

## ABSTRACT

There are many ways that can be done by medic specialists to analyze someone's health condition. For example to analyze someone's heart condition, medic specialists can use Photoplethymograph (PPG) equipment. PPG is used to measure the condition of blood circulate which is pumped by heart to certain organ in human body. From the measurement result, we can know the whole condition of someone's heart in certain period of time.

Nowadays, PPG has been fully equipped with computer using cable network or wireless network to communicate. However, the using computer is less effective because it's big size and just can use in fix place. To cope that lacks, computer can be changed with mobile phone (handphone, smart phone, or PDA). The using of mobile phone which has smaller size, will simplify to use PPG anywhere and anytime.

In this final assignment, will be implemented PPG that is connected with mobile phone using wireless network. Wireless network that used is Bluetooth. Bluetooth module that used is Embedded Blue from A7 Engineering. The using of PPG signal will be focused to measure heart beat in certain period of time and display graphic PPG in mobile phone. That graphic can be used by medic specialists to know someone's heart condition.

**Key words:** *Photoplethysmograph (PPG), Bluetooth, Mobile phone*