NEW APPROACHES FOR SECURITY, PRIVACY AND TRUST IN COMPLEX ENVIRONMENTS

Proceedings of the IFIP TC-11 22nd International Information Security Conference (SEC 2007), 14-16 May 2007, Sandton, South Africa

Edited by

Hein Venter
University of Pretoria, South Africa

Mariki Eloff
University of South Africa, South Africa

Les Labuschagne
University of Johannesburg, South Africa

Jan Eloff
University of Pretoria, South Africa

Rossouw von Solms
Nelson Mandela Metropolitan University, South Africa

Table of Contents

Digital Forensics

FORSIGS: Forensic Signature Analysis of the Hard Drive for Multimedia File Fingerprints 1
John Haggerty and Mark Taylor

Digital Forensic Readiness as a Component of Information Security Best Practice 13
Talania Grobler and Buks Louwrens

Human-Computer Interaction I

Value creation and Return on Security Investments (ROSI) 25
Christer Magnusson, Josef Molvidsson and Sven Zetterqvist

Usability and Security of Personal Firewalls 37
Almut Herzog and Nahid Shahmehri

Computer-Based Trust

Trusted Ticket Systems and Applications 49
Andreas U. Schmidt and Nicolai Kuntze

Trust Evaluation for Web Applications based on Behavioral Analysis 61
Luiz da Costa Carmo, Breno de Oliveira, and Augusto Braga

Information Security Management I

Improving the Information Security Model by using TFI 73
Rose-Mharie Ahlfeldt, Paolo Spagnoletti, and Guttorm Sindre

Ontological Mapping of Common Criteria's Security Assurance Requirements. 85
Andreas Ekelhart, Stefan Fenz, Gernot Goluch, and Edgar Weippl

Network Security I

Management of Exceptions on Access Control Policies 97
Joaquin Garcia-Alfaro, Frederic Cuppens, and Nora Cuppens-Boulahia

Security Analysis of Two Ultra-Lightweight RFID Authentication Protocols 109
Tieyan Li and Guilin Wang

Information Security Management II

Exploratory Survey on ah Evaluation Model for a Sense of Security ... 121
Natsuko Hikage, Yuko Murayama, and Carl Hauser

Employees' Adherence to Information Security Policies: An Empirical Study ... 133
Mikko Siponen, Seppo Pahnila, and Adam Mahmood

Network-Security II

Phishing in the Wireless: Implementation and Analysis ... 145
Ivan Martinovic, Frank Zdarsky, Adam Bachorek, Christian Jung, and Jens Schmitt

Secure Path-Key Revocation for Symmetric Key Pre^distribution Schemes in Sensor Networks ... 157
Tyler Moore and Jolyon Clulow

Access Control I

A Credential-Based System for the Anonymous Delegation of Rights ... 169
Liesje Demuynck, Bart De Decker, and Wouter Joosen

Development and Application of a Proxy Server for Transparently, Digitally Signing E-Learning Content ... 181
Christian Josef Eibl, S.H. Basie von Solms, and Sigrid Schubert

Human-Computer Interaction II

Identity Theft- Empirical Evidence from a Phishing Exercise ... 193
Tjaart Steyn, Hennie Kruger, and Lynette Drevin

A Practical Usability Evaluation of Security Features in End-User Applications ... 205
Steven Furnell, Dimitris Katsabas, Paul Dowland, and Fraser Reid

Intrusion Detection Systems

Persona! Anomaly-based Intrusion Detection Smart Card Using Behavioural Analysis ... 217
Maciej Rossudowski, Hein Venter, and Jan Eloff

A Survey of Bots Used for Distributed Denial of Service Attacks ... 229
Vrizlynn Thing, Morris-Sloinan, and Naranker Dulay

Access Control II

A Hybrid PKI-IBC Based Ephemerizer System ... 241
Srijith Nair, Mohammad Dashti, Bruno Crispo, and Andrew Tanenbaum

Keystroke Analysis for Thumb-based, Keyboards on Mobile Devices 253
Sevasti Karatzouni and Nathan Clarke

Information Privacy I

Security Remarks on a Convertible Nominative Signature Scheme 265
Guilin Wang and Feng Bao

Using Payment Gateways to Maintain Privacy in Secure Electronic Transactions 277
Alapan Arnab and Andrew Hutchison

Access Control HI

A Role-Based Architecture for Seamless Identity Management and Effective Task Separation 289
Evangelos Kotsovinos, Ingo Friese, Martin Kurze, and Jb'rg Heuer

Extending Role Based Access Control Model for Distributed Multidomain Applications 301
Yuri Demchenko, Leon Gommans, and Cees de Laat

Information Privacy II

A Middleware Architecture for Integrating Privacy Preferences and Location Accuracy 313
Claudio Ardagna, Marco Cremonini, Ernesto Damiani, Sabrina De Capitani di Vimercati, and Pierangela Samarati , I

Enabling Privacy of Real-Life LBS: A Platform for Flexible Mobile Service Provisioning 325
Jan Zibuschka, Lothar Fritsch, Mike Radmacher, Tobias Schemer, and Kai Rannenberg

Access Control IV

Crafting Web Counters into Covert Channels 337
Xiapu Luo, Edmond Chan, and Rocky Chang

OPA: Onion Policy Administration Model - Another approach to manage rights in DRM 349
Thierry Sans, Frederic Cuppens, and Nora Cuppens-Boulahia

Security Services

Non-Repudiation in Internet Telephony 361
Andreas Schmidt, Nicolai Kuntze, and Christian Hett

FirePatch: Secure and Time-Critical Dissemination of Software Patches 373
Hdvard Johansen, Dag Jphansen, and Robbert van Renesse

Access Control V

An Experimental Evaluation of Multi-Key Strategies for Data Outsourcing 385
Ernesto Damiani, Sabrina De Capitani di Vimercati, Sara Foresti, Sushil Jajodia, Stefano Paraboschi, and Pierangela Samarati

Building a Distributed Semantic-aware Security Architecture 397
Jan Koller, Rolf Schillihger, and Gunther Pernul

Trust and Intrusion Detection Systems

Using Trust to Resist Censorship in the Presence of Collusion 409
Andriy Panchenko and Lexi Pimenidis

Evaluating the Effects of Model Generalization on Intrusion Detection Performance 421
Zhuowei Li, Amitabha Das, and Jianying Zhou

Keynote paper

Modernising MAC: New Forms for Mandatory Access Control in an Era of DRM 433
William. Caelli

IFIP WG 9.6/11.7 - IT Misuse and the.Law & the NoE "Future of Identity in the Information Society" (FIDIS) - Workshop on Security and Control of Identity in Society

Covert Identity Information in Direct Anonymous Attestation (DAA) 443
Carsten Rudolph

Safeguarding Personal Data using Rights Management in Distributed Applications 449
Adolf Hohl and Alf Zugenmaier

Identification Now and in the Future: Social Grant Distribution Process in South Africa 457
Stephen Flowerday and Gideon Ranga

Hard-drive Disposal and Identity Fraud 461
Paula Thomas and Theodore Tryfonas

An analysis of security and privacy issues relating to RFID enabled ePassprts .467
Eleni Kosta, Martin Meints, Marit Hansen, and Mark Gasson

IFIP WG 11.1/11.8 Workshop on Fostering Knowledge and Skills for Manageable Information Security

Toward User Evaluation of IT Security Certification Schemes: A Preliminary Framework 473
Nicholas Tate, Sharman Lichtenstein, and Matthew Warren

Teaching of Information Security in the "Health Care and Nursing" Postgraduate program 479
Tatjana Welzer, Marko Holbl, Ana Habjanic, Bostjan Brumen, and Marjan Druzovec

Remote Virtual Information Assurance Network 485
Ronald Dodge, Corey Bertram, and Daniel Ragsdale

Certifying the Computer Security Professional Using the Project Management Institute's PMP Model 491
Kara Nance and Brian Hay

Author Index 497