ABSTRACT

Inpatients are patients who needed a medical treatment with a concerned patient's serenity, safety, and comfort so that the patients's health development will be well-monitored by health-workers. A patient's room standard is needed to be monitored because the condition of the patient's room can also affect patient's health, so an automatic system that can measure the patient's room standard, and can be monitored by doctors, nurses, or health workers is needed. Therefore, the purposes of this research is to provide a patient's room monitoring system with an indicator if there will be any danger in the room and the monitoring system can be real time monitored. Other purpose of this research is to give a standardization of a patient's room which is the same with the standardization of patient's room by the Ministry of Health of the Republic of Indonesia. The patient's room standard's parameter that is used are room temperature, room humidity, light intensity, and room gas content. Those parameters's data is taken by clustered sensors using a fuzzy logic method. Fuzzy logic is a flexible method in its application and tolerant with imprecise data. After the research is tested, it shows that the patient's room clustering using fuzzy logic has an 88,3% accuracy with comparative data based on a standardized temperature, humidity, light intensity, and gas room content detection tool. When the patient's room has a bad quality then the system will give a warning on the indicator that is attached to the tool and also on the monitoring system application. This system is capable to show real time clustering data every 5 seconds and it can be accessed using website application.

Keywords: *standard, patient room,monitoring,sensor, fuzzy logic.*