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Fast handover algorithm for hierarchical mobile IPv6 macro-mobility management (Conference Paper)

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Abstract

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Mobile IPv6 (MIPv6) has some limitations due to long delays and signaling load during handover operation. Hierarchical mobile IPv6 (HMIPv6) is the extension of MIPv6 that is designed to reduce the signaling load and to improve handover speed of MIPv6 by splitting the mobility management into macro and micro mobility management schemes. However HMIPv6 only improves micro mobility problem where the significant delay still occurs in the macro mobility management because the handover algorithm is similar with the MIPv6 environment. This paper proposes a new fast handover algorithm that overcomes the limitations in mobile MIPv6 and its extension HMIPv6. Our design objective is to re-establish the communication traffic flow quickly and to minimize the service disruption delay that occurs during handover process in a macro mobility environment. This handover algorithm is based on the modification of the HMIPv6 protocol using the multicast technique concept. This algorithm will enable the mobile node to receive packet faster than HMIPv6 protocol during handover, seamlessly and transparently. © 2003 IEEE.

SciVal Topic Prominence

Topic: Management | Mobile telecommunication systems | Binding update

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Application software | Delay | Internet | Mobile communication | Mobile computing | Mobile radio mobility management | Multicast algorithms | Signal design | Telecommunication traffic | Wireless LAN

Indexed keywords

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