PROTOTYPE OF A FINGERPRINT BASED LICENSING SYSTEM FOR DRIVING

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Abstract: **To reduced non-licensees from driving and therefore causing accidents, a new system is proposed. It is very reliable human identification method of a fingerprint identification. It is one of the most popular and reliable personal biometric identification. The proposed system consists of a smart card capable of storing the fingerprint of particular person. While issuing the license, the specific person's fingerprint will be stored in the card. Vehicles such as cars, bikes, rails flights etc. should have a card reader which can read the particular license. Vehicles should have the facility of fingerprint reader device also. If u wishes to drive the vehicle, should insert the card (license) in the vehicle and then swipe his/her fingerprint. If the finger print which is stored in the card and fingerprint swiped in the device matches, both identification will match then only he/she can proceed for ignition, otherwise ignition will not start. It will increases the security of vehicles and also ensures safe driving by preventing accidents.**

I.INTRODUCTION

Urban growth has resulted in a substantial increase in the number of registered Cars. Each vehicle is typically required by a political support, such as a state, to undergo an annual safety inspection and license re-registration. An Objective of this process is to keep unsafe vehicles off the roads and to maintain current ownership information for the vehicles. There is a take a Decision desire to make the process for registering and re-registering vehicles as needed as possible, in order to minimize inconvenience to vehicle owners and Decreases the revenue that political divisions derive for providing such services. Currently, major cities face daunting challenges in registering and re-registering vehicles because the only current means to determine whether a vehicle registration has expired is to visually inspect the vehicle's license Number plates, or check the vehicle license plate number and/or Vehicle Identification Number ("VIN") against a database maintained by a law Rules entity. Also the system has a receiver inside the vehicle. Only Digital license holders will be used to driving the vehicle. The system also allows multiple users as per the vehicle owners command as Per Digital License

II. FUNCTIONALITY

- **When RF Id Tag & Finger Print Matched Same Time Turn ON The Car Motor**
- **If Not Matched Same Time Turn ON Buzzer**

RF ID TAG

The recent addition of RFID chips to machine-readable Documents balances the need for electronic data storage on the e-document with automated document control, since the RFID Tags can be quickly read from a distance Touch less or contactless rather than by contact with an optical Sensing Device. RFID Tags and contactless smart cards use radio frequencies for communicating data over the distance between the chip and reader. Both contact based and contactless smart cards contain a small microprocessor that provides more memory and stronger security capacities, while (passive) RFID tags typically contain a chip with less memory and limited functionality. For optical Scanner for the purposes of this brief, we do not distinguish between RFID enabled cards and contactless smart cards

SOLUTION: RFID FILE TRACKING

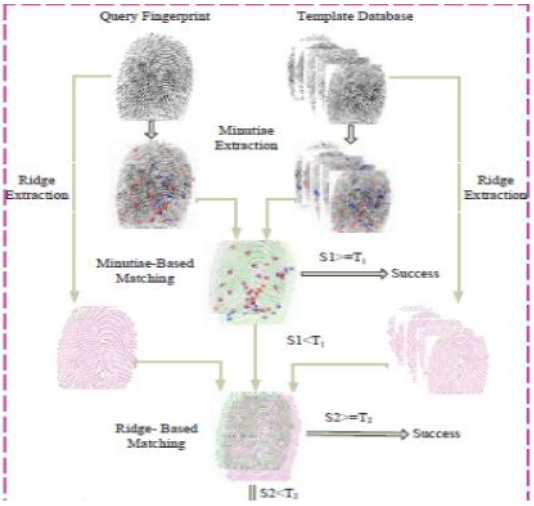
Using RFID technology, you can fully automate the tracking and locating of physical files and documents, including authorizing access, recording in/out, providing inventory counts and all associated reporting. Automation with virtually 100% accuracy means that the cooperation of the people using your files is no longer an issue. If a tagged document comes within range of a reader, its data will be captured. The figure above outlines how an RFID file tracking works within an organization. The process begins when a critical document is received. The file is commissioned into the RFID asset tracking system by adding a passive UHF RFID tag to the record. RFID tags are typically small adhesive labels that can be easily applied to files and folders, records and evidence. The tagged item is then received into inventory and added to the asset management database using a handheld or hands-free RFID reader

III.FINGER PRINT

Fingerprint identification is one of the most well-known biometrics. Because of their uniqueness and over time, fingerprints have been using for the identification for over a century, more recently becoming automated (i.e. a biometric) due to advancements in computing capabilities. Fingerprint Scanner input identification is popular because of the inherent ease in acquisition, the numerous sources (ten fingers) available for Collecting, and their developing use and collections by law enforcement and immigration.

IV.HARDWARE

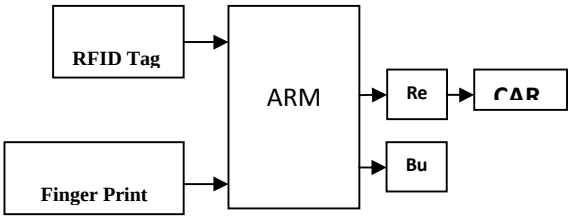
A variety of sensor types — OFC, capacitive, ultrasound, and thermal — are used for collecting the digital image of a fingerprint Scanner surface. Optical sensors take an image of the fingerprint, and are the most common sensor. The OFC capacitive sensor determines each pixel value based on the capacitance measured, made possible because an area of air (valley) has significantly less capacitance than an area of



finger Print (friction ridge skin) for that. Other fingerprint sensors capture images by employing high frequency ultrasound or optical devices that use prisms to detect the change in light reflectance related to the fingerprint. Warmp scanners required for a swipe of a finger across a surface to measure the difference in temperature over time to create a digital image.

V.CONTROLLER

The role of the controller is to enable the logic flow (shown aside). The microcontroller is fed with the required input signals from card reader and seat belt controller. The card reader sends signals, each to individual pins of the microcontroller, and the signals include fingerprint matching information, license expiry status, license suitability status and license blocked status, all in the form of bits. The microcontroller then branches out to any one of the logical paths and delivers the output at one of its pins, which is used by the ignition control unit.



The flow logic also includes checking of expiry of the license. If the license expires in 10 days, it prompts the user to renew the license, once the license expires, the ignition does not happen. When the user holds a learner's license, it accepts the license after the fingerprint matches, then it prompts the user to insert a valid license and once again the checking process continues. The valid license is to be present in the vehicle until the vehicle is switched off. If the license is taken out before ignition is OFF, the vehicle automatically comes to OFF, and this ensures that the license is not used in another vehicle to switch it ON. We have implemented the proposed prototype using ARM7 LPC2148 microcontroller. ARM microcontroller can also be used if the system is going to be more sophisticated and makes use of interrupts to control the switching ON and OFF of the ignition system.

VI.CONCLUSION

The above input and output analysis of the proposed system proves that the vehicle can be ensured that it is been driven only by the correct persons. The system also giving the facility for the learner's licensees to drive by keeping a Digital licensed person near them in the Process. It also gives time to get the system not working if any malfunction exists. In Vehicle, it also Confirm that the seat belt is worn by the driver, so that it adds the safety feature to vehicle. Though implementation of this system may take to time, it would be of great using for the safety of drivers and irregularities can be kept at check without any irregular faults. The developed prototype serves as an impetus to drive future Functions, geared towards developing a more robust and embedded real-time fingerprint based on ignition systems in vehicles.

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