

## **ABSTRACT**

This study aims to analyze the effect of TCP Vegas implementation in wireless sensor networks for building condition structure monitoring protocols. Wireless sensor networks are very effective because they are able to detect vibrations without using cables and at low cost. This research method involves a quantitative approach with an experimental type of research. The study will be conducted using NS-2 as a simulator tool. The data analysis to be carried out aims to identify the results of throughput, delay, and packet loss ratio. TCP Vegas is one of the transmission control protocols that is suitable for monitoring building structure conditions because it can obtain more consistent throughput while reducing delay. This study aims to provide insight into TCP Vegas on wireless sensor networks, especially for monitoring building structure conditions.

*Keywords--- TCP Vegas, Wireless Sensor Network, Throughput, Delay, Packet Loss Ratio*