



Voice Based Email System for Blind Using IVR Review Paper

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Abstract - Internet has become one of the basic amenities for day-to-day living. Every human being is widely accessing the knowledge and information through internet. However, the visually challenged people find it very difficult to utilize this technology because of the fact that using them requires visual perception.

The advancement in computer based accessible systems has opened up many avenues for the visually impaired across the globe in a wide way. Audio feedback based virtual environment like, the screen readers have helped blind people to access internet applications immensely. We describe the voicemail system architecture that can be used by a blind person to access e-mails easily and efficiently. The database will be maintained that will help the visually impaired people to attached and send file in the form of text, image etc and will be able to deal with multiple email id's at the same time which in turn should increase the efficiency of the system.

Keywords : Visually challenged people, IVR, Speech to text converter

1.INTRODUCTION

The visually challenged people or illiterate people find it very difficult to utilize this technology because of the fact that using them requires visual perception and the knowledge to used the system in accurate way. However not all people can use the internet. This is because in order to access the internet you would need to know what is written on the screen. If that is not visible it is of no use.

If the person is illiterate and need to understand the language also to accumulate the same in the vocabulary then it makes internet a completely useless technology for the visually impaired and illiterate people.

In this system mainly three types of technologies are used namely: STT (Speech-to-text) : here whatever we speak is converted to text.

TTS (text-to-speech) this method, which converts the text format of the emails to synthesized speech. We can say that this method is completely opposite to that of the STT method.

IVR (Interactive voice response): IVR is an advanced technology describes the interaction between the user and the system in the way of responding by using keyboard for the respective voice message. IVR allows user to interact with an email host system via a system keyboard, after that users can easily service their own enquiries by listening to the IVR dialogue. IVR systems generally respond with pre-recorded. This IVR system will also guide the user to proceed further in the application.

Apart from all these methods that needs to be considered in the process of project execution the major thing that needs to be taken care are the performance improvement in the system of sending email from the source to the destination users. Thus this has been provide the way in which multiple email id's will be handled at the same time.

2. EXISTING SYSTEMS

Now-a-days e-mail systems are available in which only voice recognition & text-to-speech systems are accessible to the users. The voice based e-mail system proposed by various authors has made use of IVR, Speech to text converter.

3. PROPOSED WORK

The proposed system is based on the idea which is not in the existing mails systems. This system takes into consideration the efficiency and accuracy of the mail system .The system will be said effective only when the mail system will be able to used by the people whether able or disable. The proposed system emphasize on the user friendliness, including normal people visually impaired people as well as illiterate people.

The system is based on the IVR-Interactive Voice Response. The blind users find it difficult to access the mail system using the mouse click. Thus the IVR system will make this accessible to the blind users in an efficient ways. This system will be perfectly accessible to all types of users as it is just based on simple mouse clicks and speech inputs and there is no need to remember keyboard shortcuts. Also because of IVR facility those who cannot read need not worry as they can listen to the prompting done by the system and perform respective actions.

The figure given below provides an diagrammatic idea about the improvisation in the project.

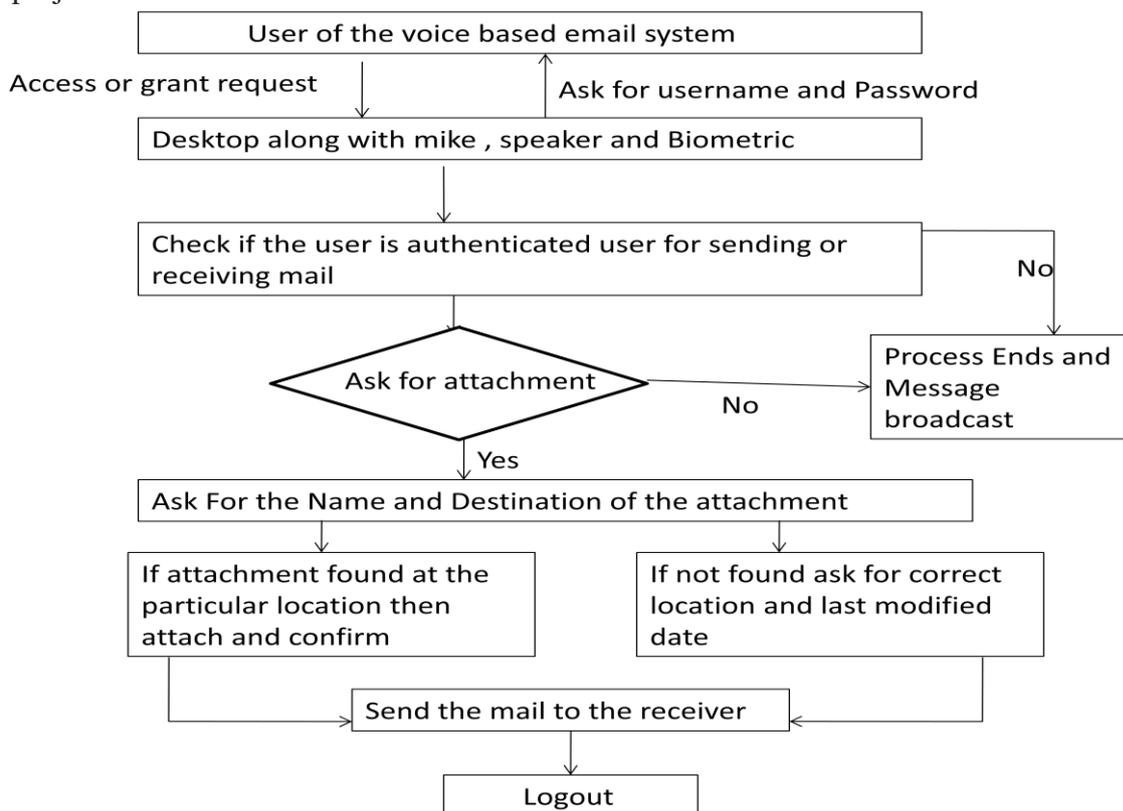


Fig: Diagrammatic Representation Of Voice Based Email System

4. ADVANTAGES AND APPLICATIONS

1. This system makes the disabled people feel like a normal user.
2. They can hear the recently received mails in the Inbox, as well as the IVR technology is effective for guiding them.
3. The visually impaired people can advance from desktop application to the web based application.
4. The major advantages of this system is that user won't require to use the keyboard.

5. CONCLUSIONS

This e-mail system can be used by any user of any age group with ease of access. In this paper we will be proposing a system which will help the visually impaired people to access

email services efficiently. This system will help in overcoming some drawbacks that were earlier faced by the blind people in accessing emails.

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