ABSTRACT

ANALYSIS AND DESIGN OF LED DOT MATRIX DISPLAY VIA WIFI USING ANDROID MOBILE APPLICATION

Dot Matrix LED Display is an electronic information delivery medium consisting of Light Emitting Diodes (LED) that are connected matrix with a combination of rows and columns. With the presence of digital media, this is a solution if the announcements / news are always changing every time can be controlled via an android smartphone so, that its use will be very practical that can be controlled remotely.

In this Final Project, a prototype of the Dot Matrix LED Display control system will be designed using a non-preemptive scheduling algorithm and NodeMCU microcontroller that is integrated with an Android smartphone using IoT features.

The results of this study are testing the success of sending text by testing the delivery of texts 30 times each in the morning, afternoon and evening. The test results if during the day are susceptible to interference because the Wi-Fi signal will be less stable compared to morning and night. Then the time of sending text to the system will be less than 1 second.

Keywords : *Dot Matrix LED Display, NodeMCU, Non-preemptive, Smartphone.*