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Boundary Scan Security Enhancements For A Cryptographic

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EDN, Electrical Design News

Guidelines on Cell Phone and PDA Security

The Electrical Engineering Handbook - Six Volume Set

Viruses, Hardware and Software Trojans

21st IFIP WG 10.5/IEEE International Conference on Very Large Scale Integration, VLSI-SoC 2013, Istanbul, Turkey, October 6-9, 2013, Revised Selected Papers

Intelligent Technical Systems

The Test Access Port and Boundary-scan Architecture

14th International Workshop, Leuven, Belgium, September 9-12, 2012, Proceedings

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Introduction to Hardware Security and Trust

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ZigBee Wireless Networks and Transceivers

Mastering SoapUI

Modern Embedded Computing
Network Security Assessment
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An In-Depth Guide to Mobile Device Forensics
Proceedings, International Test Conference, 1993
Hardware Protection through Obfuscation
Computer Aided Systems Theory - EUROCAST 2009

Boundary Scan Security Enhancements For A Cryptographic ***OMB No. 8467293009135 edited by***

KELLEY JAMARCUS

EDN, Electrical Design News Springer Science & Business Media In response to tremendous growth and new technologies in the semiconductor industry, this volume is organized into five, information-rich sections. Digital Design and Fabrication surveys the latest advances in computer architecture and design as well as the technologies used to manufacture and test them. Featuring contributions from leading experts, the book also includes a new section on memory and storage in addition to a new chapter on nonvolatile memory technologies. Developing advanced concepts, this sharply focused book— Describes new technologies that have become driving factors for the electronic industry Includes new information on semiconductor memory circuits, whose development best illustrates the phenomenal progress encountered by the fabrication and technology sector Contains a section dedicated to issues related to system power consumption Describes reliability and testability of computer systems Pinpoints trends and state-of-the-art advances in fabrication and CMOS technologies Describes performance evaluation measures, which are the bottom line from the user's point of view Discusses design techniques used to create modern computer systems, including high-speed computer arithmetic and high-frequency design, timing and clocking, and PLL and DLL design

Guidelines on Cell Phone and PDA Security Computer Aided Systems Theory - EUROCAST 200912th International Conference, Las Palmas de Gran Canaria, Spain, February 15-20, 2009, Revised Selected Papers

Mobile devices are ubiquitous; therefore, mobile device forensics is absolutely critical. Whether for civil or criminal investigations, being able to extract evidence from a mobile device is essential. This book covers the technical details of mobile devices and transmissions, as well as forensic methods for extracting evidence. There are books on specific issues like Android forensics or iOS forensics, but there is not currently a book that covers all the topics covered in this book. Furthermore, it is such a critical skill that mobile device forensics is the most common

topic the Author is asked to teach to law enforcement. This is a niche that is not being adequately filled with current titles. An In-Depth Guide to Mobile Device Forensics is aimed towards undergraduates and graduate students studying cybersecurity or digital forensics. It covers both technical and legal issues, and includes exercises, tests/quizzes, case studies, and slides to aid comprehension.

The Electrical Engineering Handbook - Six Volume Set Springer Science & Business Media

Computer Aided Systems Theory - EUROCAST 200912th International Conference, Las Palmas de Gran Canaria, Spain, February 15-20, 2009, Revised Selected PapersSpringer

Viruses, Hardware and Software Trojans

Springer Science & Business Media

This book provides a comprehensive introduction to hardware security, from specification to implementation. Applications discussed include embedded systems ranging from small RFID tags to satellites orbiting the earth. The authors describe a design and synthesis flow, which will transform a given circuit into a secure design incorporating counter-measures against fault attacks. In order to address the conflict between testability and security, the authors describe innovative design-for-testability (DFT) computer-aided design (CAD) tools that support security challenges, engineered for compliance with existing, commercial tools. Secure protocols are discussed, which protect access to necessary test infrastructures and enable the design of secure access controllers.

