A MESH-BASED QoS AWARE MULTICAST ROUTING PROTOCOL

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A Thesis Submitted in Partial
Fulfillment of the Requirements for the Degree of
Master of Science (Computer Science)
School of Applied Statistics
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The Examining Committee Approved This Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science (Computer Science).

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ABSTRACT

Title of Thesis	A Mesh-Based QoS Aware Multicast Routing Protocol
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A mobile Ad Hoc Network (MANET) is a collection of mobile nodes that can communicate with each other using multihop wireless links without utilizing any fixed based-station infrastructure and centralized management. Each mobile node in a MANET acts as both a host generating flows or being destination of flows and a router forwarding flows directed to other nodes.

Future applications of Mobile Ad Hoc Networks are expected to be based on all-IP architecture and be capable of carrying real-time multimedia applications such as voice and video as well as data. It is necessary for MANETs to have an efficient routing and quality of service mechanism to support future applications.

In this thesis, we propose a QoS aware multicast routing protocol (QMRP) based on mesh architecture which offers bandwidth guarantees for applications in MANETs. Experimental evaluations are carried out in a simulated environment. The
results show that the proposed protocol outperforms ODMRP, a mesh-based multicast routing protocol in a variety of environments

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