# An Electronic Support System for Dumb and Paralyzed Person

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## ABSTRACT

This project is about the development of a novel electronic speaking system for dumb and paralyzed persons. Due to their physical disability, an attender is always required to monitor and help their day to day activities. However, most of the time, attender is idle and the attender time is wasted. Hence, an electronic system is proposed in this project to help the dumb and paralyzed persons to communicate their need to the attender. The attender may be entrusted with other work during the time, when dumb and paralyzed persons do not need the support of attenders. This avoids the attenders continuously monitoring the dumb and paralyzed persons and the attenders may engage themselves in other works.

Keywords: Electronic speaking system, Physical disability and Paralyzed person.

## 1. INTRODUCTION

Nowadays the speechless and paralyzed people couldn't fulfil their needs and requirements. Due to development of this system is at first to speak for the speechless and paralyzed people in order to fulfil their basic needs thereby to make them independent self-reliable. The developed assistive aid produces voice which is audible to the care takers so that they can react for the voice message.

The aims and objectives of this project:
1) Basic object of this project is to design a portable embedded system.
2) To develop an economical and simple solution for the detection of finger gestures.
3) Cost effective, reliable data acquiring method and signal conditioning.

## 2. PROPOSED SYSTEM

In this project we propose to develop a simple communication system for the benefit of dumb and paralyzed persons. When a person needs some help/support, he or she shakes (makes movement) head/hand/finger, and the speed is measured by the accelerometer. The output is predefined by voice driver circuit. The heartbeat sensor and temperature sensor is used to sense the patients for 24/7.If any changes occurs, it will intimate to the attender by using the GSM through corresponding mobile phone number. This can help to understand the need of such dumb and paralyzed people.

| S.No. | Title | Author Name | Year of Publication | Content |
|---|---|---|---|---|
| 1. | **Speaking Gloves For Speechless Persons** | Abjhijt Auti, V.G.Puranik, A.K.Kureshi. | **Feb 2014** | Glove with Internal flex sensors produce a proportional change in resistance of various elements. |
| 2. | **Electronic Hand Glove Through Gestures For Verbally Challenged Persons** | Mukesh P. Mahajan, Devyani Badve, Pooja Sonar, Sayali Sonawane. | **April 2016** | Glove with contact switches will be converted into synthesized speech to convey an audible message to others by wireless system. |
| 3. | **A Speaking module for Deaf and Dumb** | Divyanshee Mertiya , AyushDadhich , Bhaskar Verma | **Aug 2016** | Glove with flex sensors and wireless data transmission by Bluetooth chip in android mobile. |

## 3. EXISTING SYSTEM

In recent years, for human computer interactions hand gesture recognition is used mostly. They play an important role in gaming and control application i.e. 3-D mouse, Tele-robotics & virtual reality controlling. Rather than this, it is also used in those applications which aid the physically challenged community as dumb and paralyzed people. So, primary requirement for conversion of sign people to speech is Hand-gesture recognition. Hand-gesture recognition project is very useful for dumb and paralyzed people; it can also be used by the patients with half of their body paralyzed as they couldn't speak.

Currently the existing speaking system for dumb and paralyzed person uses, separate sensors used for monitoring for each and every system. In one system, the messages are transferred by wireless and in another system, the messages are transferred by Bluetooth module. These systems are used by short distance communication and in case data's are got loss in the wireless transmission lines. In existing all systems they are used only FLEX SENSOR. By this flex sensor the restricted movements of paralyzed (stroke) patients cannot flex their hand or finger.

## 4. BLOCK DIAGRAM
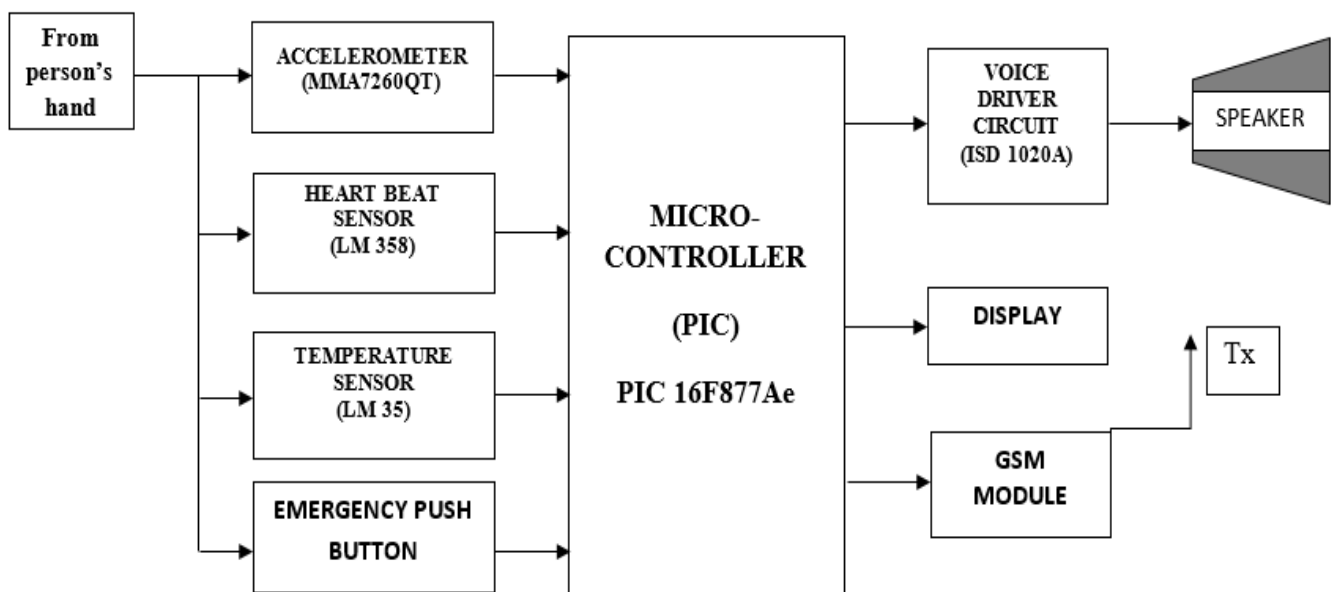


## 5. CONCLUSION

The proposed system is the useful tool for speech impaired and partially paralyzed patients which fill the communication gap between patients, doctors and relatives. This system is proposed to improve lifestyle of dumb/ paralyzed person's. It will give dumb and partially paralyzed patients a voice to speak for their needs and to express their gestures. It requires low power operating system and having less weight. This project is helpful for the industry of people working in the area of designing systems based on microcontroller applications. To support more number of signs, and different languages mode the system can be extended. In future, designing of a jacket which will be capable of detecting movement of animals can also be done by improving the project. Project's efficiency can also be enhanced by doing different hardware development strategies and various programming techniques.

## REFERENCES

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[3] Divyanshee Mertiya, Ayush Dadhich, Bhaskar Verma, "A Speaking module for Deaf and Dumb", *August 2016, Jaipur, Rajasthan, India.*