A Mobility Management Scheme for Hybrid Wireless Sensor Networks

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ABSTRACT

A hybrid wireless sensor network consists of several fixed and mobile sensor nodes. Mobile nodes make the deployment more flexible in a manner that one can dispatch mobile nodes to hot-region on demand. Proxy MIPv6 is one of the well-know network-based mobility management protocols, in which the mobile node is not required to participate in any mobility-related signaling. Proxy MIPv6 can be considered as a suitable candidate to enable mobility in wireless sensor networks. In this thesis, we provide a novel scheme called PMIPv6-DI, which enhanced the proxy MIPv6 to support inter-sensor network roaming. We also analyzed the signaling cost for location update. Simulation result shows that the proposed PMIPv6-DI can be successfully performed in hybrid wireless sensor networks. Moreover, the mobility management scheme effectively reduced the signaling cost and transmission delay occurred by the movement of mobile sensor nodes.

Keywords : Wireless Sensor Networks、Mobility Management、Proxy Mobile IPv6

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