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# Voice Based Automated Transport Enquiry System with GPS Enabled Tracking

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***Abstract:*** *In this era of modern science there are many developments happening in the field of information technology just to ease the human efforts engineers are working on various software projects for different purpose. Differentiating our project title name our system will take input in the form of voice or speech and will work accordingly as per the input given by the user and by processing the queries regarding transportation of bus in the back end, our system will display the result. It will be helpful for the user to get the response of his transportation queries effortlessly.*

***Keywords:*** *GPS, Speech Recognition, MS Speech SDK.*

## I. Introduction

Now this is the generation of speed. Everything happens in the speed of ultra supersonic. The data can be transferred within seconds i.e. at the speed of light in the digital medium, can travel in the ultra supersonic speed, hence there is a need of information inflow in the same speed. Here is one such need of information fast enough. We have experienced in waiting to transport terminals like Bus Stations for transport controllers to get the information about the transport facility. We encounter so many times there will be no person for providing this information which significantly wastes the time just to know whether there is any facility or not. Here is one solution for such a problem i.e. Voice based automated transport enquiry system with GPS enabled tracking.

Voice Based Automated Transport Enquiry System is the enquiry system which operates based on the voice input given by the user. 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.

## II. Literature Review

Following are some of the search which has been reviewed for the proposed system: -

P. Ramakanthkumar ; G. Prabhushankar ; S. Ilavarasu Implemented the proposed system entitled will help the pilot, test engineers and radar evaluation team in real time and during offline by means of analyzing the path of the target aircraft and HACK aircraft in desired map and will provide navigation specific parameters such as latitude, longitude, altitude, speed, range etc. The system will save the target information during flight [1].

Daryush D. Mehta, Matias Zañartu, Harold A. Cheyne II many common voice disorders are chronic or recurring conditions that are likely to result from faulty and/or abusive patterns of vocal behavior, referred to generically as vocal hyper function. An ongoing goal in clinical voice assessment is the development and use of noninvasively derived measures to quantify and track the daily status of vocal hyper function so that the diagnosis and treatment of such behaviorally based voice disorders can be improved [2].

Bojan Prtvar, Dragan Mihajlo Vic , Krsto Lazić Next generation set top boxes are increasingly Android powered set top boxes and are using Bluetooth LE (Low Energy) Remote controllers instead of legacy infra-red. Android powered set top boxes can easily be equipped with Google voice application, but unlike the standard devices such as smartphones and tablets, where the voice capture device is a microphone integrated into the device, the question of the voice capture device remains open. In this paper we present one solution for using a Bluetooth LE Remote controller as a voice capture device inside Google's Voice search framework on Android platforms [3].

Liu Wei, Chen He-Xin, Kong Ling-yuan, Wang Xing The design adds voice alarm function to ordinary alarm to solve the alarm problems in the market. It not only makes the users understand the reason of alarm more directly and effectively but also can play various voice according to various condition. The design uses 89C52 microcontroller as the core, SPI serial communication to develop and design the alarm system. The users may record voice content according to their fondness and need. The voice chip we used can be used 100 thousand times and can keep the message 100 years. So it will have a bigger market [4].

S. Gamm, R. Haeb-Umbach, D. Langmann implemented design of a command-based speech interface for a voice mail system. Speech recognition was integrated in the voice mail system in order to allow the remote interrogation of messages in a speech-only dialogue. Our design goal was that consumers would perceive voice control as a clear benefit versus touch-tone control. It is shown how the speech interface was designed in a top-down approach. We started with a concept development and tested it by means of a Wizard-of-Oz simulation. After refining the concept in parallel design, the design was implemented in a high-fidelity prototype [5].

Ala' F. Khalifeh, Khalid A. Darabkh , Aya Kamel With the increasing importance of Online Systems, in which a voice over Internet Protocol (VoIP) client can remotely interact and send a voice control commands, the reliability of such systems under different network impairments such as packet loss, delay, delay variation (Jitter), and the link bandwidth becomes a challenge. In this paper, the effect of Quality of Service (QoS) parameters of the network on theVoice-Controlled Online Systems is thoroughly investigated, and a set of recommended bounds on these parameters is proposed [6].

