Dear readers

Welcome you to the new issue of the Journal of Systems Integration. In this issue you can find articles dealing with problems of IS/IT implementation in organizations and also with problems of software effectiveness and database management.

The topic of the Industry 4.0 seems to be a topic with high potential especially in time when the digitalization of production and the whole life is growing. But there is a significant low level of understanding and even low knowledge of Industry 4.0 topic in the Czech and Polish companies. In the article, written by Josef Basl, „The pilot survey of the industry 4.0 principles penetration in the selected Czech and Polish companies” is presented current status of the Industry 4.0 understanding and penetration in the Czech and Polish companies, incl. expected benefits and known obstacles of this trend.

Has Business Intelligence a positive effect on overall corporate performance? Or how does the business performance management system look like? Answers you can find in the article of Peter Mesaros et al.: „Business Intelligence impact on corporate performance in Slovak enterprises – a case study“. The results of the research confirm that properly implemented and effectively used enterprise Business Intelligence solution brings indisputable advantages. This statement can be justified by the other major findings and results of the research

In the article written by Samuel Furusa et. al. “A conceptual Model for Highway Speed Monitoring and Enforcement in Zimbabwe” is presented example of effective systems integration of Automatic Number Plate Recognition, Global System for Mobile Communications (GSM) and back-end police computing system in Zimbabwe.

One of the main activities in the process of developing a web based application is often based on a data mapping from a database into a web page semantics. This activity may bring a specific type of problem. In the article of Daniel Vodnansky: “Entropy-based hierarchization of relational data structures” is proposed a design of a transformation method of a simple ER model (or analogically relational model) to document oriented XML for use in data transformation based on principle of entropy calculations.

Is an information system effective? This question hides countless other questions. And why should information system be efficient? The article written by Dita Blazkova “System evaluates system”: method for evaluating the efficiency of IS” deals with automated data acquisition for the purpose of evaluation of information systems efficiency using standard metrics based on personal observations.

Article “Interface-based software testing” written by Aziz Ahmad Rais demonstrates importance of software quality, highlighting what exactly is meant by quality in this context, and giving an overview of software testing. In order to develop a new software testing concept, “interface” is defined alongside the fundamental aspects of an interface-based testing concept. The examples provided demonstrate the ease-of-use of such a concept, and show that there are many open-source tools that can be used to develop it.

I am convinced that in this issue you will find again interesting articles that will help you in your professional life.

Best regards

Zdenek Molnar – Editor in Chief