Classic and Modern Technologies to Protect PDF Documents

Gabriel PETRICĂ

EUROQUALROM, Faculty of Electronics, Telecommunications and Information Technology,
University "Politehnica" of Bucharest, Romania
gabriel.petrica@upb.ro

Abstract
This article presents techniques used to ensure the security of data in a PDF file: setting a password (both for opening and modifying the document), encryption using digital certificates and Adobe LiveCycle Rights Management, an advanced tool which centralizes user access rights on a dedicated server. Digital IDs (based on user's digital certificates) are essential elements in securing PDF documents, applying digital signature and certification. Provided by a Certification Authority, the digital certificate contains the user's public key used to sign a product (document, e-mail, VBA script or a complex application) and distribute on Internet. Finally is presented the concept of Digital Rights Management (DRM), a technique for protecting the copyright of various types of information (mainly multimedia, documents and e-books).

Keywords: PDF, digital certificate, public key, encryption, digital rights management

References:

[1] PDF Reference and Adobe Extensions to the PDF Specification, http://www.adobe.com/devnet/pdf/pdf_reference.html (accessed 10.04.2016).
[2] Ioan-Cosmin Mihai, Gabriel Petrică, Costel Ciuchi, Laurenţiu Giurea, Provocări şi strategii de securitate cibernetică, Editura Sitech, Craiova, 2015, ISBN 978-606-11-4951-3.
[3] Lisa Bucki, J. Walkenbach, M. Alexander, R. Kusleika and F. Wempen, Microsoft Office 2013 Bible: The Comprehensive Tutorial Resource, John Wiley & Sons, 2013.
[4] M. Tulloch, J. Koch and Sandra Haynes, Microsoft Encyclopedia of Security, Microsoft Press, 2003.
[5] Wenjun Zeng, Heather Yu, Ching-Yung Lin, Multimedia Security Technologies for Digital Rights Management, Academic Press, 2011, ISBN 9780080463896.
[6] ***, Digital Rights Management: Concepts, Methodologies, Tools, and Applications, IGI Global, 2012, ISBN 9781466621374.
[7] E. Becker, Digital Rights Management: Technological, Economic, Legal and Political Aspects, Springer Science & Business Media, 2003.
[8] https://en.wikipedia.org/wiki/Digital_rights_management (accessed 15.04.2016).