Computer Engineering
Final year Project (2001 ~ 2002)

Poster

Project ID number: SM3B-01
Project Title: Voice lock on Hand-Held Device

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Introduction

Nowadays, hand-held devices such as iPAQ are under rapid development. More people own one as their personal assistant. As the hand-held device becomes indispensable and personal, security will be an important issue for the hand-held device.

However, the traditional identification method provided by the vendor is very simple. The identity of the user is verified by keying the password. This identification method can cause some serious security problems. For example, the password can be stolen or forgotten easily.

In order to solve the potential security problem, in our final year project, we will design a voice lock system for a hand-held device. It can verify the voice of the user and recognize the password spoken by the user on the basis of information obtained from speech waves.

Objective

The objective of our final year project is to build a voice lock on a hand-held device that can perform fast, high correctness of acceptance and rejection of user access through the password spoken by the user.
Speech part

Digit recognition and user verification

Configuration module

Lock module

Communication module

Accept or reject the user

Hand-Held Device software implementation

Desktop Personal Computer

Desktop PC software implementation

Model Training Module

Communication Module
Choose the User name: After recording, the input sound is being processed.

The digits are wrongly spoken.

An imposter is trying to login to our system.

The sound of the user is verified, and he is a valid user!

The Voice Lock Registration System.

It can guide the new user step by step to register a new account.

It performs training of models and also updates of registry.