Voice Based Automated Transport Enquiry System

Abstract

We have experienced in waiting to a transport terminals for transport controllers to get the information about the transport facility. We encounter so many times there will be no person for providing these information which significantly wastes the time just to know whether there is any facility or not. Here is one solution for such a problem which lessens the human intervention in providing such information in the transport terminals.

Voice Based Automated Transport Enquiry System is the enquiry system which operates based on the voice input given by the user. There is no communication which is understood more appropriately than voice. This system too uses the voice commands and gives the required information in the form of voice. This system is can be installed in any transport terminal like Bus stands, Railway terminals or airports.

Voice Based Automated Transport Enquiry System is developed for providing the information for the enquiry in transport terminals. This project is developed as an android application. This uses server for storing the information to be provided to the user.

This System is developed for providing the information for the enquiry in transport terminals using PHP technology. This uses sql server for storing the information to be provided to the user. using Microsoft Speech recognition to detect the voice from the user and uses the speech control to deliver the voice output. This also displays the results on the screen for further verification.

Modules

1. Users

User can search the details about transportations like when the bus come, which bus is available at a particular time, when it reaches the destination etc.

- user Searching

  User can search details through voice or text about location, timings etc.

2.Admin

Admin will update the system when changes arrived like arrival time, unavailability of bus etc.

- Login

Admin can login in to a system by using user name and password encrypted with SHA512 algorithm.

- voice to text conversion & vice versa

They receive the input from user and convert text to voice and voice to text and then give corresponding output to the user.

- View users

  Admin can see the details about user.

- View operators

  Admin can see the details about operator.

- Location Tracking

  Admin can provide the location to the user.

3. Bus Operators (Agent)

operators can manage transportations,including locations, bus types,Availability, timing of the buses.

- Registration

  New operator can create new account by giving their details

- Login

  Operator can login into a system by giving username and password.

- Bus type

  Specify category of buses like fast,superfast ,ordinary etc.

- Add Timings

  Specify the arrival and departure of buses.

- Add Platform

  Specify the waiting platform.

SHA512 Algorithm

Security is provided by using this algoritham. The SHA-512 compression function operates on a 1024-bit message block and a 512-bit intermediate hash value. It is essentially a 512-bit block cipher algorithm which encrypts the intermediate hash value using the message block as key.

Speech to text conversion for multilingual languages

Speech-To-Text (STT) system takes a human speech utterance as an input and requires a string of words as output. The proposed system is implemented using Mel-Frequency Cepstral Coefficient (MFCC) feature extraction technique and Minimum Distance Classifier, Support Vector Machine (SVM) methods for speech classification. Speech utterances are pre-recorded and stored in a database. Database mainly divided into two parts testing and training. The system is developed in MATLAB (R2010a) environment.