Automated Mobile Operating Through Voice

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Abstract: *"Automated Mobile Operating through Voice" project which is based on Android application. In this project, there are four modules which is name as Calling, Messaging, Browser and Music. If user wants to open any one of the module then user must have to speak to open the modules. Once user open particular module then user can perform operation related to that module. Module description is shown.*

Calling: When user says "call" then user should tell the name of the person to whom he/she wants to call.App searches that name, if particular name was not found then user must tell the mobile number & calls automatically.

Messaging: When user says "Message" then message box should be open. Then user should tell that what he/she want to do like create message or inbox According to that operation should perform.

Browser: It takes voice input and helps you to operate all your browsing services through voice.

Music Player: When user says "Music" then music player should be open. In music user can search, play the songs of user's choice by giving command "play (name of the music)".

Keywords: *Android, Voice, Speech Recognition*

1. GENERAL INTRODUCTION

The first speech recognition systems could understand only digits. Bell Laboratories designed in 1952 the "Audrey" system, which recognized digits spoken by a single voice. Ten years later, IBM demonstrated at the 1962 World's Fair its "Shoebox"machine, which could understand 16 words spoken in English.

1980s: speech recognition vocabulary jumped from about a few hundred words to several thousand words, and had the potential to recognize an unlimited number of words. One major reason was a new statistical method known as the hidden Markov model.

1990s: Automatic Speech Recognition Comes to the Masses. In the '90s, computers with faster processors finally arrived, and speech recognition software became viable for ordinary people.In 1990, Dragon launched the first consumer speech recognition product,Dragon Dictate, for an incredible price of $9000. Seven years later,the much-improved Dragon NaturallySpeaking arrived. The applicationrecognized continuous speech, so you could speak, well, naturally, at about 100 words per minute. However, you had to train the program for45 minutes, and it was still expensive at $695.

In 2010, Google added "personalized recognition" to Voice Search on Android phones, so that the software could record users' voice searches and produce a more accuratespeech model. The company also added Voice Search to its Chrome browserin mid-2011. Remember how we started with 10 to 100 words, and thengraduated to a few thousand? Google's English Voice Search system now incorporates 230 billion words from actual user queries. And now along comes Siri. Like Google's Voice Search, Siri relies oncloud-based processing. It draws what it knows about you to generate contextual reply, and it responds to your voice input with personality. (As my PC World colleague David Daw points out: "It's not just fun but funny. When you ask Siri the meaning of life, it tells you '42' or 'All evidence to date points to chocolate.' If you tell it you want to hide body, it helpfully volunteers nearby dumps and metal foundries.").Activities in the system are managed as an activity stack. When a new activity is started, it is placed on the top of the stack and becomes the running activity. The previous activity always remains below it in the stack, and will not come to the foreground again until the new activity exits.An activity has essentially four states If an activity in the foreground of the screen (at the top of the stack), it is active or running[2].

If an activity has lost focus but is still visible (that is, a new non-full-sized or transparent activity has focus on the top of your activity), it is paused. A paused activity is completely alive (it maintains all the state and member information and remains attached to the window

manager), but can be killed by the system in extreme low memory situations.

If an activity is completely obscured by another activity, it is stopped. It still retains all state and member information, however it is no longer visible to the user so its window is hidden and it will often be killed by the system when memory is needed elsewhere. If an activity is paused or stopped, the system can drop the activity from memory by either asking it to finish, or simply killing its process. When it is displayed again to the user, it must be completely restarted and restored and restored to its previous state.

1.1 Literature Review

Android is the world's most widely used Smartphone platform and the software of choices for technology companies who require a low cost customizable lightweight operating system for high-tech devices without developing one from scratch. This is introduces the proposed application "MTVA" which is an android based automated mobile operating through voice. This chapter also introduces to widely popular android OS along with its basic architecture. This chapter also includes the brief introduction about existing system and an already developed android application. It also includes the problems associated with existing system.

