ABSTRACT

Information needs are important for society in this more advanced era. Media

information takes various forms, from conventional to unconventional. LED

display is one of the most widely used information media because it is more

attractive to look at. To be able to work the LED display requires a microprocessor

that functions to operate data including sending data, data display settings, and data

changes. The use of microprocessors is considered inefficient because of the low

price. In addition, the control to operate the LED display is usually done by directly

accessing and using additional devices such as a keyboard or flash drive which is

difficult for the operator if the LED display is in a high place. LED display is mostly

used for running text which only displays letters and numbers which reports are

monotonous.

The result of this final project is a system LED display that can be controlled

wirelessly via a website without having to directly access the LED display. The

distance that can be taken to control the LED display is up to 45 m with or without

obstructions. The LED display can animate 2 images and text on a 32x64 pixel LED

display with the use of electrical energy for both types of animation simulated in a

simulation is around (2.9 - 3.0) Wh to increase the maximum maximum. Control of

the system's LED display uses a microcontroller which functions to operate data

including data transmission, data display settings, and data changes. Animations

can be made in the form of animation options, animation speed, and text and clock

options.

Keyword: *Microcontroller*, LED *display*, *Running text*