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A handover scheme in heterogeneous wireless networks

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Abstract

In order to achieve seamless handover for real-time applications in the IP Multimedia Subsystem (IMS) of the next-generation network, a multi-protocol combined handover mechanism is proposed in this paper. We combine SIP (Session Initiation Protocol), FMIP (Fast Mobile IPv6 Protocol) and MIH (Media Independent Handover) protocols by cross-layer design and optimize those protocols' signaling flows to improve the performance of vertical handover. Theoretical analysis and simulation results illustrate that our proposed mechanism performs better than the original SIP and MIH combined handover mechanism in terms of service interrupt time and packet loss.

Key words : Vertical handover; MIH; IMS; FMIP; NS2