

## **ABSTRACT**

*The advantages of SMS (Short Message Service) like simple, cheap and be fast, are the reasons to develop the applications based on SMS. In this final project had been designed and realized an SMS application like display by using Dot Matrix LED based on microcontroller AT 89S52 that show the information to the public.*

*The information which is showed is academic information and presented to STTTelkom community. Two lines display gives good information enough to the people, where line one consist of the information and line two is the user ID. The writing format of SMS which has been decided keeps the accuracy of user identity. So, there is not hesitant for the information because the user ID and password have been listed.*

*The design and realization of this device consist of three part / blocks. They are controller block for controlling all system, counter block for controlling the display, and dot matrix display block with 50 columns and 7 lines for showing the information.*

*The experiment and implementation have similar results with the theory. First, message will be showed on display if SMS is sent with the correct ID, password, and writing format by user. Second, the execution time for SMS sending with the correct format is slower than execution time for SMS sending with incorrect format. Because the SMS with correct format need to be checked more detail. Third, each message will not join overlapping because of the interrupt system.*