

## **ABSTRACT**

Electrocardiogram (EKG) is an image of electrical current that produced by heart ventricles in a beat. EKG gives us information about the heart condition. It is made by placed some electrodes at our body to take some weak signals from the body to the monitoring instruments. Electrocardiogram standard makes it possible to compare signals from people who have normal condition and the one who has abnormalities.

Doctors mobility in handling patients, sometimes forced them to check patients conditions from other places. Some types of medical data need to be measured, collected, processed, saved then sent to another place. One form of medical information is electrocardiogram (EKG).

Availability of telecommunication means that suitable with telemedical needs has been held lots in Indonesia. Public switch telephone network (PSTN) is one of media that can be used as an alternative in this system.

The problem is how to build an information system that able to transfer data from measurement tools at patients place to their doctors.

This final project has designed and created that information system by doing lab experiments in sending Electrocardiogram Data (EKG) through PSTN (Public Switch Telephone Network). Data collecting techniques that uses is observation, where data was received from experimental results and tool testing. System design has two steps, there are designing and realizing hardware at transmitter and receiver's place, and also software design and realization at PC for store and forward process. After finding suitable spesification, the next steps are implementation and also hardware and software testing.

The result is an implementation of an interface tools to send electrocardiogram data through PSTN (Public Switch Telephone Network).