FINGERPRINT BASED IGNITION SYSTEM

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SYNOPSIS :

Biometric systems have overtime served as robust security mechanisms in various domains. Fingerprints are the oldest and most widely used form of biometric identification. A critical step in exploring its advantages is to adopt it for use as a form of security in already existing systems, such as vehicles.

This Project focuses on the use of fingerprints for vehicle ignition, as opposed to the conventional method of using keys. The prototype system could be divided into the following modules: fingerprint analysis software module that accepts fingerprints images; hardware interface module and the ignition system module. The fingerprint recognition software enables fingerprints of valid users of the vehicle to be enrolled in a database. Before any user can ignite the vehicle, his/her fingerprint image is matched against the fingerprints in the database while users with no match in the database are prevented from igniting the vehicle. Control for the ignition system of the vehicle is achieved by sending appropriate signals to the parallel port of the computer and subsequently to the interface control circuit. The developed prototype serves as an impetus to drive future research, geared towards developing a more robust and embedded real-time fingerprint based ignition systems in vehicles.