IEEE COMSOC Distinguished Lecture Program

'Broadband Wireless IP'

by

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Venue: Bilik Taklimat, 2nd Floor, Tower Block, Engineering Complex, Faculty of Engineering,

Universiti Putra Malaysia (UPM), Serdang

Organized by

IEEE Communications Society and Vehicular Technology Joint Chapter (Malaysia Section)

FREE ADMISSION

Abstract:

With technological advancement and social changes, a proliferation of access networks (e.g. 2G, 3G, WLAN, HIPERLAN, WiMAX) with diverse data rates and quality-of-service (QoS) specifications have emerged. Cellular operators have invested heavily into their networks and are working hard to maintain (even expand) their market share by improving the services (such as increasing throughput and data rate). It is difficult to predict which of these technologies will ultimately come on the top, reinforcing the likelihood of their coexistence in the future. *Broadband Wireless IP* everywhere will find its way through the realization of Next Generation Mobile Network (NGMN) which is expected to offer ubiquitous roaming across these networks by inter-connecting these and other emerging technologies through a common platform, thereby providing an end-to-end IP connectivity between peer end terminals. Inter-connectivity through a common platform will enable individual networks to evolve independently (through the adoption/modification of new/current system) while at the same time allow newer technologies to seamlessly integrate with the NGMN framework. In terms of the radio network, whether a common radio interface will be adopted across the entire NGMN to support high data rates or multiple interfaces (e.g. FDMA, TDMA, Narrowband CDMA, Wideband CDMA, or OFDMA) in their current form will continue to coexist is an open issue. This is influenced as much by the operator's willingness to invest into the new interface as by the need to safeguard their present investment. Deploying a common multi-access radio system across NGMN would involve considerable capital investment which will ultimately lead to a concerted effort by the operators to resist changes in the existing radio interfaces. So far no compelling winner has emerged to dictate the transition since it is difficult to reach a consensus regarding the priority of one radio system over another. In this talk, the abovementioned topics will be presented toward a more concise conclusion on the mobile network of the future, which will be the main platform for a true mobile broadband IP access.

Speaker's Bio:

Abbas Jamalipour (a.jamalipour@ieee.org) holds a Ph.D. from Nagoya University, Japan. He is the author of the first book on wireless and mobile Internet and three other books, has contributed to nine other books, has authored/co-authored over 190 journal and conference papers, and holds two patents, all in the field of wireless communications. He is a Fellow of IEEE, an IEEE Distinguished Lecturer, and a Fellow of Engineers Australia. He was Chair of the Satellite and Space Communications Technical Committee (2004–2006), and is currently Vice Chair of the Communications Switching and Routing Technical Committee and Chair of the Asia-Pacific Board, Chapters Coordinating Committee. He is the Editor-in-Chief of IEEE Wireless Communications, and a Technical Editor of IEEE Communications Magazine, Wiley's Int'l Journal of Communication Systems, Journal of Communications and Networks, and several other journals. He is a voting member of the IEEE GITC and IEEE Communications Society Education Board and has been a Vice Chair of IEEE WCNC '03–'06, Chair of IEEE GLOBECOM '05 (Wireless Communications), and a symposium Co-Chair of IEEE ICC '05–'08 and IEEE GLOBECOM '06–'07, and the General Co-Chair of IEEE RWS2009. He is the recipient of several international awards including the Best Tutorial Paper Award and Distinguished Contribution to Satellite Communications Award, both from the IEEE Communications Society in 2006.