

## ABSTRACT

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The level of air pollution in each place is different, the difference is because the number of pollutant sources in each place is not the same, such as the number of industries, the number of passing vehicles, and cigarette smoke. Therefore, monitoring tools are needed to monitor pollutants so that air pollution can be reduced. So in this final project designed a tool that can monitor the level of pollutant in air with technology of monitoring system based on Wireless Sensor Network (WSN). The equipment used is Arduino Nano microcontroller as control center unit by using Arduino IDE software. Gas sensors used to measure the amount of pollutants in the air are MQ-7 gas sensors to measure CO levels resulting from volcanic eruptions, biological processes, and HC oxidation such as methane derived from wet soils and faeces of living things, and use sensor MQ-135 to measure NO<sub>2</sub> levels generated from motor vehicles. In the process of sending the results of sensor detection data used Xbee S2C. The air pollution monitoring view uses Visual Studio on the computer to be connected to the campus LCD Monitor using a cable. Testing of airborne monitoring tool is done in two different places in Telkom University.

*Keywords : Monitoring Air pollution, Arduino Nano, Visual Studio, Wireless Sensor Network (WSN)*