

## ABSTRACT

Wind is a natural phenomenon that is changing and can not be known directly without tools by humans. As we know, wind direction and speed as a reference worker in wind power plants. Where the direction and speed are used to determine the direction of the propeller plants and to investigate how the performance of plants against wind speed. pilot to fly the plane, fishermen anchored and the other.

Therefore made monitors wind speed and direction Digita with ZigBee transmission to assist in the work. This device consists of a photodiode sensors are placed in eight directions (north, northeast, east, southeast, south, southwest west, northwest) to determine the wind direction, and speed of the rotary encoder sensor to measure wind speed.

With the establishment of this tool, people can know the wind direction and speed with a maximum distance of 100 meters from the tool assisted ZigBee transmission and displayed on the computer. With the results of sensor data which have different wind speed 99.79 with tool manufacturers and wind direction sensor which has an error of 100% to 99.2% which indicates the sensor tool works well.

Keywords: wind, speed, ATmega 8535, ZigBee