ABSTRACT

Badminton Service Referee is an important role in the leader's match, not only the match in the match but also can be a helper, enforcer, separator, judge, determinant and others. The referee is the main factor in determining the smooth running of the match, the badminton referee is divided into 3 parts, namely the main referee, the main referee as the leader of the match, the service judge referee provides the main referees directives to provide direction and judge referees enter or exit using hand signals.

This final task has a function that can help communicate between the referee and the audience. With the help of the flex sensor it is expected to be able to maximize and reduce errors when leading badminton matches. The sensor uses an accelerometer sensor that uses a sensor used to measure the acceleration of an object and a device to measure directing coordination, with the principle of establishing angular momentum, this tool works in conjunction with the accelerometer.

In this final project the writer can produce 100% good accuracy and the lowest is 73% testing which focuses on trying one movement at a time. Furthermore, for testing all movements the highest accuracy results are 87.5% and the lowest result is 62.5%. This is influenced by the continuous tool usage factor, the flex sensor which has a tolerance value of ± 30% and the influence of the quality of the sensor used. So that the results of the displayed image do not match. Another factor that the tool fails to display is the interface between Arduino Uno and Ms Visual Basic which cannot appear on the screen.

Keywords: *badminton referee, judge service, sensor fle, accelerometer, arduino.*