VOICE ACTIVATED DOOR

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ABSTRACT

The project is to design and build a door which use person voice for authorization. The Voice Biometrics technology is used in this project to recognized person's voice and allows authorization for the user. The system provides robust identification of the user because the voice of each person is unique and it is hard to find two person voices identical. Besides that, the voice biometrics technology able to provides convenience to the disabled and handicapped people, by using voice as the key to access the door. To allow door access, MATLAB software is used to do voice enrolment and verification. The MATLAB Graphical User Interface (GUI) is created for allows quick access without have to run each file, thanks to call back function that link every m-files with a single button.

Basically, the system is speaker based or text independent verification, the user have to record their voice to the MATLAB for few seconds regardless what he or she speaks by using microphone connected to the laptop. The system will then extract the voice of the person and stored inside the voice database. During the verification process, the system will match the voice that already stored in the voice database with the input voice, and Euclidean Distance is use to find the closest match of the voice matched with the voice database, an access granted will be shown on the GUI screen.

Once the verification process is complete, data will send through serial port to Programmable Logic Controller (PLC) to activate the dc motor, simultaneously the LCD will show the authorized person's name.