Editorial Preface

Mobile Terminal Technology and User Behavior

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This regular issue of the Journal of Organizational and End User Computing (JOEUC) collects five articles.

The first paper, titled A Key-Based Mutual Authentication Framework for Mobile Contactless Payment System Using Authentication Server, presents a framework for mutual authentication between a user device and a point of sale (POS) machine using magnetic secure transmission (MST) to prevent the wormhole attack in Samsung pay. The primary attribute of this method is authenticating the POS terminals by an authentication server to bind the generated token to a single POS machine. To secure the system from eavesdropping attack, the data transmitted between the user device and the machine is encrypted by using the Elgamal encryption method. Experimental comparison and security analysis are presented with previously proposed systems to show the advantages of the proposal in this research work.

The second paper, titled Placement for Intercommunicating Virtual Machines in Autoscaling Cloud Infrastructure: Autoscaling and Intercommunication Aware Task Placement, focuses on the autoscaling and intercommunication aware task placement issues. It formulates the autoscaling and intercommunication aware task placements (AIATP) as an optimization problem, with additional constraints and proposes solution, which uses the placement knowledge of prior tasks of individual applications. When compared with well-known algorithms, CloudsimPlus-based simulation demonstrates that AIATP reduces the resource fragmentation (30%) and increases the resource utilization (18%) leading to minimal number of active PMs. AIATP places 90% tasks of an application together and thus reduces the number of VM migration (39%) while balancing the PMs.

The third paper, titled The Role of User Resistance and Social Influences on the Adoption of Smartphone: Moderating Effect of Age, examines the factors affecting users’ adoption of the smartphone as an innovative device. Prior studies on the acceptance of computing devices have primarily focused on the impact of the technological benefits and characteristics, and there is a lack of research approaching user resistance, which hinders the diffusion of an innovation. In view of the above drawback, this study has attempted to build a research model that explains factors affecting user’s resistance to smartphone adoption by integrating technological and social antecedents forming the resistance, and empirically analyzes the data obtained through a survey. As a result, the relative complexity and relative advantages presented in the theory of innovation diffusion has a direct impact on the user’s resistance.

The fourth paper, titled The Effect of Use, Overuse, and Appeal of Mobile Game App on Add-Ons Purchases and Players Recruitment, investigates the permanent challenge of monetizing mobile game apps and continuously reaching new players. The authors analyze how the present use of the
mobile games and their appeal contribute to the behaviors of purchasing mobile game accessories and recruiting players. Results with information obtained from a sample of app gamers show that using a game app can have positive effects on recruitment, a notion reinforced when the level of performance rises, while overuse of the game app may lead to a feeling of addiction or shame that reduces new player recruitment. In addition, the game’s perceived appeal (experiential value, procedural justice, and prestige) are also related with investing in new products and with recruitment.

The fifth paper, titled Seeing is Believing: The Effects of Images on Trust and Purchase Intent in eWOM for Hedonic and Utilitarian Products, explores the effects that images have on online consumer behavior. In this research work, the proposed two-study investigation examines the effects of images in electronic word of mouth (eWOM) for both hedonic and utilitarian products. Results show that images affect the relationship between review text and purchase intention as well as trust for both product categories. However, images are shown to be more effective for hedonic than utilitarian products. Interestingly, it is found that congruence between the image and text is not a significant predictor of trust or purchase intention in some conditions (i.e., the images may not have to perfectly reflect the text to facilitate these outcomes for utilitarian products).

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