

Linguistic Voice App

Prof. Praveen Hasalkar, Masaratjahan Kudle, Mohammadi Kamplee, Prasad Chaudhari, Deepak Mali

Department of Computer Science and Engineering, Walchand Institute of Technology,

W.I.T-Solapur, Maharashtra, India

Abstract: A new form of augmentative and alternative communication device for people with severe speech impairment- the voice-input voice-output communication (VIVO). It recognizes the disordered speech of the user and builds messages, which are converted into artificial speech. Application development was accepted to employ the user-centred design and progress methods, which well-known and sophisticated key requirements for the tool. A new method for building small words, speaker-dependent automatic speech generates with reduced amounts of guidance data, was applied. The device is also capable of doing optimized searching. The voice input is used as search keyword and converted into the text first. This text is then given for searching over internet or with some predefined domains. The output obtained is optimized data and is then again converted into the voice output. The VIVO was evaluated to make use of the device to produce intelligible speech output from disordered speech input and also to use it as the question answering device. The trial highlighted some issues which limit the performance and usability of the device when applied in real usage situations, with mean recognition accuracy of 67% in these condition. These limits will be addressed in future work.

Keywords: VIVO, TTS

I. INTRODUCTION

People love their mobile phones because they can actually stay in touch wherever they are. Not just for talking, but mailing, texting etc. We are constructing with the growth of mobile phone technology. As the users are increase day by day, facilities are also growing. Beginning with simple regular handsets which were used just for making calls, cell phones have changed our lives and have become part of life. Now a day's cell phones are not only used for making calls but also they have countless uses and can be used as a Camera, Music player, T.V., Tablet PC ,Web browser etc. And with the new technologies, new software and system softwares are required.

In recent years, smart phones have placed an increasing importance on bringing speech technologies into typical usage. This centre has led to products such as talking server, which is used to implement speech-enabled telephony systems. Now let's limit our focus towards applications of android mobile phones. Mobile dictionary is the most widely used data application in the world, with 2.4 billion active users. But instead of searching the word meaning by typing, we just give input in the form of voice by just speaking the word of which we required meaning and also getting its meaning in form of voice itself minimizing the work.

II. AIM AND OBJECTIVE

The major objective of our project is to develop android application for answers to asked questions by giving input as well as getting output in the form of voice.

Objective includes

A. Speech to text conversion

This will include the conversion of speech into text by matching appropriate peach and frequencies, which is

done by servers holding large database regarding possible different peach and frequencies of a person's voice. This server is already built by Google.

B. Searching mechanism

After converting speech into text the searching mechanism is performed which include searching of that text is done by application itself and extracting the required output. The cache of recently used data is stored in memory.

C. Connecting via internet

If the desired data does not match with any cached data then it will search it over the internet.

D. Text to speech conversion

If the statement is found then it will be transformed into voice as an output of our application.

III. EXISTING SYSTEM

Whenever we want to get answer to a question we need to perform searching task in the huge thus wasting lot of time. In case of mobile phones need to type the whole question to get its resultant answer. This process involves considerable wastage of time as it is gives many of links instead of result. The process requires human interaction at each state and takes a lot of time.

We can briefly summarise the drawback as:

A. Manually typing of word

In the existing system, whenever you want to find from mobile phone you need to type whole text manually.

B. Less Efficient

The existing system is less efficient as it may not give exact data needed for every searched text as they give lot of links.

C. Time Consuming

As each and every time we need to type whole text, search accordingly and also need to go through the obtained links and open them then check for our need, read its meaning thus wasting lot of time.

IV. PROBLEM STATEMENT

User gives input in the form of voice, this voice is converted into text and this text is searched in the data residing in application itself and extracts its meaning, then this meaning will be converted into voice. If the entered data is not found in mobile-cache then it will be sent over Wikipedia, Google etc. to extract its meaning and gets converted into voice. Finally the client will be getting the resultant answer in the form of a voice for the searched result

V. IMPLEMENTATION

Here we are using eclipse for writing android source code for designing interface and creating various processes included in application. Beginning with the conversion of the voice to text, this is performed by matching the person's voice pitch and frequency then finding the appropriate word, this task is performed by Google servers having huge database regarding different pitch and frequencies.. then the resultant text is searched in the dictionary through searching technique and if the word is found its corresponding meaning is extracted and given as input to the another process where this text is converted into voice, the text to voice conversion takes place internally and we are getting output as voice saying the meaning of the word which we have spoken as input.

