ABSTRACT

Friday prayers are a mandatory worship for Muslims. At Friday prayers, a series of agendas, such as khutbah, become one of the valid requirements of Friday prayers. Muslim pilgrims are also required to listen to the khutbah delivered by khotib solemnly, for a mosque that is not too large the Muslim congregations can still touch the khutbah and see directly when khotib deliver the khutbah, but in a large-capacity mosque not all worshippers can listen to the khutbah delivered by khotib directly because of some disturbances such as there is a wall, in the mosque's courtyard, and on a different floor. Therefore, the use of external displays such as monitors or TV that can display khotib when delivering khutbah can help the congregation be more solemn when the khutbah is recited.

To accommodate this, a system displayed khotib when greeting the khutbah using a tool that can detect whether khotib has climbed to the pulpit and delivered the khutbah. Wemos D1 R2 was chosen to be the central processing of the text of whether khotib was on the stand and delivered the khutbah and send the detection data to the local server to set the view to be visualized to the worshippers.

The test results of this tool had an average accuracy performance of the sensor reached 99% at a test distance of 1 meter and the data was sent in real-time with the trigger of a change in the status of khotib there and did not exist with an average delay of 43.76 ms and an average through "put sensor" of 76.8 kbps from hardware to the server using the HTTP POST protocol.

Keyword: Smart Building, Arduino, RTSP, Sensor Ultrasonik, HTTP Method.