PROJECT REPORT

ON

**American Standard Sign Language Representation Using Speech Recognition**

SUBMITTED BY

1. Amruta Bhujbal
2. Priya Khandagale
3. Pradnya Balwadkar

DEPT. OF ELECTRONICS & TELECOMMUNICATION

P.E.S’S MODERN COLLEGE OF ENGINEERING

PUNE – 411 005.

UNIVERSITY OF PUNE

2013 - 14

CERTIFICATE

This is to certify that

1. **Amruta Bhujbal Exam No:B80313035.**
2. **Priya Khandagale Exam No:B80313102.**

**3. Pradnya Balwadkar Exam No:B80313105.**

Of B.E. E&TC have successfully completed the Project Seminar titled ‘**American Standard Sign Language Representation Using Speech Recognition**’ during the academic year 2013-14.This report is submitted as per the requirement of B.E. E&Tc Engineering as prescribed by University of Pune.

**Principal H.O.D. Project Guide**

**P.E.S’s MCOE, Pune-5 E&TC Prof.Mrs.H.M.Kanitkar**

**Dr. Mrs. K.R.Joshi Prof.Mr. V. N.Patil Prof.Mrs.V.N.Jirafe**

ACKNOWLEDGEMENT

Every person to be successful needs someone who can give him or her proper guidance to achieve their goles.Being no exception,we want to acknowledge the guidance and support of these people in very beginning of the report.

I would like to express my sincere thanks and gratitude to the faculty of P.E.S.Modern college of engineering for giving us the opportunity the conducting projects and motivating us. We are extremely thankful to Mrs.H.M.Kanitkar and Mrs.V.N.Jirafe as our project supervisor for their constant guidance inspiration and co-operation and .We would like to express our sincere gratitude to H.O.D. Professor V. N. Patil for giving us this great opportunity to learn all these new things.

And further, we express our deep regards to our respected principal DR.Mrs.K.R.Joshi For her valuable experience and constant inspiration without which we would not have completed this project.

**ABSTRACT**

Project aims at recognizing spoken words and represents the words using American standard sign language via a robotic arm. The application uses MATLAB to achieve it. Our idea behind this project is to help the deaf and the dumb to recognize the words spoken more efficiently. To bridge the communication and expression gap between the normal people who cannot understand the sign language, and the deaf and dumb who cannot understand the normal speech.

For that this project provides a software package to convert the speech signal, (which does not have any meaning for the deaf and the dumb) into the sign language

Design of the software package is based on the principle of ‘speech recognition’ where the speech is converted to the text and passes the command as isolated words to hardware which represent the signs and also to software which animate the signs.

A-S-S-L enables the dumb and deaf to speak with their hands which represent their tongue. A-S-S-L is an American standard sign language was demonstrated around 1980 in United States and many other countries, to provide education for the people who have problem in speaking and hearing the words (the deaf and the dumb).

For this METLAB software is used for speech recognition. Speech recognition technique used is Mel-frequency cestrum coefficient refried from IEEE paper. ARM7 is used for hand assembly working, which will represent signs according to A-S-S-L. Servo motors are used in hand assembly.LCD is used for debugging purpose.

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