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EDITORIAL

Can Cybersecurity Risk Be Managed?

Trying to answer this quasi-rhetorical question, let us expose a few facts. Just facts.

One of the business acquisitions that impacted the world of scientific publications was that Clarivate Analytics, the Intellectual Property & Science business of the famous information agency Thomson Reuters (since 2011), was acquired almost two years ago (in 2016) by corporate investors to became an independent company, headquartered in Philadelphia, U.S.A. This science unit of Thomson Reuters provided for many years integrated information-based solutions with brands as ISI Web of Knowledge and Web of Science (among others), mostly for academia and research & development community.

This piece of news of deep interest for scholars across the world, just recently, was unintentionally associated with another fact that transcended the business and science borders, and seriously impacted the American politics: the scandal Cambridge Analytica. In mid-March this year, The Guardian and The New York Times made public details about how an intelligence company (Cambridge Analytica) harvested data of about 50 million Facebook users and wrongfully used the data – in order to influence American voters during 2016 elections period.

Almost confusing, Clarivate Analytics and Cambridge Analytica: two information/intelligence companies with pretty similar sound names, both using top technology and both intensively exploring social networks … yet with quite different objectives (probably this issue deserves more than a few lines to deeper think about). Nothing is wrong with data processing in order to better understand consumer behaviour or design better marketing strategies (as old as the second World War, basically); nothing is wrong either about using more and more computer power and newer cloud computing technologies and algorithms of data mining for this purpose. However, the red line of data security was crossed, and a strong alarm signal was triggered.

With all advantages of the increased connectivity in the cyber-environment (all types of transactions, more information, higher speed, superior convenience, and quality of life), there are coming several alarming challenges – directed to individuals, organizations, and states: increased risk of cyber-criminality, frequent privacy invasions and attacks on private data, media aggressiveness, assault of fake news, pornography and sextortion – to name just a few, letting aside the hackers' involvement in influencing political decisions by public opinion during elections. It is a complex situation that involves all actors: governments, organizations, and people. In terms of decision making, it is a question of balance between privacy versus security. In terms of size, is a battle of giants: governments of superpowers (U.S.A., European Union, China) – that want to regulate the information traffic in the cyber-space – against social

media companies, which want more monopolistic freedom; both want access to the people's personal data – to be used with rather different intentions.

Romania, as any other country, is connected to the global system, and the world-wide-web makes both geographic borders and distance obstacles, obsolete. On the other hand, it is an EU Member State. According to the European Commission (2018), „the authorities of EU countries teamed up to tackle unfair terms and conditions identified on social media". As result of the dialogue held between the EU authorities and social media companies (specifically Facebook, Twitter, Google+), a number of concerns raised by Consumer Protection Cooperation Authorities were addressed. At present, the European Commission is preparing to modernize the legislation aiming to provide new advantages for consumers (i.e. users of social media): protection of the consumer's rights as well as mechanisms to enforce and properly apply the rule of law. Expanded EU internet data protection rules (effective May 25, 2018) are providing increased consumers' control over how companies collect and use their information.

Torn between privacy and security, the right governments, legislators and top decision makers should keep the right balance between the people's privacy rights versus security needs. At the organization level, we all witnessed, over the last half of century or such (as time evolves), „sure ways for better management systems" associated with sound management positions as: Chief Quality Officer (as result of quality management trend), Chief Information Officer (effect of information technology development), Chief Risk Officer (following the 2008 global financial and economic crisis), and currently Chief Information Security Officer – who has already sub-ordinated the Cybersecurity Manager.

Would the next one be Chief Cybersecurity Officer?

Cezar Scarlat
Senior Editor

ABSTRACTS

Risk Management Based on Fuzzy Models

Iuliana Grecu (1), Nadia Belu (2), Nicoleta Rachieru (2), Emil Militaru (3)
(1) University POLITEHNICA of Bucharest, Romania, (2) University of Piteşti, Romania, (3) National Institute for Informatics Bucharest, Romania

ABSTRACT: *Failure mode and effects analysis (FMEA) is a useful and effective tool to identify and mitigate project risk, which utilizes the risk priority number (RPN) to determine the risk priority order of failure modes. Every production project is subject to numerous risks. Production project effectiveness is synonymous with project success in achievement of the goals. For these, it is very important to determine and evaluate the risks in all project life cycle – Initiation- Planning – Execution – Monitoring & Control – Closure in order to keep the implementation of the project under certain conditions The objectives of this research were to explore risk management practices influencing the success of production projects. In the first part of the study, a classical application of FMEA technique has been proposed to evaluate of the risks in production project. Then, a new risk assessment system based on the fuzzy set theory and fuzzy rule base theory is to be applied to assess and rank risks associated to failure modes that could appear for a production project, from automotive industry. The results show that the proposed approach can reduce duplicated RPN numbers and get a more accurate, reasonable risk assessment.*

KEYWORDS: project, production project, FMEA, Risk priority number, fuzzy logic, MATLAB software system

