would be beneficial. What You Will Learn Set up an IoT pentesting lab Explore various threat modeling concepts Exhibit the ability to analyze and exploit firmware vulnerabilities Demonstrate the automation of application binary analysis for iOS and Android using MobSF Set up a Burp Suite and use it for web app testing Identify UART and JTAG pinouts, solder headers, and hardware debugging Get solutions to common wireless protocols Explore the mobile security and firmware best practices Master various advanced IoT exploitation techniques and security automation In Detail IoT is an upcoming trend in the IT industry today; there are a lot of IoT devices on the market, but there is a minimal understanding of how to safeguard them. If you are a security enthusiast or pentester, this book will help you understand how to exploit and secure IoT devices. This book follows a recipe-based approach, giving you practical experience in securing upcoming smart devices. It starts with practical recipes on how to analyze IoT device architectures and identify vulnerabilities. Then,

it focuses on enhancing your pentesting skill set, teaching you how to exploit a vulnerable IoT device, along with identifying vulnerabilities in IoT device firmware. Next, this book teaches you how to secure embedded devices and exploit smart devices with hardware techniques. Moving forward, this book reveals advanced hardware pentesting techniques, along with software-defined, radio-based IoT pentesting with Zigbee and Z-Wave. Finally, this book also covers how to use new and unique pentesting techniques for different IoT devices, along with smart devices connected to the cloud. By the end of this book, you will have a fair understanding of how to use different pentesting techniques to exploit and secure various IoT devices. Style and approach This recipe-based book will teach you how to use advanced IoT exploitation and security automation.

Software Defined Radio Using MATLAB & Simulink and the RTL-SDR

This book constitutes the refereed proceedings of the 14th International Conference on Cognitive Radio-Oriented Wireless Networks, CROWNCOM 2019, held in Poznan, Poland, in June 2019. The 30 revised full papers were selected from 48 submissions and present a large scope of research topic also covering IoT in 5G and how cognitive mechanisms shall help leveraging access for numerous devices; mmWave and how specific propagation and operation in these bands bring new sharing mechanisms ; how resource allocation amongst bands (including offload mechanisms) shall be solved. The key focus will be on

how rich data analysis can improve the delivery of above defined services.

Hardware Hacking

For over a decade, Andrew "bunnie" Huang, one of the world's most esteemed hackers, has shaped the fields of hacking and hardware, from his cult-classic book Hacking the Xbox to the open-source laptop Novena and his mentorship of various hardware startups and developers. In The Hardware Hacker, Huang shares his experiences in manufacturing and open hardware, creating an illuminating and compelling career retrospective. Huang's journey starts with his first visit to the staggering electronics markets in Shenzhen, with booths overflowing with capacitors, memory chips, voltmeters, and possibility. He shares how he navigated the overwhelming world of Chinese factories to bring chumby, Novena, and Chibitronics to life, covering everything from creating a Bill of Materials to choosing the factory to best fit his needs. Through this collection of personal essays and interviews on topics ranging from the legality of reverse engineering to a comparison of intellectual property practices between China and the United States, bunnie weaves engineering, law, and society into the tapestry of open hardware. With highly detailed passages on the ins and outs of manufacturing and a comprehensive take on the issues associated with open source hardware, The Hardware Hacker is an invaluable resource for aspiring hackers and makers.

Progress in Intelligent Computing Techniques: Theory, Practice, and Applications

Many people think of the Smart Grid as a power distribution group built on advanced smart metering—but that's just one aspect of a much larger and more complex system. The "Smart Grid" requires new technologies throughout energy generation, transmission and distribution, and even the homes and businesses being served by the grid. This also represents new information paths between these new systems and services, all of which represents risk, requiring a more thorough approach to where and how cyber security controls are implemented. This insight provides a detailed architecture of the entire Smart Grid, with recommended cyber security measures for everything from the supply chain to the consumer. Discover the potential of the Smart Grid Learn in depth about its systems See its vulnerabilities and how best to protect it

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION