Journal of Digital Forensics, Security and Law, Vol. 7(4)

Editorial Board

Editor-in-Chief
Gary C. Kessler
Embry-Riddle Aeronautical University
Florida, USA

Associate Editor-in-Chief
Marcus K. Rogers
Purdue University
Indiana, USA

Section Editors

Digital Forensics
Gregg Gunsch
Defiance College
Ohio, USA
Scott Inch
Bloomsburg University
Pennsylvania, USA

Cyber Law
Erin Kenneally
Univ. of California San Diego
California, USA
Nigel Wilson
The University of Adelaide
South Australia, Australia

Information Security
David Dampier
Mississippi State University
Mississippi, USA
Daniel P. Manson
Cal Poly Pomona
California, USA

Science of Digital Forensics
Fred Cohen
California Sciences Institute
California, USA
Simson Garfinkel
Naval Postgraduate School
California, USA

Book Review
Jigang Liu
Metropolitan State University
Minnesota, USA

Technology Corner
Nick V. Flor
University of New Mexico
New Mexico, USA

Regional Editors

Australia
Craig Valli
Edith Cowan University
Western Australia, Australia

Europe/UK
Denis Edgar-Neville
Canterbury Christ Church Univ.
Canterbury, UK

Latin America
Pedro Luís Próspero Sanchez
University of Sao Paulo
Sao Paulo, Brazil

Mid-East and Africa
Andrew Jones
Khalifa Univ of Science, Technology & Research
Sharjah, United Arab Emirates

Mid-East/Israel
Eli Weintraub
Afeka Tel Aviv Academic College of Engineering
Tel Aviv, Israel

Copyright © 2012 ADFSL, the Association of Digital Forensics, Security and Law. Permission to make digital or printed copies of all or any part of this journal is granted without fee for personal or classroom use only and provided that such copies are not made or distributed for profit or commercial use. All copies must be accompanied by this copyright notice and a full citation. Permission from the Editor is required to make digital or printed copies of all or any part of this journal for profit or commercial use. Permission requests should be sent to Editor, JDFSL, 1642 Horsepen Hills Road, Maidens, Virginia 23102 or emailed to editor@jdfsl.org.

ISSN 1558-7215
Call for Papers

The Journal of Digital Forensics, Security and Law has an open call for papers in, or related to, the following subject areas:

1) Digital Forensics Curriculum
2) Cyber Law Curriculum
3) Information Assurance Curriculum
4) Digital Forensics Teaching Methods
5) Cyber Law Teaching Methods
6) Information Assurance Teaching Methods
7) Digital Forensics Case Studies
8) Cyber Law Case Studies
9) Information Assurance Case Studies
10) Digital Forensics and Information Technology
11) Law and Information Technology
12) Information Assurance and Information Technology

Guide for Submission of Manuscripts

Manuscripts should be submitted through the JDFSL online system in Word format using the following link: http://www.jdfsl.org/submission.asp. If the paper has been presented previously at a conference or other professional meeting, this fact, the date, and the sponsoring organization should be given in a footnote on the first page. Articles published in or under consideration for other journals should not be submitted. Enhanced versions of book chapters can be considered. Authors need to seek permission from the book publishers for such publications. Papers awaiting presentation or already presented at conferences must be significantly revised (ideally, taking advantage of feedback received at the conference) in order to receive any consideration. Funding sources should be acknowledged in the Acknowledgements section.

The copyright of all material published in JDFSL is held by the Association of Digital Forensics, Security and Law (ADFSL). The author must complete and return the copyright agreement before publication. The copyright agreement may be found at http://www.jdfsl.org/copyrighttransfer.pdf.