The Hidden Effects of New Fiscal Frame's

Beatrice Leuştean
University POLITEHNICA of Bucharest, Romania

ABSTRACT: *It is known the fact that, in Romania, fiscal rules change for about ten times a year and there is obviously a direct perceived and quantifiable effect over business incentive. This article aims finding if there is a reasonable and quantifiable hidden effect of the fiscal frame changes over the entrepreneurial incentive. The business choice is based on the economic results. For this purpose, the forgotten effects model shall be utilized. This present paper iterates the importance of projecting an investment for a small enterprise in a changing tax frame. It also points to assessing economic profit given the fiscal frequent changes and such, investor's incentive. The author pilot tested a tool in order to be applied to other regions for finding relevant data in what regards the role of the fiscal changes on the way a business is conducted.*

KEYWORDS: taxes, fees, SME, fiscal rules, business incentive

Benefits of Social Technologies

Cezar Scarlat (1), Alexandra Ioanid (1), Jeretta Horn Nord (2)
(1) University POLITEHNICA of Bucharest, Romania, (2) Oklahoma State University, USA

ABSTRACT: *Based on the theory of uses and gratifications (U&G) to understand the people's needs to use social technology, the main objective of this paper is to analyze what kind of technology devices Romanians have access to and what social technologies they prefer. A structured questionnaire was used as a main survey tool in this pilot study. The study aims at answering the following questions: (i) what social technologies are used by Romanians and (ii) for what purpose; (iii) what benefits were obtained for that stated purpose (if any). The results of the survey should make the managers of organizations think about ways to sell their products by social networks, which is great opportunity Romanian companies can use to increase their revenue and profits. In the final part, several alarming trends are discussed – as increased cyber-criminality, assault of fake news, and hackers' attempts to influence political decisions. It is a complex situation that involves all actors: governments, organizations, and people. In terms of decision theory, it's a question of balance between privacy vs. security.*

KEYWORDS: social technologies, access to (social) technology, use of social technology, theory of uses and gratifications

Thematic Content Analysis for Software Applications

Andreea Ogrezeanu (1), Anca Alexandra Purcarea (2), Andrei Ogrezeanu (3)
(1) Small Academy Bucharest Romania, (2) University POLITEHNICA of Bucharest Romania,
(3) Siveco Bucharest Romania

ABSTRACT: *The literature about technology adoption/acceptance has produced large amounts of evidence about the importance of user perceptions when comes to technology use and usefulness. That is why, increasingly, the argument can be and is made that information technology development and improvement should make significant use of user feedback. This paper is focused on how such user feedback can contribute to developing more user-friendly software applications. Specifically, we explore the role of thematic content analysis (TCA) as a tool in analyzing user feedback.*
The paper is aiming to clarify the process of using thematic content analysis in software development: sources of data, themes identification, recoding or consolidating data, data analysis, etc. The main focus is on how qualitative data could be transformed into actionable findings for developers and business decision makers. Providing insights with regards to clients' perceptions, attitudes and behavior could contribute to designing software applications that better respond to clients' needs.

A New Structure for the Music Industry

Paul Niculescu-Mizil Gheorghe (1), Leili Soltanisehat (2)
(1) National Institute for Informatics Bucharest, Romania, (2) Old Dominion University, Norfolk, (VA), USA

ABSTRACT: *The music industry is preparing for a new and secure online standard digital audio format, namely „.bc – dotBlockchain", which uses Smart Contracts and Blockchain technology distribution through encrypted virtual currency transactions. Such radical changes are imminent in the near future and will represent the interconnected decentralized inclinations of the socio-technological systems in the music industry, in order to balance the transparency of the copyright of the online digital musical content. The purpose of this paper is to highlight the differences between classic and modern system architectures and to analyze the process of creating a balanced system for the music industry. The secondary research aim is to identify, on one hand, the weaknesses of the centralized systems and on the other hand, the advantages of the system-of-systems which attract the attention of market development. The research findings can be of real interest to developers and experts seeking ways to reposition the interdisciplinary domain of music.*

KEYWORDS: Decentralized databases, System of systems, Blockchain technology, „.bc" digital file format, Economic aspects of the music industry

Knowledge Process Outsourcing (KPO) and the IT Services

Alina Plesa (1), Sorin Ionescu (2), Andrei Niculescu (2)
(1) HXA BIZ Bucharest, Romania, (2) University POLITEHNICA of Bucharest, Romania

ABSTRACT: *The progress in information technology and the growth of knowledge-based industries have created new business opportunities at international level. Corporations have evolved from outsourcing business processes to outsourcing high-value processes. This led to the emergence of a new trend Knowledge Process Outsourcing, KPO. This includes market research and data management, research and work on intellectual property, equity and finance, analysis etc. In this article we examine the premises that led to the appearance of KPO and how they are reflected in the literature. Also, a synthesis of the factors influencing the success of outsourcing processes has been made, which should be taken into account in the KPO decisions. Another important chapter is intended to present the benefits and risks of this process and it is suggested a way for an organization to increase the likelihood of success in implementing KPO.*

KEYWORDS: Knowledge Process Outsourcing, Intellectual resources, Quality service, Success factors, KPO risks