

M S Ramaiah Institute of Technology

(Autonomous Institute, Affiliated to VTU)

MSR Nagar, Bengaluru-560054

A Dissertation Report on

**Analysis of Congestion with Varying Buffer Size to Improve
QoS in Multipath Multihop WSN**

Submitted by

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1MS14SCN04

In partial fulfillment of the requirements for the award of degree of

Master of Technology
in
Computer Network Engineering

Under the guidance of

Dr. MONICA R. MUNDADA

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CERTIFICATE

This is to Certify that Mr. Desai Pranav Bharatbhai (1MS14SCN04) has completed Project Phase II (MCSE401) titled “Analysis of Congestion with Varying Buffer Size to Improve QoS in Multipath Multihop WSN” in partial fulfillment for the award of degree of Masters of Technology in Computer Network Engineering, during the year 2015-16 under the supervision of Dr. Monica R. Mundada, Associate Professor, Dept. of CSE MSRIT Bengaluru. The project is approved as it satisfies the academic requirements with respect to the project work prescribed for Master degree. To the best of our understanding the work submitted in this report has not been submitted in part or full, for the award said degree.

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- 1.
- 2.

DECLARATION

I hereby declare that the dissertation work entitled “Analysis of Congestion with Varying Buffer Size to Improve QoS in Multipath Multihop WSN” in this report is carried out by me at M S Ramaiah Institute of Technology, Bengaluru under the guidance of Dr. Monica R. Mundada, Associate Professor, Dept. of CSE, MSRIT, Bengaluru for the partial fulfillment of the requirements for the award of the degree of Masters of Technology. I further declare that work reported in this project has not been submitted as the basis for the award of any degree or diploma or certificate in this institute or any other institute or university.

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ABSTRACT

In Wireless Sensor Networks (WSN), Quality of Service (QoS) assumes a critical role as networks performance is relies on QoS only. WSN is exceptionally prevalent as it has wide application range. WSN is more cost effective for monitoring the different aspects of environment and enterprises. WSN has inadequate resources such as computational power and energy constraint. Congestion is one basic subject which has drawn consideration of many researchers. Congestion results into decreased network performance and also drains the battery of the node, which is a limited resource in WSN. So, congestion must be decreased to enhance QoS and lifespan of a network. In this project, we present an effective approach for enhancing congestion in wireless sensor networks. This proposed algorithm may reduce the congestion and gives an effective solution. It establishes multiple paths from each sensor node to the cluster head and passes it to a ‘traffic node’ that manages the congestion and then sends it to base station. Traffic Node is intermediate node between cluster head and base station.

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