Additional information regarding the format of submissions may be found on the JDFSL Website at http://www.jdfsl.org/authorinstructions.htm.
Contents

Call for Papers .................................................................................................................. 2
Guide for Submission of Manuscripts .............................................................................. 2
From the Editor-in-Chief ................................................................................................. 5
Column: The Science of Digital Forensics: Recovery of Data from Overwritten Areas of Magnetic Media ................................................................. 7
Fred Cohen
"Preemptive Suppression" – Judges Claim the Right to Find Digital Evidence Inadmissible before It is Even Discovered ............................................. 21
Bob Simpson
An Australian Perspective on the Challenges for Computer and Network Security for Novice End-Users ................................................................. 51
Patryk Szewczyk
Forensic Evidence Identification and Modeling for Attacks against a Simulated Online Business Information System .................................. 73
Manghui Tu, Dianxiang Xu, Eugene Butler, & Amanda Schwartz
Implementing the Automated Phases of the Partially-Automated Digital Triage Process Model ................................................................. 99
Gary Cantrell & David A. Dampier
John C. Ebert
Technology Corner: A Regular Expression Training App ..................................... 125
Nick V. Flor
Subscription Information ............................................................................................... 133
Announcements and Upcoming Events ......................................................................... 135
Welcome to the final issue of Volume 7. We start the issue with the Digital Forensics as Science column, with Fred Cohen taking on the sometimes-controversial issue of recovering overwritten data from magnetic media. In our other standing columns, John C. Ebert provides an in-depth review of a new edition of one of the best-known Windows forensics books written by Anson et al., and Nick Flor presents a Technology Corner article with an app for teaching regular expressions. And, of course, we have four peer-reviewed papers in this issue, covering the trifecta of the Journal – digital forensics, information security, and the law.

The first paper, 'Preemptive Suppression' – Judges Claim the Right to Find Digital Evidence Inadmissible before It is Even Discovered (Simpson), is a very timely review of a recent Vermont Supreme Court decision. On the heels of the controversial U.S. v. Comprehensive Drug Testing ruling that essentially eliminated plain view on digital devices, a trial judge in Vermont started to add strict limitations and conditions on search warrants for digital devices in criminal investigations. Prosecutors sought clarity from the state Supreme Court about the constitutionality of those restrictions, as reported in this paper.

An Australian Perspective on the Challenges for Computer and Network Security for Novice End-Users (Szewczyk) discusses research about why following "simple" information security guidelines is often beyond the reach of many novice computer users. The paper further describes methods that may prove beneficial to improving users' security and computer proficiency.

The third paper, Forensic Evidence Identification and Modeling for Attacks against a Simulated Online Business Information System (Tu, Xu, Butler, & Schwartz), describes mechanisms that can be used by an organization to maintain forensic readiness, i.e., the ability of an organization to be prepared to launch an investigation or perform an audit after an event. The authors describe several scenarios of internal and external attacks, and a honeypot-based simulation model.

Our final paper, Implementing the Automated Phases of the Partially-Automated Digital Triage Process Model (Cantrell & Dampier), describes ways of automating the digital triage process. As the number of digital devices with a possible nexus to an arrest or crime increases, as well as the size of the digital media to examine, triage in the field becomes an important way to minimize a huge backlog in the lab that might include non-probative information.
I also wish to note that this is my final issue as Editor-in-Chief. They say that "change is good." Over the last two years, with the support of publisher and founding editor, Glenn Dardick, and the amazing set of professionals listed on the journal's masthead, we have morphed the journal in several subtle and not-so-subtle ways. For starters, we added section editors to assist in the review of papers, which has increased the rate at which we can process submissions. We also added regional editors in an effort to increase international submissions. We added two columns – Digital Forensics as a Science (Fred Cohen and Simson Garfinkel) and Technology Corner (Nick Flor) – to our extant Book Review column (Jigang Liu, who also steps down after this issue). And we have increased the number of peer-reviewed papers from three to four per issue. I thank all of the editors, reviewers, authors, and readers in continuing the journal's success. With this, I hand the EIC reins over to David Biros and trust that he will have the same level of support as I have had. Thank you all.

Gary C. Kessler, Ph.D., CCE, CISSP
gary.kessler@erau.edu