21st IFIP WG 10.5/IEEE International Conference on Very Large Scale Integration, VLSI-SoC 2013, Istanbul, Turkey, October 6-9, 2013, Revised Selected Papers

Springer

Cell phones and Personal Digital Assistants (PDAs) have become indispensable tools for today¿s highly mobile workforce. Small and relatively inexpensive, these devices can be used not only for voice calls, simple text messages, and Personal Information Management (PIM), but also for many functions done at a desktop computer. While these devices provide productivity benefits, they also pose new risks. This document is intended to assist organizations in securing cell phones and PDAs. More specifically, this document describes in detail the threats faced by organizations that employ handheld devices and the measures that can be taken to counter those threats.

Intelligent Technical Systems

Springer Nature

Modern Embedded Computing: Designing Connected, Pervasive, Media-Rich Systems provides a thorough understanding of the platform architecture of modern embedded computing systems that drive mobile devices. The book offers a comprehensive view of developing a framework for embedded systems-on-chips. Examples feature the Intel Atom processor, which is used in high-end mobile devices such as e-readers, Internet-enabled TVs, tablets, and net books. This is a unique book in terms of its approach - moving towards consumer. It teaches readers how to

design embedded processors for systems that support gaming, in-vehicle infotainment, medical records retrieval, point-of-sale purchasing, networking, digital storage, and many more retail, consumer and industrial applications. Beginning with a discussion of embedded platform architecture and Intel Atom-specific architecture, modular chapters cover system boot-up, operating systems, power optimization, graphics and multi-media, connectivity, and platform tuning. Companion lab materials complement the chapters, offering hands-on embedded design experience. This text will appeal not only to professional embedded system designers but also to students in computer architecture, electrical engineering, and embedded system design. Learn embedded systems design with the Intel Atom Processor, based on the dominant PC chip architecture. Examples use Atom and offer comparisons to other platforms Design embedded processors for systems that support gaming, in-vehicle infotainment, medical records retrieval, point-of-sale purchasing, networking, digital storage, and many more retail, consumer and industrial applications Explore companion lab materials online that offer hands-on embedded design experience

The Test Access Port and Boundary-scan Architecture

Springer

This book is about security in embedded systems and it provides an authoritative reference to all aspects of security in system-on-chip (SoC) designs. The authors discuss issues ranging from security requirements in SoC designs, definition of architectures and design choices to enforce and validate security policies, and trade-offs and conflicts involving security, functionality, and debug requirements. Coverage also includes case studies from the “trenches” of current industrial practice in design, implementation, and validation of security-critical embedded systems. Provides an authoritative reference and summary of the current state-of-the-art in security for embedded systems, hardware IPs and SoC designs; Takes a "cross-cutting" view of security that interacts with different design and validation components such as architecture, implementation, verification, and debug, each enforcing unique trade-offs; Includes high-level overview, detailed analysis on implementation, and relevant case studies on design/verification/debug issues related to IP/SoC security.

14th International Workshop, Leuven, Belgium, September 9-12, 2012, Proceedings

Springer

This book provides readers with a valuable reference on cyber weapons and, in particular, viruses, software and hardware Trojans. The authors discuss in detail the most dangerous computer viruses, software Trojans and spyware, models of computer Trojans affecting computers, methods of implementation and mechanisms of their interaction with an attacker — a hacker, an intruder or an intelligence agent. Coverage includes Trojans in electronic equipment such as telecommunication systems, computers, mobile communication systems, cars and even consumer electronics. The evolutionary path of development of hardware Trojans from "cabinets", "crates" and "boxes" to the microcircuits (IC) is also discussed.

Readers will benefit from the detailed review of the major known types of hardware Trojans in chips, principles of their design, mechanisms of their functioning, methods of their introduction, means of camouflaging and detecting, as well as methods of protection and counteraction.

