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OPTIMIZATION AND PERFORMANCE ANALYSIS OF TCP OVER VARIOUS ROUTING ALGORITHMS IN UMTS WCDMA NETWORKS

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ABSTRACT

Universal Mobile Telecommunication Network (UMTS) deal with various packet losses. These packet losses developed in network due to channel fading and shadowing. Contention in network should maintain by TCP end-to-end semantics and dependency on intermediate nodes is minimized. Recent development of advanced 3G networks and services makes it necessary for improving TCP's efficiency and resource utilization. In this paper, we use TCP Tahoe protocol to compare the Performance of two dynamic state routing protocols for 3G networks is: RIP (Routing Information Protocol) and OSPF (Open Shortest Path First). RIP and OSPF are based on similar dynamic state routing, the differences is only in the protocol implementation methods that can escort to significant concert differentials. These protocols are inspected based on 'traffic sent (packets/seconds)', 'traffic received (packets/seconds)' and TCP connection (Congestion Window)', by using TCP Tahoe algorithm.

KEYWORDS: Universal Mobile Telecommunication System (UMTS), Transmission Control Protocol Tahoe (TCP Tahoe), Routing Information Protocol (RIP), OSPF (Open Shortest Path First), Operational Network Evaluation Tool (OPNET)