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Email Framework for Blinds using Speech Recognition

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Abstract - *This project aims at developing an email system that will help visually impaired people. Due to integration of communication technology with internet the communication has becomes very easy in today's world, the very basic and important need for using the internet is accessing email. But some peoples like visually challenged people find very difficulties to utilize technology of internet because of the fact that using them required visual perception. That's why we make this project. This research has enable the blind people to send and receive voice based email messages with the help of computer system, this system is completely based on interactive voice response is make it friendly to user and efficient to use. Our proposed system GUI is evaluated opposed to the GUI of traditional e-mail server and we found that our proposed architecture performs more better than that of the existing GUIS. In this project, we use speech to text and text to speech technique access for blind people.*

Keywords:-TTS, STT CONVERSION and IVR.

1. INTRODUCTION

Internet has made life of people so easy that people today have access to any information they want easily communication is one of the main fields highly changed by internet. Emails are the most dependable way of communication over internet for sending and receiving some important information. But there is a certain horm for humans to access the internet and the horm is you must be able to see. There are some visually impaired people or blinds people who can't see things and thus can't see the computer screen or keyboard. A survey has shown that there are more than 240 million visually impaired people around the globe. i,e. around 240 million people are unaware of how to use internet or email , Hence we make this project for that type of people. IVR- Interactive Voice Response is a technology which allows computer to interact with humans using of the voice input or a keypad in telecommunication. IVR allows customers to interact with host system via a computer keypad and by speech recognition. Nowadays there are various technologies available in this world like screen readers, ASR (automatic speech recognition), TTS (text to speech), STT (speech to text), etc. But these are not much efficient for them. We have to make some internet facilities to them so they can use internet email. In this project we describe the VMAIL system architecture for windows platform that can be use by a blind person to send e-mails easily. The application uses 'text to speech' andvoice recognizer to facilitate sending emails using a desktop application.

2. LITERATURE REVIEW

Electronic mail i. e. E-mail is the most important part in day to day life but some of the people in today's world don't know How to make use of Internet, some are blind or some are illiterate.

1) In Existing system ,Blinds people does not send E-mail using the system , the multitude of email types along with the ability setting enables their use in nomadic daily contexts.
2) The research paper mention here have a separate website which consist of their own Database , Interface and also its own interface[1]. They have created their own mailing system in which the visually impaied people can send and receive mails via the the system only, no other systems like Gmail, Yahoo can be accessed.
3) In this, system maintains a database for user validation and storing mails of the user[1].
   The database is used to store the information of user like Username, Password his mails
   When user request for any information then information is restore from the database.
4) As authentication, compose, inbox. Also the user has to go through the process of signing-up which somewhere giving rise to the complexity of using their websites,also this is a websites,so there is one more obstacle for the visually impaired people to go their URL.
5) Presents an approach to speech recognition through the fuzzy modeling and decision making which is ignore noise rather than this detection and removal[2]. The speech spectrogram is converted into a fuzzy linguistic description and this description is used instead of resize acoustic features[2].
6) Main features are smooth and natural sounding speech can be synthesize , the voice charecteristics can be changed , it is "trainable [2].Conditions of the basic system are synthesized speech is "buzz" considering it is based on a vocoding technique , it has been overcome using high quality vocoder and hidden semi-Markov model based accounstick modeling .

Diagram:-

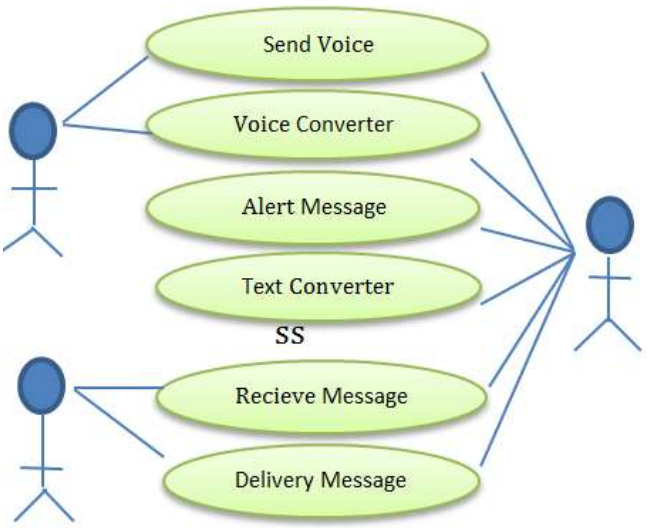


Fig. Use Case Diagram

3. PROPOSED SYSTEM

The visually impaired peoples are finds so many difficulties to utilize this technology because of the fact that using them requires visual perception. Howsoever all people can't use the internet, this is because in order to access the internet user should need to know what is written on the screen.

The proposed system of this project is totally based on a novel idea and is nowhere like the existing mail system .

This web system is said to be perfectly accessible only when it can be used efficiently by all types of people whether able or disable.

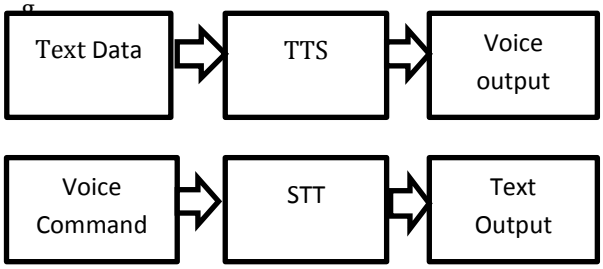
Our system focuses more on user friendliness of all types of people including normal people visually challenged people as well as illiterate people.

The System is completely based on IVR –Interactive Voice Response. In this we proposed the VMAIL system architecture for window platform that used by blind people to easily send e-mails.

LIST OF MODULES:

- SPEECH _TO_TEXT Converter
- TEXT_TO_SPEECH Converter
- Word Recognition

Diagram:



4. FUTURE WORK

For normal peoples to see ,e-mailing is not a big deal, but for that people who are not able to see and they are not blessed with gift of vision it postures a key concern because of its intersection with many vocational responsibilities .This e-mail framework for blind people using speech recognition has a great application as it is used by visually impaired people as they can understand where they are.

This system makes the visually impaired people feel like a normal user . They can hear the recently received mails to the inbox, as well as the IVR technology proves very effective for them in the terms of guidance .The visually challenged people can progress from desktop application to the web based application .

5. CONCLUSION

Our project allows visually impaired people to interact with a web based application and it helps the visually impaired people to access e-mail services efficiently .This project presents a system for visually challenged user interaction based on real time web application .Any naïve user who does not know th e location of keys on the keyboard need not worry because the keyboard usage is eliminated in this project. The user only needs to follow the instruction given by the IVR and use mouse clicks according to get the respective service offered.

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