ABSTRACT

The infusion set device used in hospitals is still manual. When a nurse wants to know the condition of the patient's intravenous fluids or control the speed of the infusion fluids, the nurse must approach the patient's room and in the end the nurse's activity is not efficient.

To efiicient the activity of the nurses which not have to approach patient rooms one by one by making monitoring system and controlling system on infusion set device. The sensors that connected to the network will be displayed on the web page located at the nurse post. The data from the sensor is sent through a real-time database of google's firebase and sent to the web page via the Apache web server. Web page design using bootstrap framework and html. There are two levels of users on this system, admin level-user and nurse or member level-user. At admin level-user the activities that can be done in the form of monitoring and controlling infusion fluid of patient, register patient and register member (nurse) in order to get access while at member level-user activities that can be done only monitoring and controlling patient.

From this final project obtained the test results that the average delay that occurred between firebase and web pages is 86 ms, below the standard of data application transmission delay according to the ITU-T of 100 ms. Thus this system can be categorized as an *IoT* system and can be applied by existing hospitals.

Keyword : *Web Interface, monitoring and controlling systems, IoT*