ABSTRACT

In the online teaching process (online) a teacher is necessary describes the material clearly and has a broad perspective so that the material can delivered completely. The problem occurs because the camera has different viewing angles limited, this resulted in teachers not free to move and explain material on a broad chalkboard.

For this reason, a motion tracking camera is designed which is the same as the camera a stand that can move to follow the teacher's upper body. The camera will be connected with components such as 2 MG996R *servo to move the camera X-Axis and Y-Axis. Then with OpenCV technology, the camera will track the teacher as an object and follow the direction of movement of that object.*

The results obtained from this final project, it is concluded that by integrating from python to video conference and without video conferencing the system can detect the upper body at a distance of 2-6 meters. For the X-Axis servo motor angle for conditions using video conference and without video conference the servo can rotate by detecting the upper body at angles of 30^o, 60^o, 90^o, 120^o and 150^o. Then on the Y-Axis for conditions using video conference and without video conference the servo can rotate by detecting the upper body at 90^o, 100^o, 110^o, 120^o and 130^o angles. The test was carried out in a room with an area of 9.1 m x 7.4 m, the light condition of the room was 116 lux and the object height was 1.5 m and the camera height was 0.8 m.

Keywords*: motion tracking camera*, *OpenCV, upper body.*