IEEE 802.16m as an enabling technology for IMT-Advanced

Abstract

This tutorial will discuss the IEEE 802.16m as a candidate technology for IMT-Advanced. The tutorial will first present the IMT-Advanced requirements, then an overview of IEEE 802.16-2009. The enhancements required to be applied to IEEE802.16-2009 to meet the IMT-Advanced requirements. The tutorial will focus on the efforts made by the IEEE to present IEEE 802.16m as a candidate technology for IMT-Advanced. We will present the enabling technologies of IMT-Advanced and how they are mapped to the physical and MAC layer specifications of IEEE 802.16m. Finally, the tutorial will provide participants with timely perspective on hot research topics related to IEEE 802.16m

Najah Abu Ali received her B.S. and M.S. degrees in Electrical Engineering in 1989 and 1995 respectively from University of Jordan, Amman, Jordan and her PhD degree in 2006 in Computer Networks, Electrical Engineering department at Queen's University, Kingston, Canada. She joined the College of Information Technology, United Arab Emirates University (Al Ain, UAE), as an Assistant Professor with the Network Engineering track. She had a postdoctoral fellowship at the School of Computing, Queen's University from January 2006 to August 2006. She worked as an instructor and the head of the Engineering Department at Queen Noor College in Jordan from 1995 to 2003. Her research interests comprise wired and wireless communication networks.
Specifically, analytical and measurement based network performance management and Quality of Service and resource management of single and multihop wireless networks. Dr. Abu Ali has deep knowledge in Broadband Wireless Networks architecture, design, QoS provisioning and performance and has published extensively in the area. She delivered several tutorials before including one on Resource Management in WiMax Networks at ICC 2008, an overview of IEEE 802.16/WiMAX at CCNC 2009, and another on IMT-Advanced standardization and technologies, presented in Globecom 2009.
She is currently writing, together with Hossam Hassanein and Abdel-Hamid Taha, a book entitled “LTE, WiMax and the Race towards wireless broadband services” for John and Wiley and Sons, forthcoming October 2010.

History of Tutorial Presentation

She has previously presented and/or contributed to the following tutorials.

1. *Enabling Technologies and Standardization Activities of IMT-Advanced*, Globecom’09, Hawaii, USA, December 2009.
2. *QoS Support in IEEE 802.16/WiMAX PMP and Mesh - Capabilities, Advances, Challenges and Open Issues*, CCNC’09, Las Vegas, USA, January 2009.
3. *WiMax Multimedia QoS and Radio Resource Management*, ICC’08, Beijing, China, May 2008.
4. *Wireless Broadband in 2020: Looking through the IMT-Advanced Eyehole*, VTC 2010, Ottawa, Canada.