ABSTRACT

Cameras are devices that are susceptible to damage from various environmental factors, such as high temperature and humidity. The utilization of drybox cameras acts as a step to keep the camera in good condition by setting regulated storage parameters. The main objective of this research is to design a monitoring system for drybox cameras using BME280 sensor, TCS 34725 RGB Color Sensor and IoT-based servo and find out the Quality Of Service (QoS) in sending its data to ANTARES platform. allowing users to observe the status of drybox cameras in real-time and enact preventive measures in response to unfavorable parameter changes. To achieve this, this research uses BME280 sensors to measure temperature and humidity, TCS34725 RGB sensors to measure the color value of the silica gel in the dehumidifier in the drybox and servo as the drybox air valve. Based on the tests that have been carried out, the sensor readings found are not less than 6% for measuring humidity and temperature against the UNI-T hygrometer comparison and the TCS34725 sensor can also identify red and blue color values properly which then the data that has been collected is transmitted to the IoT antares server via the ESP32 DEVKIT V4 microcontroller. Then in sending it to antares, the calculation of QoS (Quality Of Serrvice) parameters is also carried out, which includes testing delay, Packet loss and Jitter in testing the three QoS parameters getting an index value of 3, which is good based on TIPHON standards Furthermore, this data is archived and presented to users through the ANTARES web interface.

Keywords: Drybox camera, BME280, IoT, TCS 3472