ABSTRACT

The process of transmitting information has become more sophisticated lately, such as through digital information boards, but still has deficiencies in performance. Many information boards use personal computers (PCs) and use access points (APs) as wireless devices to connect to the network, this causes the installation of hardware that is quite complex and requires infrastructure, besights that the sistem used to update information is used manually or one one by one, and also the completeness of incomplete information content.

Therefore, the final project has been designed and realized a digital information board based on Raspberry pi as a PC replacement. This sistem uses an ad-hoc network to interconnect boards with each other instead of AP. so that it can reduce costs when building a network and does not require infrastructure, and created a live streaming and video on demand service using ip cam software that is connected to Raspberry pi, the content in the form of video will be compressed so that it is easy to send so that when you want to display videos not too heavy because it has been compressed. display on digital information boards using the web with HTML, PHP, and MYSQL programming languages.

On the results of network testing implemented on digital information boards in 2 scenarios, namely LOS (line of sight) and NON LOS (non line of sight), different values are obtained, the results obtained in the LOS scenario, HTTP: throughput 0.0193Mbit / sec, delay 0.133sec and 0.208sec jitter, video streaming: throughput of 0.027Mbit / sec, 0.255sec delay and 0.436sec jitter and live streaming: throughput of 0.154Mbit / sec, 0.085sec delay and 0.160sec jitter..

***Keywords**: Raspberry pi, Web server, Network*