1.2 Android

Android is a mobile operating system (OS) based on the Linux kernel and currently developed by Google. Android is designed primarily for touch screen mobile devices such as smart phones and tablet computers, with specialized user interfaces for televisions (Android TV), cars (Android Auto), and wrist watches (Android Wear). Android has a growing selection of third party applications, which can be acquired by users either through an app store such as Google Play or the Amazon Appstore, or by downloading and installing the application's APK file from a third-party site..

Features of Android

Powerful, simple, and beautiful

Millions of people use Android because it's so powerful yet still so easy. The home screen, apps, and widgets are simple to use right out of the box, but completely customizable. With Android, anyone can create a unique mobile experience that's just right for you.

Play everywhere you go

Google Play is the easiest way to enjoy all favourites: more than 750,000 apps and games, millions of songs, thousands of movies and TV shows, the world's largest collection of eBooks, and a growing selection of magazines. With Google Play, there's no wires, no hassle, just pure entertainment. User can now read, listen and watch anywhere he want on his tablet, phone, or in any browser at play.google.com.

2. OBJECTIVE

The objective of our project is to develop this application for the ease of use for the user and this application can be used by the handicapped people also when if user's screen is damaged or in the rain your screen cannot be operated.

2.1. Proposed Work

To develop an Android application named "Automated Mobile Operating through Voice". This project is divided into following modules:

1) Calling

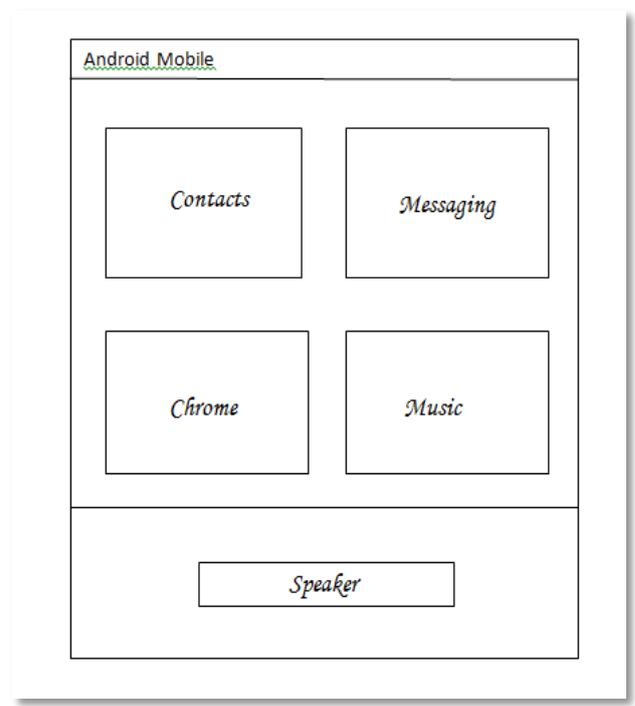2) Messaging

3) Browser

4) Music Player

3. METHODOLOGY

Fig 1: *System Architecture*

This system is divided into four different modules

Module 1: Calling

This module enables users to operate all the call related operations using voice. The summarized description is described below.

1. User gives the name of the contact and the command "call" enables user to call.

2. If the contact is not present in list then user gives number.

Module 2: Messaging

This module enables user to send messages or chat without operating the screen. In this module user can write the messages using voice. Its steps are as follows.

1. User uses "message" command to open messaging window.

2. Here user can either compose message according to the user needs.

Module3: Browser

This is a module that needs internet connection for the use. This module is very simple to use. Here user simply need to give the URL which user want to search and just give "search" command to proceed further.

Module 4: Music

This module enables users to listen to their favorite songs without bothering of getting the screen locked. In this module user can stop song using "stop" command. Its steps are as follows.

1. The command "music" enables the music app.

2. Here user can either start, stop the playlist

4. ALGORITHM

Load voice Recognizer

Input->User voice

If(input equals to call)

{

if(input is & matches to contact in the android database)

        {

                Call to specialized name;

        }

    else if(input is number)

{

        Call to specialized number;

    }

    Else

            Its invalid input or number;

    }

else if(input equals to message)

    {

Take valid name or valid number to whom user want to send message. Take input text & when user passes message is sent.

