ABSTRACT

Humans through their life always communicate with one another. Either between individuals or groups. Generally, humans communicate using oral and written use. However, there are humans who have limitations so that they cannot communicate using spoken words. For a solution to this problem, there is already a way to communicate using sign language by hand. But not all people understand sign language. To find a solution, bend sensors are used to make a tool that can translate hand sign language. The bend sensor will later be modified so that it can measure finger movements.

The total number of letters tested was 26 letters using the Sistem Isyarat Bahasa Indonesia (SIBI) which only required one hand to use. Then the Bend sensor is placed on the back of each finger to read the movement of the fingers, and the accelerometer is placed on the back of the hand. There is a first test by focusing on one letter and a second test with all letters at once to find out the work results of the tool.

Through this research, the authors get the highest accuracy results of 100% and the lowest accuracy results of 50% on tests that focus on each letter. Furthermore, by testing all letters, the highest accuracy value is 73% and the lowest accuracy is only 53%. This is caused by the user factor when doing sign language, and the tolerance value of the bend sensor resistance at 30%. So that the input value read by the sensor does not match the sensor input value that has been set for each letter. This factor is the reason the tool fails to read the desired letter and causes an error in the appearance of another letter that is not desired or the appearance of two letters together due to the proximity of the size of the letter.

Keywords: Communication, sign language, sensor bend