

## ABSTRACT

Nowadays, technology grows very fast, not only from the side of the device, but also its application. IT Telkom is one of the institution telecommunications technologies-based which utilizes a variety of devices and applications so that all activities undertaken on campus walk with a practical, fast, and smoothly by using available technology. *Presence* system is always done every hour lectures at IT Telkom. So far, the system performed tend to still manual, that is by distributing a list of *presence* and then sign it or call a name / student ID, one by one. Therefore, in this final project describes the design of the *presence* mahaiswa system using *RFID* (Radio Frequency Identification) and *embedded ethernet* with TCP/IP network-based. The goal is to shorten the process of *presence*, to shorten the process of updating *presence* data, and optimize the use of IT Telkom student ID card.

In this final project, the output signal *RFID* reader ID-12 in the form of digital signal will send through pin 9 to pin RXD (PD.0) microcontoller. Microcontoller ATMega 8535 is used to pass the parallel data into serial before being sent to the network through WIZ110SR module using serial transistor circuit. WIZ110SR serves as a converter from serial protocol to TCP / IP protocol. Users can perform monitoring using a PC which is connected to the network. On the PC made a software that can display results each time a student *presence*.

Key words: *presence, RFID, embedded ethernet*