Special Issue on Seamless Handover in Next Generation Wireless/Mobile Networks

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Scope of Special Issue
Mobile communication has evolved in a rapid pace from the introduction of Analog Cellular networks in 1980s. Technology has gone through tremendous changes in terms of security, access techniques, protocol stacks, bandwidth usage and also convergence into packet switching based on All-IP network from the conventional circuit switched techniques. Complexity has increased due to the introduction of different access technologies, available services, and other aspects as mentioned above during the telecom evolution for the past 20 years. Pressure is mounting to harmonize various technologies under a common IP backbone so that seamless handover can be provided that exploits the benefits of available radio access technologies. Seamless handover should be achieved not only for Inter-Technology but also for Inter-Operator handover. Operators and the consumers will be greatly benefited in terms of cost effectiveness, enhanced features, location independence and ease of use through the introduction of seamless heterogeneous handover mechanisms.

Several standardization activities have already started working on technical solutions for seamless handover. One of the well known activities is that of next-generation networks (NGN) making use of IMS based solution for service provisioning and handover between fixed and mobile operators. Within 3GPP and 3GPP2, activities are on-going to provision handover between different technologies and recently, in 3GPP, between different domains. This activity within 3GPP falls under All-IP Network (AIPN) System Architecture Evolution (SAE)/Radio Access Network (RAN) Long Term Evolution (LTE). IEEE 802 is also looking into media-independent handover (MIH) in 802.21 while 802.11u is working on inter-technology handover. Handover enhancement within IEEE 802.11 is taking place within Task Group R (TGr). IETF has produced some solutions in the seamoby working group while further enhancements are being done in various other groups including mobopts, mipshop and mobike. Along with standardization activities, various operators and vendors are also involved in developing harmonized solution for heterogeneous networks, like, UMA. At the same time a lot of research and development activities are taking place by academia, research institutes and industries too.

So far, the work has focused on one specific topic of handover such as security, QoS, and routing. However, the focus should be on developing an end-to-end network perspective that covers the whole span of the network from radio aspects to OSS aspects that includes value added services.

With the above background, this special issue invites people to present papers on seamless handover in heterogeneous networks in the following (but, not limited to) areas:

- Handover security
- Solutions for mobility support
- Charging and billing, and AAA infrastructure
- Fraud Management across various networks
- Access Control techniques in heterogeneous networks
- QoS provisioning for inter-technology and intra-/inter-domain handover
- Content provisioning and seamless use of VAS across different networks
- Standardization activities
- Testbed or measurement results

Important dates

Deadline of paper submissions:	15th May 2006
Notification of acceptance:	1st October 2006
Final Manuscripts Due:	1st November 2006
Publication of Feature Topic:	February 2007

Submission

Papers should follow the Springer format (11pt, single column, double spaced) and not exceed twenty pages including figures and tables.

Manuscript should be submitted on-line at: https://www.editorialmanager.com/wire/
You MUST select article type: "Special Issue: Seamless Handover"

Author information is available at:
http://www.springer.com/sgw/cda/frontpage/0,11855,5-40109-70-35706624-000.html

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