# ABSTRACT

Hendra Suryadinata (08320040015)

## SYSTEM MINIMUM ONE TIME PASSWORD USING IC89C51

( xiii + 62 pages: 42 figures; 5 tabels)

In general, people create static password for gaining permission to any restricted access. Every time they want to access the system, then they are required to provide their own password. This means needs password memorization prior to one's authentication. However, this type of security cannot provide high protection for the password owner from any illegal attempt made by unauthorized user, such as sniffing a password through detecting letters typed-in by the user. In contrast to static password, dynamic password provides unique password based on real time. In this scenario, unsynchronized time between the pad and the computer any user is working on will result in failure of granting the user with privilege to the computer resource.

To implement the concept of dynamic password, a minimum system called One Time Password is developed. Basically, this system combines minute, hour, date, month, and year from RTC (Real Time Clock) for making up eight-digit password and will changes every two minutes as displayed on the pad's LCD screen. This unique password will matched with computer to determine whether the user is granted or not.

By conducting some test, the result indicates a success as shown by the fact that the pad can synchronized its time with computer's time automatically, and the system can generate valid password for the user. To this success future work may deal with designing a complex system that provide more secure authentication.

References: 13 (1995 - 2009).