If the word is not found in the dictionary then it is sent over the Wikipedia to search the word, the first paragraph after that word is extracted and stored in the temporary storage space and also given for further processing where

it actually gets converted into voice as final output. For storing the dictionary and creating temporary storage space the database is required. For this purpose we are using SQLite database which is very simple and suitable mini database system. Separate space as provisional storage has to be made to store the word and its meaning which is not found in the dictionary but searched over the Wikipedia, this word along with its meaning is stored in the temporary storage for quick accessing of word meaning instead of again searching it over the Wikipedia. The block diagram of the whole system shows in the fig

VI. FUNCTIONAL FLOW

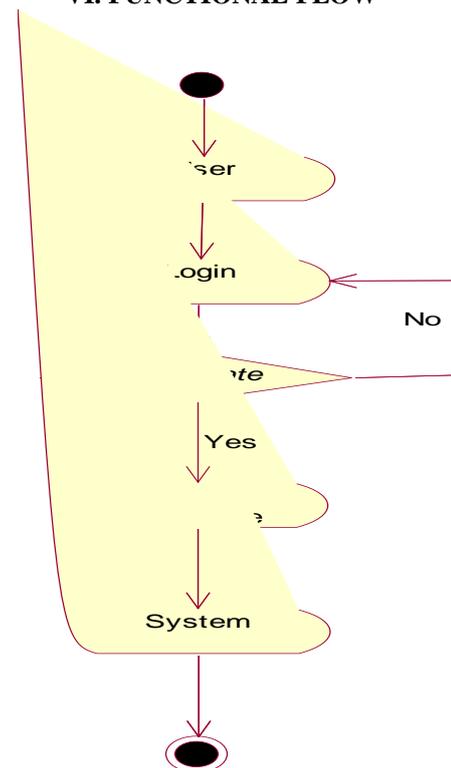


Fig.1. Flow diagram

VII. DESIGN



VIII. UNITS

A. speech-to-text conversion

The main requirement of every speech to text conversion system is a database which will match up to peach with frequencies. If we build up the system which will convert the speech into text worldwide that is for any user it is hard job because the frequency of giving input of any user is different as that of other user. If the system is global hence we are creating it for the mobile user means our job is very much difficult there are millions and billions mobile users and sound frequency and peach comparison is difficult. Hence we need to use database which is already provided by "Google". If we try to create the database manually it will generate time and space problem. To create such a vast database lot of time will be wasted and this project is for mobile users whose internal memory of mobile is generally low and the database for this is system is very vast. In its place of creating a database for this system we need to use accessible database which is available at the web server. The speech input is collected in the container and the send it to the peach and frequency comparison there cognition take place. To get correct text which is spoken we need training on input file and the output is collected in the text file.

B. Searching Mechanism

The system includes three searching mechanisms are as planned below:

i. Searching in dictionary

After converting the speech into the text the searching mechanism search the text meaning in the dictionary residing in mobile itself and extract the meaning of the text. If the text meaning is not found in the dictionary then it searches in the temporary storage.

ii. Searching in temporary storage

In this it searches the text meaning in the temporary storage and extracts the meaning of the text. This searching mechanism stores the text meaning for a particular slot of time. If the text meaning is not found in the temporary storage then it will be searched over Wikipedia.

iii. Searching over Wikipedia

Wikipedia search the meaning of given text and extract the Meaning of it. This extracted text meaning is stored in temporary Storage for some period of time.

C. TEXT-TO-SPEECH

Text to speech synthesis is converting the text to the synthetic speech that is as close to real speech as possible according to the pronunciation norms of special language. Such systems are called text to speech (TTS) systems. Input element of TTS system is a text, output element is artificial speech. where the actual conversion is done by storing some rules regarding text analysing like saving pronunciation of each alphabets with some exceptions, taking pause whenever space is been encountered while actual converting text into speech and so on.

IX.DETAILS OF SOFTWARE AND HARDWARE

A. Software Requirements

Operating System:-Android operating system.

B. Hardware Requirements

Mobile phone with specification.

- Android operating system (version 2.3).
- 650 MHz processor.
- 512 MB RAM.

X. CONCLUSION

This paper will demonstrate the plan and implementation of building an application which will give word meaning in the form of voice having user friendly interface and useful in day to day life for many users for finding the word meaning. This will also overcome on various disadvantages found in existing system thus making it more efficient and reliable.

REFERENCES

- [1] <http://www.android.com>
- [2] Android Developer Resources: <http://developer.android.com>
- [3] "Android Application Development All in one for Dummies" by Barry Burd
- [4] "Mobile Apps Development" by Anubhav Pradhan, Anil V Deshpande
- [5] Android Developer Tools Essentials by Mike Wolfson (O'Reilly Media).
- [6] Google <http://www.google.com>

BIOGRAPHIES**Prof. Praveen Hasalkar**

Department of Computer Science and Engineering, Walchand Institute of Technology, W.I.T-Solapur, Maharashtra, India

**Masaratjahan Kudle**

Department of Computer Science and Engineering, Walchand Institute of Technology, W.I.T-Solapur, Maharashtra, India

**Mohammadi Kamplee**

Department of Computer Science and Engineering, Walchand Institute of Technology, W.I.T-Solapur, Maharashtra, India

**Prasad Chaudhari**

Department of Computer Science and Engineering, Walchand Institute of Technology, W.I.T-Solapur, Maharashtra, India

**Deepak Mali**

Department of Computer Science and Engineering, Walchand Institute of Technology, W.I.T-Solapur, Maharashtra, India