

IOT ENABLED VENTILATOR MONITORING SYSTEM FOR COVID-19 PATIENTS

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ABSTRACT

This study aims to (1) produce a monitoring and control system for a breathing apparatus (Ventilator) based on the Internet of Thing (IoT), (2) test the performance of the IoT system when monitoring variables on the ventilator machine, (3) test the performance of the system. IoT to perform parameter settings on the ventilator machine. The IoT protocol is expected to provide protection to medical personnel in handling Covid-19 patients, when monitoring and setting up ventilators. The method used is Define, Design, Develop, and Disseminate (4D). Data collection is done through (1) Testing and Observation (2) Questionnaire (3) Limited field test. This research produces a control and monitoring system for mechanical ventilators. The mechanical ventilator consists of a gripper motion mechanism driven by a dc motor. The movement of the gripper creates pressure and releases pressure on the ambu bag. The depth of pressure exerted by the gripper is measured as the volume and pressure of the air delivered to the lungs. The rate of pressure exerted is measured as the velocity of air flowing into the lungs.

Kata Kunci: *Ventilator, IoT, Covid19*