

ABSTRACT

Motion capture is a process to obtain data that describes the movement of humans or animals. The motions that are captured are real movements which are then applied to digital media. There are two types of tools for MoCap, namely MoCap tools that use markers and MoCap tools that do not use markers (markerless). The IMU sensor is one of the MoCap marker tools that has advantages and disadvantages.

In this study, movement data was recorded using the MPU-9250 sensor and a multiplexer to connect the I2C addresses to the five MPU-9250 sensors finger, which movement can be used as material for animation.

Based on the results, the five finger MoCap hardware simulation based on the IMU sensor, the IMU sensor data using a Complementary Filter and without using a filter produces pitch, roll and yaw error values. The smallest error value using Complementary Filter on the five fingers is 0.06110% and the smallest error value without filter is 7.29331%.

Keywords: *Motion Capture, MPU-9250, I2C, Firebase.*