

**PERFORMANCE PARAMETER OF WIMAX: A STUDY  
OF PHYSICAL LAYER OF WIMAX UNDER  
DIFFERENT PATH LOSS AND MODULATION  
TECHNIQUES**

This thesis is presented in partial fulfillment for the award of the  
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Trough this project, we can applied what we have learn in our study. Basically we only learn the theoretical part but we did not do on practical. Hence this project has helped us to understand about it.

## ABSTRACT

*Abstract*-WiMAX (Worldwide Interoperability for Microwave Acces) technology is becoming imperative in modern wireless communication system nowadays. WiMAX is one of the alternatives for users to overcome the limitations of the existing wireless communication such as lack of security, coverage area and low data rate. Since that, WiMAX has received a great deal of attention mainly from the academia and industry. There are some salient features supported by WiMAX which makes it more capable of handing quality of services (QoS) and various traffic applications. This paper focuses on the performance of physical layer of WiMAX using different path loss and modulation techniques. Three different path loss models are used to investigate the performance of the network. The simulation was done using OPNET 14.5 and found that the simulated performance of these models gives different result. This paper also covers the important performance of all the path loss models and modulation techniques.

Keyword: WiMAX, PHY, path loss, modulation techniques

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