

Trends in Consumer Communications

Consumer Communications and Networking Series Editorial

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by Ali C. Begen, Mario Kolberg, and Madjid Merabti

The last 15 years have heralded many developments and advances in consumer communications. From early developments of device specific challenges in interoperability and configuration that are well captured by the concept of plug and play to a more recent emphasis on mobility and service personalization. The one constant technical challenge and to a great extent a business success is home networking in its many forms. There is not a modern home without some variant of a set top box. The three papers in this issue provide a good overview of current and topical requirements in consumer communications.

The first article entitled, “Homenet3D: A new View on Home Network State”, by Armitage et al. reviews the state of the art in home working from a very apt point of view - the consumer and system’s usability. The challenge to manage and operate more complex home networks is discussed in details before a new approach using visualization techniques is proposed.

The second article entitled, “Greening the Spectrum: A Minority Game Based Mechanism Design”, by Elmachour et al. addresses the dual challenge of what to do with the crowding of the communication spectrum and energy consumption. In this paper the authors propose techniques of Cognitive Radio and minority game-based mechanisms in order to re-use under-utilized frequency spectrum and reduce energy consumption.

The third article by Nightingale et al. entitled, “Video Adaptation for Consumer Devices: Opportunities and Challenges Offered by New Standards”, discusses the latest developments in video compression technology standards that are aimed at improving service quality. In particular, it focuses on the use of new adaptation techniques.

If the articles in this series are of interest to you, then we strongly urge you to consider participating in the IEEE Consumer Communications and Networking Conference (CCNC) 2015 that will be held next January in Las Vegas in conjunction with the Consumer Electronics Show (CES) – the largest CE show in the world. See <http://www.ieee-ccnc.org> for details.

Biographies:

Ali C. Begen [SM] (abegen@cisco.com) is with the Video and Content Platforms Research and Advanced Development Group at Cisco. His interests include networked entertainment, Internet multimedia, transport protocols and content distribution. Ali is currently working on architectures for next-generation video transport and distribution over IP networks, and he is an active contributor in the IETF in these areas.

Ali holds a Ph.D. degree in electrical and computer engineering from Georgia Tech. He received the Best Student-paper Award at IEEE ICIP 2003, and the Most-cited Paper Award from Elsevier Signal Processing: Image Communication in 2008. Recently, he was a general co-chair for the ACM Multimedia Systems Conference 2011. Currently, he is organizing a special session on IPTV and related technologies in Packet Video Workshop 2012. Further information on Ali’s projects, publications and presentations can be found at <http://ali.begen.net>.

Mario Kolberg [SM] is a senior lecturer within the Institute of Computing Science and Mathematics at the University of Stirling. His research interests include Peer-to-Peer overlay networks, Home Automation, and IP Telephony. Mario is on the editorial Board of the Springer Journal 'Peer-to-Peer Networking and Applications' and has a long standing involvement with the IEEE CCNC conference series. He served as its TPC Chair for the Jan 2011 running. Currently, he chairs the track on Human Centric Computing at IEEE Globecom 2014. Mario has published more than 50 papers in leading journals and conferences. He is a member of a number of international conferences program committees on networking and communications. He holds a PhD from the University of Strathclyde, UK.

MADJID MERABTI [M] (M.Merabti@ljmu.ac.uk) is a professor of networked systems and director of the School of Computing and Mathematical Sciences at Liverpool John Moores University, United Kingdom. Madjid Merabti is currently on leave as Dean of the College of Sciences at the University of Sharjah, UAE, (mmerabti@sharjah.ac.ae). He holds a Ph.D. from Lancaster University, United Kingdom. He has over 20 years' experience in conducting research and teaching in the areas of computer networks (fixed and wireless), mobile computing, and computer network security. He is widely published, with over 150 publications in these areas, and leads the Distributed Multimedia Systems and Security Research Group. He is principal investigator in a number of current projects: Mobile Networks Security and Privacy Architectures and Protocols, Secure Component Composition in Ubiquitous Personal Networks, Networked Appliances, Mobile and Ad Hoc Computing Environments, Sensor Networks, and computer games technology. He was Guest Editor for the Special issue on Research Developments in Consumer Communications and Networking of Multimedia Tools and Applications: An International Journal (Kluwer, September 2005). He is a member of the Steering Committee for IEEE CCNC. He has acted as TPC chair for a number of international conferences, including the 5th IEEE Workshop on Networked Appliances, Liverpool, October 2002. He is a member of a number of international conferences program committees on networking, security, and computer entertainment.