

ABSTRACT

Prosthetic hand is a prototype of human hand that works based on result which obtained from EMG signal. Electromyography (EMG) is a technique used to obtained electrical activity from muscles. Electromyography used an instrument called electromyograph to produce an Electromyogram (EMG) signal.

In previous research, prosthetic finger movement were controlled by Electroencephalogram (EEG) signal which obtained from electrical activity produced by the brain. However, the use of EEG signal to control the fingers movement obtain a small accuracy value, the large number of channels and produces noise when eyes blinked during EEG signal acquisition.

In this Final Project a prosthetic arm made which works based on electromyography (EMG) which produced by human hand. The EMG signal then signal processing is carried out and function as an input that can control the servo motor so the response that obtained corresponding to original finger movement.

Keywords: *prosthetic fingers, EMG signal, flexion, extension, servo motors.*