

## **ABSTRACT**

Hendry Prawira (08320030004)

### **Designing Lamp Remote Control System Based on Short Message Services**

(xiii + 77 pages: 51 figures; 15 tables, 5 appendixes)

Designing the vast popularity of Short Message Services, this technology is commonly used for connecting people in different locations. How this technology can be applied for various areas, particularly in controlling bulb remotely, gains interest in this research. Together with microcontroller, a basic system was developed to activate bulbs. This research focuses on processing the defined scenario by examining the encoded command message to obtain how reliable the system is.

The design of this remote control system consists of three modules, i.e., control module, base terminal, and PC. The control module operates the central function of the system; whereas the base terminal is used to receive and send messages. PC is used to store incoming message temporarily. Furthermore, in order to ensure the authority of the message sender, the system applies a procedure of verification and validation before processing the command.

On average, a number of tests conducted have shown the system successfully completed the command 100%. Unfortunately, the rate while the system sends the respond message as a replay is not as high as the system completes the received command. The rate about 79.17% indicated that GSM network traffic contributed much in the success of the reply message sending.

References: 19 (1995 – 2006)