InfoWorld McGraw-Hill Companies

Secure and Resilient Software: Requirements, Test Cases, and Testing Methods provides a comprehensive set of requirements for secure and resilient software development and operation. It supplies documented test cases for those requirements as well as best practices for testing nonfunctional requirements for improved information assurance. This resource-rich book includes: Pre-developed nonfunctional requirements that can be reused for any software development project Documented test cases that go along with the requirements and can be used to develop a Test Plan for the software Testing methods that can be applied to the test cases provided A CD with all security requirements and test cases as well as MS Word versions of the checklists, requirements, and test cases covered in the book Offering ground-level, already-developed software nonfunctional requirements and corresponding test cases and methods, this book will help to ensure that your software meets its nonfunctional requirements for security and resilience. The accompanying CD filled with helpful checklists and reusable documentation provides you with the tools needed to integrate security into the requirements analysis, design, and testing phases of your software development lifecycle. Some Praise for the Book: This book pulls together the state of the art in thinking about this important issue in a holistic way with several examples. It takes you through the entire lifecycle from conception to implementation ... . —Doug Cavit, Chief Security Strategist, Microsoft Corporation ...provides the reader with the tools necessary to jump-start and mature security within the software development lifecycle (SDLC). —Jeff Weekes, Sr. Security Architect at Terra Verde Services ... full of useful insights and practical advice from two authors who have lived this process. What you get is a tactical application security roadmap that cuts through the noise and is immediately applicable to your projects. —Jeff Williams, Aspect Security CEO and Volunteer Chair of the OWASP Foundation

Introduction to Hardware Security and Trust Morgan Kaufmann

Master the art of testing and automating your SOA using SoapUI About This Book Design real-time test automation frameworks for Enterprise applications using SoapUI Learn how to solve test automation issues for complex systems A complete guide to understanding SOA automation from quality assurance to business assurance Who This Book Is For The book is intended for test architects, SOA test specialists, automation testers, test managers, and software developers who have a good understanding of SOA, web services, Groovy Scripting, and the SOAP UI tool. What You Will Learn Familiarize yourself with Test Web services from functional, nonfunctional, and security aspects Learn to test real-time service orchestrations Design test automation solutions for SOA-based Enterprise applications Learn multilayer test automation Selenium plus SoapUI under a single umbrella Integrate your SoapUI framework with Jenkins In Detail SoapUI is an open-source cross-platform testing application that provides complete test coverage and supports all the standard

protocols and technologies. This book includes real-time examples of implementing SoapUI to achieve quality and business assurance. Starting with the features and functionalities of SoapUI, the book will then focus on functional testing, load testing, and security testing of web services. Furthermore, you will learn how to automate your services and then design data-driven, keyword-driven, and hybrid-driven frameworks in SoapUI. Then the book will show you how to test UIs and services using SoapUI with the help of Selenium. You will also learn how to integrate SoapUI with Jenkins for CI and SoapUI test with QC with backward- and forward-compatibility. The final part of the book will show you how to virtualize a service response in SoapUI using Service Mocking. You will finish the journey by discovering the best practices for SoapUI test automation and preparing yourself for the online certification of SoapUI. Style and approach Filled with real-time examples, this book will help readers take their knowledge to the next level. This book is a comprehensive guide that will cover the end-to-end life cycle of implementing SoapUI in various phases of software testing and the software development life cycle.

Hardware Security CRC Press

The consumer electronics market has never been as awash with new consumer products as it has over the last couple of years. The devices that have emerged on the scene have led to major changes in the way consumers listen to music, access the Internet, communicate, watch videos, play games, take photos, operate their automobiles—even live. Digital electronics has led to these leaps in product development, enabling easier exchange of media, cheaper and more reliable products, and convenient services. This handbook is a much-needed, comprehensive engineering guide to the dynamic world of today's digital consumer electronics. It provides complete details on key enabling technologies, standards, delivery and reception systems, products, appliances and networking systems. Each chapter follows a logical progression from a general overview of each device, to market dynamics, to the core technologies and components that make up that particular product. The book thoroughly covers all of the key digital consumer product categories: digital TV, digital audio, mobile communications devices, gaming consoles, DVD players, PCs and peripherals, display devices, digital imaging devices, web terminals and pads, PDAs and other handhelds, screenphones/videophones, telematics devices, eBooks and readers, and many other current and future products. To receive a FREE daily newsletter on displays and consumer electronics, go to: http://www.displaydaily.com/ ·Surveys crucial engineering information for every digital consumer product category, including cell phones, digital TVs, digital cameras, PDAs and many more—the only reference available to do so ·Has extremely broad market appeal to embedded systems professionals, including engineers, programmers, engineering managers, marketing and sales personnel—1,000,000+ potential readers ·Helps engineers and managers make the correct design decisions based on real-world data

