

## A Reactive Fast Inter-MAP Handover for Hierarchical Mobile IPv6

**Authors :** Pyung Soo Kim

**Abstract :** This paper proposes an optimized reactive fast intermobility anchor point (MAP) handover scheme for Hierarchical Mobile IPv6, called the ORFH-HMIPv6, to minimize packet loss of the existing scheme. The key idea of the proposed ORFHHMIPv6 scheme is that the serving MAP buffers packets toward the mobile node (MN) as soon as the link layer between MN and serving base station is disconnected. To implement the proposed scheme, the MAP discovery message exchanged between MN and serving MAP is extended. In addition, the IEEE 802.21 Media Independent Handover Function (MIHF) event service message is defined newly. Through analytic performance evaluation, the proposed ORFH-HMIPv6 scheme can be shown to minimize packet loss much than the existing scheme.

**Keywords :** hierarchical mobile IPv6 (HMIPv6), fast handover, reactive behavior, packet loss

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