ABSTRACT

Star telescope is an instrument of vision device that can be used to see objects far away to look more closely and clearly, its use is required at least the technical skills and knowledge of sky maping. This makes use of the telescope to be ineffective. Thus, is need for controlling the movement of telescope with a personal computer utilizing a controller but still human-assisted.

At this final project, made a motion control device as a reference point the telescope with its motion. Actuator to telescope uses two servo motors have different torque values adjusted to the weight. Each servo motor will move the telescope toward the X-axis and Y-axis. Device testing is done using a laser pointer telescope mounted on the tip that leads to a corner of the screen to calculate the angles of motion of the telescope. Input angle entered in the interface installed on a personal computer using Visual Basic 6.0 software. Test for motion direction angle X-axis or to the right and left are 1^0, 5^0, 10^0, 20^0, 30^0, 40^0, 60^0 and 80^0. The corner of testing for Y-axis direction of motion or upon the 1^0, 5^0, 10^0,20^0 and 50^0.

Final results of which have made the telescope motion control device can perform a maximum X-axis direction of motion of 80^0 while the maximum Y-axis direction of motion of 50^0. The device controller has an error angles about 3.72^0 and error rate of 48.21%.

Key words: telescopes, personal computer, servo motor