Design, Verification, and Debug Springer

Annotation Proceedings of the 24th International Test Conference held in Baltimore, October 1993--the premier conference for the testing of electronic devices, assemblies, and systems, including

design for testability and diagnostics. This year's leading edge topics are mixed-signal testing, multichip modules, systems test, automatic synthesis of test structures in design, boundary scan, and Iddq. Core topics represented included ATPG, modeling, test equipment hardware, delay fault testing, software testing, DFT, applied BIST, board testing, memory and microprocessor testing, test economics, and test quality and reliability. Annotation copyright by Book News, Inc., Portland, OR.

ZigBee Wireless Networks and Transceivers Springer

Boundary-Scan, formally known as IEEE/ANSI Standard 1149.1-1990, is a collection of design rules applied principally at the Integrated Circuit (IC) level that allow software to alleviate the growing cost of designing, producing and testing digital systems. A fundamental benefit of the standard is its ability to transform extremely difficult printed circuit board testing problems that could only be attacked with ad-hoc testing methods into well-structured problems that software can easily deal with. IEEE standards, when embraced by practicing engineers, are living entities that grow and change quickly. The Boundary-Scan Handbook, Second Edition: Analog and Digital is intended to describe these standards in simple English rather than the strict and pedantic legalese encountered in the standards. The 1149.1 standard is now over eight years old and has a large infrastructure of support in the electronics industry. Today, the majority of custom ICs and programmable devices contain 1149.1. New applications for the 1149.1 protocol have been introduced, most notably the `In-System Configuration' (ISC) capability for Field Programmable Gate Arrays (FPGAs). The Boundary-Scan Handbook, Second Edition: Analog and Digital updates the information about IEEE Std. 1149.1, including the 1993 supplement that added new silicon functionality and the 1994 supplement that formalized the BSDL language definition. In addition, the new second edition presents completely new information about the newly approved 1149.4 standard often termed `Analog Boundary-Scan'. Along with this is a discussion of Analog Metrology needed to make use of 1149.1. This forms a toolset essential for testing boards and systems of the future.

Mastering SoapUI

DIANE Publishing

A practical handbook for network adminstrators who need to develop and implement security assessment programs, exploring a variety of offensive technologies, explaining how to design and deploy networks that are immune to offensive tools and scripts, and detailing an efficient testing model. Original. (Intermediate)

Modern Embedded Computing Springer

The concept of CAST as Computer Aided Systems Theory was introduced by F. Pichler in the late 1980s to refer to computer theoretical and practical developments as tools for solving problems in system science. It was thought of as the third component (the other two being CAD and CAM) required to complete the path from computer and systems sciences to practical developments in science and engineering. Franz Pichler, of the University of Linz, organized the first CAST workshop in April 1988, which demonstrated the acceptance of the concepts by the scientific and technical community. Next, the University of Las Palmas de Gran Canaria joined the University of Linz to organize the first international meeting on CAST (Las Palmas,

February 1989) under the name EUROCAST'89. This proved to be a very successful gathering of systems theorists, computer scientists and engineers from most European countries, North America and Japan. It was agreed that EUROCAST international conferences would be organized every two years, alternating between Las Palmas de Gran Canaria and a continental European location. From 2001 the conference has been held exclusively in Las Palmas. Thus, successive EUROCAST meetings took place in Krems (1991), Las Palmas (1993), In- bruck (1995), Las Palmas (1997), Vienna (1999), Las Palmas (2001), Las Palmas (2003) Las Palmas (2005) and Las Palmas (2007), in addition to an extra-European CAST c- ference in Ottawa in 1994.

