

ABSTRACT

Archery is an activity that using bow to shoot an arrow on target. The activity has been estimated around 9,000 – 10,000 BC, by found in Stellmoor in Ahernsburg valley. In the archery there are archer who shoot the bow, the arrow are sharp weapons that are long, pointed at the end, and the last one is bow are weapons to shoot the arrow. By the times, archery become modern and developing into weapons for war and became one of olympic sport.

In modern archery there are many type of bow, including tranier bow, recruiting bw, compound bow, mongolian bow, and many more. With many types of bow that exist, the ability of the arm is required in the case of pulling an arrow from the bow. By knowing the ability of the arm, athletes can determine kind of bow they capabilities. Therefore, the writer will conduct analysis by observing the arms of athletes to determine caharacteristics of the athlete's arm. The research is conducted by placing an EMG (Electromyograph) sensor on the athlet's arm, then process the signal of sensor using Quadratic Discriminant Analysis.

For the result of analysis the author found that in 14 Kg class obtained an average similarity of EMG signal without testing data in 50% with 50% of miss data, and with testing data the similarity value were 62% with miss 38%. In 26 Kg class, the avarage similarity of EMG signal without testing data in 32% with miss 68%, and with testing data the similarity value were 41% with miss 59%. The signinficant differences between classes are duet o lack of training data and testing data.

Keywords: Archery, Quadratic Discriminant Analysis, EMG, Full Draw.