Voice Operated Lift/Elevator in Emergency

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***Abstract*: This project presents the design and construction of voice operated lift/elevator control system. This system acts as human-machine communication system. Speech recognition is the process of recognizing the spoken words to take the necessary actions accordingly. User can also control the electrical devices like fan, door etc with the help of voice recognition system. The main purpose of designing this project is to operate the Elevator by using voice commands. This device is very helpful for paralysis, short height people and physically challenged persons.**

***Keywords*: voice operated, lift**

1. Introduction

The main aim of this project is to design and construct a voice operated lift/elevator control system. This system acts as human-machine communication system. Speech recognition is the process of recognizing the spoken words to take the necessary actions accordingly.

Elevator is become the main part of our day to day life. Elevator is become a transport device that is very common to us now a days. We use it every day to move goods or peoples vertically in a high building such as shopping center, working office, hotel and many more things. Elevator is a very useful device that moves people in the shortest time to desired floor .Lift is the vital part of everyone's life living in large buildings, and moreover it is the necessary thing in large buildings or any big construction having number of floors to move from one floor to another. Now a day it is becoming prestigious thing for the malls, shopping Markets, colleges, hospitals, hotels. Which are having two or three floors or more than that. So we are trying to make it more automatic through our project.

Speech recognition model is the method by which the elevator can be controlled .and by Speech recognition model we will get input to controlling the elevator. Whenever we are dealing with voice control, the first term come in our mind is Speech Recognition i.e. system should know or understand human voice as input to the speech recognition model. Speech recognition is a technology in which the system will understand the words but not its meaning of the words given by the speech of any person to speech recognition module. Speech is a best and ideal method to controlling the elevator. In this project we are also going to give indication to the security in emergency situation. In emergency situation means in case of lift failure .it may be the fault because of power failure or may more reasons of power failure .in emergency condition it will indicate to the security person and that time buzzer will ringing on. [1]

2. Literature survey

Vrajesh Prajapati and Mehta at. el.: Voice recognized elevator, we have given the information which describes the voice operated elevator which is also easy in language and important for user. This voice operated elevator mainly useful for handicapped person (blind).

Elevator operated on voice so maintenance cost for keypad which is use previously also reduce. A voice recognition program and its connection with the controller can supply sufficient amount of commands necessary for the elevator control on which the elevator will operated. The old elevators where having many drawbacks like there was key press problem and time required to press one key was also more. Voice operated elevator is saving time. [2]

3. Proposed System
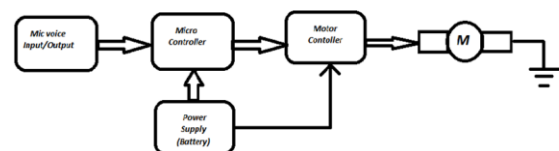
Voice operated lift/ Elevator

Fig. 1. System architecture

The speech recognition system is main part of this project. Speech recognition system provides the communication mechanism between the user and the microcontroller based control mechanism of elevator. This project makes use of a DC motor for moving the lift/elevator based on the voice/speech commands given by the user and voice recognition chip is used for recognition of the voice commands which will be given by the user. Microcontroller is programmed, with the help of embedded C programming. The microcontroller is capable of communicating with all input and output modules of elevator. The voice recognition system which is the input module to the microcontroller takes the voice instructions given by the user as input and the controller judges whether the instruction is to lift upwards or to the downwards , and according to the users voice the switching mechanism controls the elevator. The similar

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voice based commands also used to turn on/off the fan inside the elevator. Also, LCD display is available for visual information of operations being performed for the person in the elevator and the same indication given to the person on LCD display who will be present in the security cabin [3].

4. Conclusion

A voice recognition program and its connection with the controller can supply a sufficient amount of commands necessary for the elevator control on which the elevator will operate. The old elevators were having many drawbacks like there was key press problem and time required to press one key was also more. In this voice operated elevator we are taken prevention in emergency condition like lift failure and here indication given to the security person who will be inside security cabin. Voice operated elevator is saving time but there was problem of security. This paper gives solution to all these problems.

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