Network Security Assessment Elsevier

This book offers readers comprehensive coverage of security policy specification using new policy languages, implementation of security policies in Systems-on-Chip (SoC) designs – current industrial practice, as well as emerging approaches to architecting SoC security policies and security policy verification. The authors focus on a promising security architecture for implementing security policies, which satisfies the goals of flexibility, verification, and upgradability from the ground up, including a plug-and-play hardware block in which all policy implementations are enclosed. Using this architecture, they discuss the ramifications of designing SoC security policies, including effects on non-functional properties (power/performance), debug, validation, and upgrade. The authors also describe a systematic approach for “hardware patching”, i.e., upgrading hardware implementations of security requirements safely, reliably, and securely in the field, meeting a critical need for diverse Internet of Things (IoT) devices. Provides comprehensive coverage of SoC security requirements, security policies, languages, and security architecture for current and emerging computing devices; Explodes myths and ambiguities in SoC security policy implementations, and provide a rigorous treatment of the subject; Demonstrates a rigorous, step-by-step approach to developing a diversity of SoC security policies; Introduces a rigorous, disciplined approach to “hardware patching”, i.e., secure technique for updating hardware functionality of computing devices in-field; Includes discussion of current and emerging approaches for security policy verification.

The Hardware Hacking Handbook

Springer Science & Business Media

This book constitutes the proceedings of the 14th International Workshop on Cryptographic Hardware and Embedded Systems, CHES 2012, held in Leuven, Belgium, in September 2012. The 32 papers presented together with 1 invited talk were carefully reviewed and selected from 120 submissions. The papers are organized in the following topical sections: intrusive attacks and countermeasures; masking; improved fault attacks and side channel analysis; leakage resiliency and security analysis; physically unclonable functions; efficient implementations; lightweight cryptography; we still love RSA; and hardware implementations.

... International Workshop, FPL ..., Proceedings Springer Science & Business Media

This volume constitutes the proceedings of the Fifth International Workshop on Field-Programmable Logic and Its Applications, FPL

'95, held in Oxford, UK in August/September 1995. The volume presents 46 full revised papers carefully selected by the program committee from a large number and wide range of submissions. The papers document the progress achieved since the predecessor conference (see LNCS 849). They are organized in sections on architectures, platforms, tools, arithmetic and signal processing, embedded systems and other applications, and reconfigurable design and models.

An In-Depth Guide to Mobile Device Forensics Springer Science & Business Media

ZigBee is a short-range wireless networking standard backed by such industry leaders as Motorola, Texas Instruments, Philips, Samsung, Siemens, Freescale, etc. It supports mesh networking, each node can transmit and receive data, offers high security and robustness, and is being rapidly adopted in industrial, control/monitoring, and medical applications. This book will explain the ZigBee protocol, discuss the design of ZigBee hardware, and describe how to design and implement ZigBee networks. The book has a dedicated website for the latest technical updates, ZigBee networking calculators, and additional materials. Dr. Farahani is a ZigBee system engineer for Freescale semiconductors Inc. The book comes with a dedicated website that contains additional resources and calculators: http://www.learnZigBee.com Provides a comprehensive overview of ZigBee technology and networking, from RF/physical layer considerations to application layer development Discusses ZigBee security features such as encryption Describes how ZigBee can be used in location detection applications Explores techniques for ZigBee co-existence with other wireless technologies such as 802.11 and Bluetooth The book comes with a dedicated website that contains additional resources and calculators: http://www.learnZigBee.com

Proceedings, International Test Conference, 1993 Springer Science & Business Media

Test functions (fault detection, diagnosis, error correction, repair, etc.) that are applied concurrently while the system continues its intended function are defined as on-line testing. In its expanded scope, on-line testing includes the design of concurrent error checking subsystems that can be themselves self-checking, fail-safe systems that continue to function correctly even after an error occurs, reliability monitoring, and self-test and fault-tolerant designs. On-Line Testing for VLSI contains a selected set of articles that discuss many of the modern aspects of on-line testing as faced today. The contributions are largely derived from recent IEEE International On-Line Testing Workshops. Guest editors Michael Nicolaidis, Yervant Zorian and Dhiraj Pradhan organized the articles into six chapters. In the first chapter the editors introduce a large number of approaches with an expanded bibliography in which some references date back to the sixties. On-Line Testing for VLSI is an edited volume of original research comprising invited contributions by leading researchers.

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