ABSTRACT

In the growing of the times, nowadays the ease of work are commonly encountered.Sensor technology is one of the tool that can facilitate a job in terms of manpower or time .one of the technology that have it is "wireless sensor network" or WSN.WSN consists of a sensor node that work to send data toward the sink node, sink node serving as a gathering place for the data sent by the sensor nodes, and also the user who control the course of WSN.

Wireless Sensor Network is intended to help make it easier to work on the research conducted by the CATV laboratory, where research is done that is reviving the campus TV network that will now be held in the building O (Ararkula) .ZigBee network using the 802.15.4 standard using simulator NS-2:35 and wireless online simulator provided by Aerohive's website to see the range of one node.Simulaiton and analysis conducted by the NS-2:35 simulator will generate parameter *Throughput*, *delay*, *energy consumption*, *packet loss*

With this design and simulation of WSN network is expected to facilitate the work and at the same time as to work saving time to the CATV assistant laboratory and continue the research.

Keywords: WSN, NS-2:35, Sensor, ZigBee 802.15.4