Mary Warren Breslin, David J. Marinelli

The Definite Audi® voice mail system, introduced in 1992, provides service superior to the previous generation of Audio voice mail systems at a cost well below that of competing systems. Based on a multifunction circuit board that is installed in the port carrier of the Definity® switch, the Definite Audio system is low in cost, easily installed and serviced, and tightly integrated with its host switch. It has been designed for worldwide sales, and is quickly gaining acceptance in the nearly 80 countries in which the Definity switch is currently sold. This paper describes how the Definite Audio voice mail system was integrated with the definite switch and designed to meet the needs of a global environment[7].

Zhang Weiqiang, Fu Lina implements the interactive Web-based voice broadcasting system. It describes in detail the technical scheme and the principle of each module in the system. The inventor based on the traditional campus network changes the traditional teaching methods and saves lots of device cost for schools. This system not only can play courseware, but also can rebroadcast radio station on the Web digitally. So the system is characterized by simple structure, efficient and practicality. It has been tested and proved that the system is accuracy, stability and safety[8].

A. Pande, K. Sirkar, A. Kanade, P. Gracias design and development of an IBM PC/AT-based low-cost voice mailing system (VMS) is described. This system, targeted for small to medium organizations, can receive and store incoming telephonic messages. The called party can later use an ordinary touch tone telephone to access his own private area on the system and do operations like playing back or deleting messages. The VMS consists of cards that can be plugged into the PC/AT bus slots and master software running on the PC/AT under the OS/2 operating system. In its maximum configuration, the system can simultaneously handle four subscriber lines from an EPABX and is estimated to support around 150 users [9].

Y. Kato implements voice message summarizing method for retrieving specific voice messages from a large number of voice messages on voice services, such as voice mail and voice bulletin boards. Voice browsing facilities are tools intended to allow users to handle voice messages as easily and conveniently as browsing books. After surveying methods for voice browsing, the author proposes a new voice message summarizing method that is based on the important part being spoken slowly and having a higher proportion of unvoiced parts. The effectiveness of this method was demonstrated using actual voices from radio programs[10].

## III. Proposed Method

Voice BasedAutomated Transport Enquiry System with GPS Enabled Tracking is developed for providing the information for the enquiry in transport terminals. This project is developed using .Net technology using c# Programming language. This uses sql server for storing the database i.e. information to be provided to the user. This user Microsoft Speech recognition to detect the voice from the user and gives appropriate output. As the name suggest it also gives the feature of live tracking of the bus.

**01.Training Phase:**

The steps used in the training phase are :

**i) Input Voice:**

Voice Input is taken from the user which is to be converted in text by using Microsoft speech SDK then by using string matching the input is matched with the source and destination by using String Matching. Use of string matching will make the processing speed of retrieving and delivering the information efficiently.

**ii) Bus Schedule Database:**

In this we store all the bus trimming's i.e. Departure, Arrival, and Platform no. It will also have the information stored in a strings variables of source and destination.

**02.Testing Phase:**

The steps in the training phase will be similarly followed in the testing phase till the feature extraction.To start the system user needs to say START VBATES to initiate the system. Whatever is the voice input given by the user is the user is taken and by the selection of language it will display the result of bus timings, bus type etc. by retrieving the information from the database.

## IV. Conclusion

Voice based automated transport enquiry system is easy to use for users and also a better service for the travelers. Our system will be available 24x7.Our system will posses' three important properties:

Ease of access, Data integrity, Availability. Suppose a user is at Jalgaon bus stand and he wants to travel from Jalgaon to Mumbai then wants to do return journey on same day then he can make an enquiry on our machine and he can get to know about timings of bus from Jalgaon to Mumbai as well as Mumbai to Jalgaon. Because of that he can save his precious time by preplanning his journey.

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