

Evaluation of Network Assisted Handoffs in Heterogeneous Networks

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Abstract This paper describes a novel distributed mobility management (DMM) scheme for the "named-object" information centric network (ICN) architecture in which the routers forward data based on unique identifiers which are dynamically mapped to the current network addresses of a device. The work proposes and evaluates two specific handover schemes namely, hard handoff with rebinding and soft handoff with multihoming intended to provide seamless data transfer with improved throughput during handovers. The evaluation of the proposed handover schemes using system simulation along with proof-of-concept implementation in ORBIT testbed is described. The proposed handoff and scheduling throughput gains are 12.5% and 44% respectively over multiple interfaces when compared to traditional IP network with equal share split scheme. The handover performance with respect to RTT and throughput demonstrate the benefits of clean slate network architecture for beyond 5G networks.

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