SMART COMMUNICATION HAPTIC GLOVE FOR DEAF AND DUMB PEOPLE

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Abstract-**Technology is developing day by day but no significant developments are under taken for deaf and dumb people. Deaf and dumb people have no ability to interact with their environment. Such people depend on the sign language. We design and implementing the smart communication for deaf and dumb people using line sensor. The glove record the gestures made by the user and then it translate their gestures into visual form**

I.INTRODUCTION

According to the statistics of the world federation of the deaf and the world health organization approximately 70 million people in the world are deaf and dumb people. The majority of speech and hearing impaired people cannot read or write in regular languages. Sign language is the native languages use by the deaf and dump to communicate with others. To solve this problem using two modes of operation in this system. If measuring the actions performed by the deaf and dumb people using resistors array (analog sensor) attached to gloves in a hand of the user. Once the glove is placed in the hands, whenever an action for sign language is accomplished, the analog voltage value acquired and the analogous action is recognized by the arduino uno board. LCD display and BLUETOOTH is used as output device to convey the message from deaf and dumb people to the receiver. Also play-back is used to play the respective sound. Arduino IDE and proteus software tools are used for compiling software coding and simulating the design. This project detects the movements of deaf and dumb or paralyzed patients and result, action show on LCD screen and alerting notification as we desired, and plays the stored sound in the play.Haptic relating to the sense of touch of sensation can be convert to meaningful sentence by using line sensor.

II.LITERATURE SURVEY

A smart glove available in the market that uses a sign language recognition system is implemented and it is translating their gestures into meaningful English letters. They found the sign language for all English alphabet letters. It is difficult to communicate and it takes more time to complete single word or sentence [1].sign speech/text system presents designing and implementing smart glove for deaf and dumb people. Translate sign to Arabic language by a haptic gloves.They found the sign language for alphabet letters in Arabic sign language. This language is cannot understood by all normal people. It can only understood by Arabic people it also take more time[2].hand gesture recognitionpresents a sign language for numbers. The main advantage of this presented in accuracy.This publishes numbers from 1to10.They found the sign language for a numbers from 1to10 and they use only one hand for gesture recognition. It takes more time to display one number to another[3].Hand talk assistive technology presents a sign language for required sentence by using flex sensor. Flex sensor is used in one finger. This method is used by all deaf and dumb people. They found the sign language for only two sentences. In this flex sensor it create only one sentence for single bend and it is costly.[4]

III.BLOCK DIAGRAM

GENERAL WORKFLOW

Every person hand shape is unique . This creates a lot of variability and it was required to create a device that enclose of these variations.Arduino is a open source electronic platform. It uses simple programming language for input commands and simple hardware output.Line sensors are expensive high end wired gloves can also serve haptic assessment which is a simulation of these sense of touch.