

## EDITORIAL PREFACE

*Zoubir Mammeri, IRIT, Paul Sabatier University, Toulouse, France*

This first issue of 2014 marks the start of *IJB-DCN*'s tenth year and a change of the editorial board. As incoming Editor-in-chief, I would like to thank the outgoing co-editors, Prof. Debashis Saha from the Indian Institute of Management, Calcutta (India) and Prof. Varadharajan Sridhar from the Management Development Institute (India), who supported the journal since its creation in early 2004. I also would like to thank the members of the editorial review board that supported the reviewing process.

It was a pleasure for me to accept when IGI Global offered me the opportunity to become IJBDCN Editor-in-chief. A new editorial board has been formed. I would like to thank the associate editors who accepted our invitation to support IJBDCN, namely Rachid Benlamri from Lakehead University (Canada), Robert Bestak from Czech Technical University (Czech Republic), Lucia Lo Bello from University of Catania (Italy), Pascal Lorenz from University of Haute-Alsace (France), Varadharajan Sridhar from Sasken Communication Technologies (India), and Sherali Zeadally from University of Kentucky (USA). With the associate editors and the editorial review board members we'll do our best to continue the great work done by the outgoing editorial board. Increasing the attractiveness and scientific quality of IJBDCN will be our objectives.

This issue includes three papers focusing on emerging technology and methods: maritime wireless networks, adapting the video content to network conditions in real-time, and mobile networks deployment in Finland.

The first paper co-authored by M. Manoufali, H. Alshaer, P.Y. Kong, and S. Jimaa provides a tutorial of maritime wireless mesh communication technologies and protocols. Maritime wireless mesh networks (MWMNs) aim at providing connectivity for maritime users and enable them to communicate with correspondent users connected to terrestrial communication networks. Some limitations of satellite and legacy maritime communication technologies jeopardize the establishment, at an acceptable cost, of reliable communications in maritime environment. Manoufali et al. paper presents the existing maritime communication technologies and routing protocols which could be deployed in implementing reliable MWMNs. Comprehensive guidelines are outlined to easily understand and critically assess the different deployed maritime communication networks and systems with routing protocols, and identify the milestones in the process of developing and implementing broadband MWMNs.

The second paper co-authored by A. Alvarez, L. Pozueco, S. Cabrero, X. G. Paneda, R. Garcia, D. Melendi, and G. Diaz focuses on

video quality in real-time adaptive systems. Adapting the content to network conditions in real-time is an important matter in best-effort networks like the Internet. Scalable Video Coding (SVC) is an interesting alternative to implement such systems. In this context, Alvarez et al. review the main solutions to measure video quality on SVC related systems and discuss the limitations of each one. They provide a framework to measure video quality metrics in real adaptive SVC based streams. An estimation method for full reference video quality metrics also is proposed. Their method reduces reference information required and it is able to provide real-time accurate results simply using metadata regarding the video quality of the reference layers. The video quality of several streams that have been generated using a real-time adaptive system is first measured with the elaborated framework and then estimated with the proposed method.

The third paper co-authored by M. Katsigiannis and C. Valagiannopoulos reports on the penetration of mobile technology in Finland, which is among the first countries in adopting mobile broadband services. Finland faces rapid

growth of mobile data traffic. Therefore, Finnish mobile operators continuously invest in their radio access networks to handle this growth, which represents an attractive revenue source. Katsigiannis and Valagiannopoulos paper presents a demand curve estimate for mobile broadband data traffic, which takes into account the impact of technology evolution on network coverage and capacity. Based on the demand curve and the market equilibrium, this paper proposes two strategies for mobile operators: i) reducing the marginal cost of traffic, and ii) changing the pricing structure. Assuming that mobile operators are price-takers (under perfect competition assumption), the conclusions of this paper indicate that a continuing reduction of marginal cost is imposed by the market forces. However, this policy of cost reduction will inevitably reach its limits. Thus, this study proposes a change in pricing structure from flat-rate tariff to usage-based charge.

*Zoubir Mammeri*  
*Editor-in-Chief*  
*IJBDCN*