

PALESTRA

(Distinguished Lecturer Tour)

Sexta-feira, 20 de Outubro de 2006, 10h00
Anfiteatro, Complexo Interdisciplinar, IST, Lisboa

Heterogeneous Wireless Access Environment

(In the context of end-to-end networking)

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Abstract

New access networks such as MANs, HANs, PANs, BANs, NEMOs and Ad hoc networks are emerging. These new networks are adding to the existing fixed, cellular, broadcast and local area networks creating a huge heterogeneous network environment. In addition, it is expected that the future mobile user will demand access to any service/content at anywhere and any time in a seamless, reliable and secure manner. The challenge is how to support the user's demands in such a heterogeneous environment. This talk will first describe the concepts of convergence, integration and inter-working of multiple heterogeneous radio access networks. It will then discuss the associated degrees of coupling between these networks. The talk will give two different approaches for the design of next generation broadband wireless networks. It will also address how to ensure the establishment, maintenance and termination of end-to-end QoS for these two approaches. As an example, the design of a wireless access network in the context of end-to-end networking will then be given. The suitability of the IP layer model as a glue to interconnect multiple heterogeneous radio access networks will next be addressed. Following on from this, the NSF initiative on Future Internet Design (FIND) will be discussed as a means to re-invent the Internet architecture.

Bio

Hamid Aghvami joined the academic staff at King's in 1984. In 1993 was promoted Professor in Telecommunications Engineering. He is presently the Director of the Centre for Telecommunications Research. He carries out consulting work on Digital Radio Communications Systems for both British and International companies. He has published over 400 technical papers and given invited talks all over the world on various aspects of Personal and Mobile Radio Communications as well as giving courses on the subject world wide. He was Visiting Professor at NTT Radio Communication Systems Laboratories in 1990 and Senior Research Fellow at BT Laboratories in 1998-1999. He was an Executive Advisor to Wireless Facilities Inc., USA in 1996-2002. He is the Managing Director of Wireless Multimedia Communications LTD (his own consultancy company). He leads an active research team working on numerous mobile and personal communications projects for third and fourth generation systems, these projects are supported both by the government and industry. He was a member of the Board of Governors of the IEEE Communications Society in 2001-2003. He is a distinguished lecturer of the IEEE Communications Society, and has been member, Chairman, and Vice-Chairman of the technical programme and organising committees of a large number of international conferences. He is also founder of the International Conference PIMRC. He is a Fellow of the Royal Academy of Engineering, Fellow of the IEE, and Fellow of the IEEE.