    }

else if(input equals to browser)

    {

Take the url from user.App redirect to the browser.

    }

else if(input equals to music)

{

        If(user inputs play)

                Play song;

        if(user inputs stop)

                Song stops;

        if(user inputs next)

                Play next song;

        if(user inputs previous)

                Play previous song;

}

else

    Wrong input to speaks.

5. IMPLEMENTATION

Fig 2: *Home Screen of Application Activity*

The home screen consists of mainly inputs that the user has to select in order to get next activity window. Here the first input that the user has to give is the name of module through voice which he want to perform. After giving input user has to go next screen. The home screen also contains button i.e speaker image button & the toast command which shows whether the command chosen is right or wrong. If the chosen command wrong it gives a beep sound with a toast message
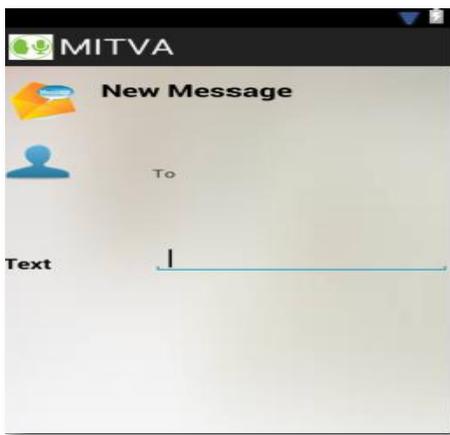

Fig 3: *Message Activity*

Fig. 3 shows the Message Activity screen of application. In this screen the user has to give first input is name or number of the person to whom he want to send the message.After giving the first input next the user has to give the text whichever he want to send. The text part takes only English language so it is must for user to give only English language as input. After that when user stops giving input message will send automatically. Here the restriction is that number must be 10 digits or contact must be present in list. Automatically message has been sent when user stops giving input. After completion of this activity the control goes back to Main Activity.
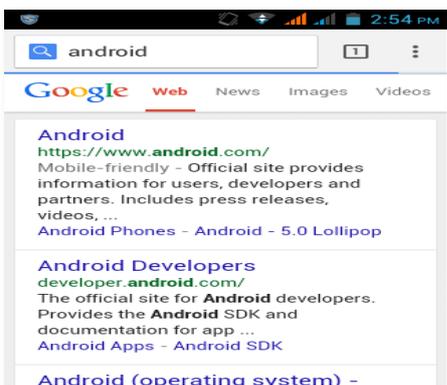

Fig 4: *Browser_Activity*

Fig.4. shows the Browser_Activity screen of application. In this activity, the user has to give URL as voice input whichever he wants to open. Then the default browser of system gets open with inputted url. If the url is wrong it shows the toast message on window.After completion of this activity the control goes back to Main_Activity.

Fig 5: *Calling _Activity*

fig 5 shows the Call Activity screen of Application. In this activity, the user has to give call as input command.

Then the second input is name or number of the person to whom he want to call.It is must that the number is of ten digits. If it is not then it shows the toast message as wrong input .In this activity telephony manager is used for connecting call to system activity. After completion of this activity the control goes back to Main_Activity.

Fig 6: *Music _Activity*

Fig.6. shows music_activity screen of application. In this activity user has to give voice command as "music" which shows the music screen & list of songs. Second input is "play" & name of song whichever he wants to

play. If user wants to stop the running song then he can stop by giving "stop" command.If he wants to pause the running song then the command is "pause". If the song is not present in list then the screen shows toast message

6. CONCLUSIONS

The proposed project is "AUTOMATED MOBILE OPERATING THROUGH VOICE". This is an Android Application which can be installed on Android phones with version 2.3 and above. The main goal of this application is to use the mobile device simply through voice.This application is the adaption to write messages in only ENGLISH language and it doesn't need an internet connection. The developed application has different uses. This application can be used for handicapped people to operate mobile through voice. for blind persons and the elder persons who don't know how to use mobile phone.

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