

GESTURES FOR VISUALLY IMPAIRED PERSON TO INTERACT WITH SMARTPHONE APPLICATION

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ABSTRACT

Android domain emerged as a platform to produce a variety of application. In today's life visually impaired persons are hard to handle the smart phones to make a call. For instance, in smart phones a person should open the contacts and search for the required person to make a call. To overcome those problems we use haptic technology with gestures. By using haptic technology combined with gestures blind person can easily able to make a call and they can share their live location in the manner of latitude and longitude without internet connection with voice response and is used to increase reliability of getting location. By using this application visually impaired person can avoid of making a wrong call. The contacts, registering details and pattern generated to make call will be stored in the local storage.

Keyword: - *haptic technology, local storage(phone memory), gestures, latitude and longitude.*

1. INTRODUCTION

Mobile phones had a quick development in recent years. With the increasing adoption of touchscreen devices, fingers and pens have become important interaction modalities in gestural touch interfaces. Information access being one of the widely used application of mobile phones have certain lags. Generally, people are used to utilizing the finger modality on touch screens thanks to its simplicity and a convenience for tasks. Designers of touch displays can benefit from communication with end users for visual impairment using gestures, particularly feedback on the functionality of such displays. This paper focuses on display intended for the hands and fingers. Differences in spatial resolution between vision and touch must also be considered when designing effective tangible media displays that allow visually impaired person to draw gesture.

1.1 OBJECTIVE

The main objective of this project is to develop application for blind people to make calls and send message with their current location using gestures. Voice response is used to indicate what actions are performed by visually impaired person.

1.2 SCOPE

By using this application in real time, it is very useful for blind persons to handle and operate a smart phones in future mobile technology. It is a basic method to start operating the smart phones and in the future it may be a key idea to implement the application for visually impaired persons and it solve problems of voice recognition applications such as inaccuracy, slowness and interpretation of unusual voices.

2. EXISTING SYSTEM

The existing technique of mobile calls are done by searching contact list in phone memory. Blind person are not able to call with this facility due to manual search and call. In keypad mobile phone location cannot be fetched and shared to the live location. Even can't be shared without internet connection. To make a call user need to search the saved contacts lists in phone memory that make burden to blind people to get the person contact.

3. PROPOSED SYSTEM

In this paper we propose efforts have been made for the blind people to make calls and message or share their live locations. The haptic technology and gesture can integrate to provide the sense of touch screen and create patterns. Blind person can make a call in android mobile and can able to share their live location. Calling done by drawing patterns i.e., gesture. Location sharing done by clicking the help icon and its sends rear image to get the location information more accurately that could be done without internet connection. This application uses voice response when an action performed to indicate the person what button they pressed. These makes visually impaired person to use android mobile for call, different design pattern can applied for each contacts in contact list.

4. MODULES

4.1 UI MODULES

This module provides first activity of the Application. It allows to visually impaired person to create a signup account. After creating account, now client can make login into the application. An helper will help blind person to add contact information and store the details to make calls and share the location by blind person.

4.2 ADD NAME AND MOBILE NUMBER

If you clicks the "Give Name and Mobile no." button from home page then "Save Name and Contact Number" screen will appear. After entering Name and Mobile number click the "Save" button and it will display a confirmation dialog box if you click "Yes" button it will save the details in the database and it will ask you to draw a pattern for the user. If you select "No" in the dialog box the data will not be saved and you can alter it again. This setup are done by the helper.

4.3 UNIQUE PATTERN GENERATION AND DATABASE MANAGEMENT

After clicking "Yes" button in dialog box a Message dialog box will appear as "Draw a pattern for saved name" At the same a Toast message will be displayed that "Contact saved successfully!!!". After clicking "Draw Pattern" button in the message dialog box it will re-direct you to a "Create a gesture" screen. In this screen draw any pattern for the contact person for whom you have saved the contact details. After drawing any pattern for the contact person. That person's name will be appear on the Edit Text box once you clicked the done button. The done button will highlight only when pattern drawn on the specified area. Contact name and number has been stored after Add details. Android used SQLite Database for storing and fetching contact details.

4.4 VIEW LIST, RELOAD AND LOGOUT

After saving some contacts and pattern for them. The Home page will display the pattern along with the Contact name in the list after saving. After saving contacts and pattern if any contacts not displaying in the list means click the "Reload" button to refresh the content. It will display the pattern along with the Contact name in the list after saving. After clicking "Quick call" button in the home screen will re-direct you to "Draw here and make a call" screen. In that blank space you should draw the pattern almost as like as you have given while saving the contact. Our application will recognize the pattern which you have drawn and it will identify and pick the respective person and make a call to them automatically. When you decided to Quit our application simply click "Home" button and it will go directly to the home page where you click "Exit" button to exit our application..

5. CONCLUSIONS

In this paper, efforts have been made for the visually impaired person to make call and share their live location with rear image using gesture. The location and the contact details are stored in phone storage. This

application will available in offline.In this SQL database is used to retrieve information that are stored in phone memory.

6. FUTURE ENHANCEMENT

In future, with more time and with more comprehensive research the proposed system can be made more accurate. Also new gesture algorithms can be implemented so as to give the impaired people's a wider variety of options to use smart phone and its applications.

7. REFERENCES

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