
Handicap Person's Mouth Painting Tool (HPMPT)

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ABSTRACT— *Speech recognition technology is one from the fast growing engineering technologies. It has a number of applications in different areas and provides potential benefits. Nearly 20% people of the world are suffering from various disabilities; many of them are blind or unable to use their hands effectively. We design Painting tool for handicap person those are unable to use their hands. This tool effectively gets the height and width of the shape, shape name, color, finally draw from speech input draw the specified shape in painting area. So my ideas are handicap person can easily draw their ideas on painting platform. HPMPT is specially based on “Digital India”*

KEYWORDS— *Speech recognition, engineering, disabilities, painting, shape, color, Digital India.*

INTRODUCTION

Speech Recognition is the voice input technology, Handicap person are more difficult to put their ideas on specific platform because of their disabilities. We design Painting tool to draw the ideas on painting platform. Nearly 20% people of the world are suffering from various disabilities; many of them are blind or unable to use their hands effectively. The speech recognition systems in those particular cases provide a significant help to them, so that they can share information with people by operating computer through voice input. This project is designed and developed keeping that factor into mind, and a little effort is made to achieve this aim. Our project is capable to recognize the speech and convert the input audio into text; it also enables a user to perform operations such Shape painting like “Rectangle, Oval..etc.”, Color etc. HPMPT is designed in Microsoft.net 3.5 framework using C# programming in Microsoft visual studio 2010 environment Microsoft Windows Speech Application Programming Interface (SAPI) 5.3 and, system speech recognition and system speech synthesis namespaces are used for speech to text conversion and vice-versa.

PREVIOUS SYSTEM (BEFORE HPMPT)

In existing system, for handicap person there is no way to implement their ideas on specified platform, many person with disabilities like hearing , from eyes, from hands and many more. Handicap person are mostly practical oriented and research base. So how they use their ideas?

So, out next topic to use of HPMPT tool and its advantages, purpose. These System mostly dedicated to “**Digital India** “ mission.

SPEECH CATEGORIES

A few classes of speech recognition are classified as under:

1) Isolated Speech:

Isolated words usually involve a pause between two utterances; it doesn't mean that it only accepts a single word but instead it requires one utterance at a time

2) Continuous Speech:

Continuous speech recognizers allow users to speak almost naturally, while the computer determines the content. (Basically, it's computer dictation). Recognizers with continuous speech capabilities are some of the most difficult to create because they utilize special methods to determine utterance boundaries.

3) Connected Words:

Connected word systems (or more correctly 'connected utterances') are similar to isolated words, but allows separate utterances to be 'run-together' with a minimal pause between them.

COMPONENTS OF SPEECH RECOGNITION SYSTEM

HPMPT WORKING

This application is mainly for handicap persons. The people who are not able to see and do activity can use this application. In HPMPT application, first input height as (X Coordinate) then next to input width (Y

coordinate) using speech. But some technical specification we put here only height and width parameter between 0 to 9. Then next its converted in height * 100 and width*100

(height,width)=(4,9)=(4*100,9*100)=(400,900).

Next step to input the shape name using speech like

1] rectangle 2] Oval

Here for HPMPT only two shape given for initially stage.

Last step is Color , using speech Color name is required like red, blue, green etc.

finally HPMPT ready to draw the shape with following parameter

- 1] (height,width)=(400,900)
- 2] Shape = Oval / Rectangle
- 3] Color = Red/Green/Blue

HPMPT ALGORITHM

For HMPT tool we use American ascent for speech library. Following are the step by step execution of HPMPT tool.

(Speech input) Shape Width
Numbers between 0 to 9
Conversion to 100
9 *100=900 HEIGHT

(Speech input) Shape Name
Rectangle / Oval
(initially only given two shape)

(Speech input) Shape Color
Red, Green, Blue etc.

Draw the shape at specified
location with color

HPMPT SYSTEM SPECIFICATION

1. HPMPT tools design in VB.NET framework with c# programming language.
2. Windows Operating system

3. Speech Recognition SAPI 5.3 with *System.Speech.Recognition* engine

4. (c# speech library)

HPMPT APPLICATION

1. Start the HPMPT tool



2. Shape Height (4 * 100=400)



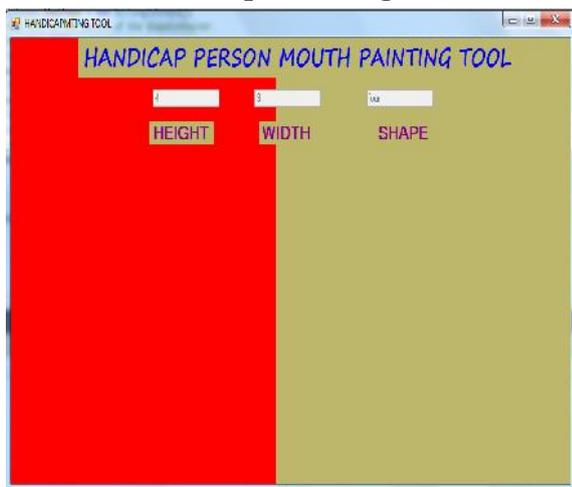
3. Shape width (9 * 100 = 900)



4. Shape = Oval



5. Shape=Rectangle



CONCLUSION:

Speech recognition is a challenging problem to deal with. We have attempted in this paper to provide a review of how much this technology has progressed in the previous years. Speech recognition is one of the most integrating areas of machine intelligence, since humans do a daily activity of speech recognition. It has attracted scientists as an important discipline and has created a technological impact on society as well as, is expected to flourish further in area of human machine interaction.

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HPMPT ADVANTAGES

1. There is no requirement of any extra device.
2. Designed for the handicapped person
3. Person can easily fill the color with height and width
4. Draw the shape with specified location
5. Improve the Digital India Concept.

HPMPT FUTURE ENHANCEMENT

1. More Shapes to be included in the software.
2. Shape size is between 0 to 9 but after converted into 100 ranges
3. Only two color given at primary stage (Red, Blue)