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ARC Band for Accessing Different Services

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Abstract: India is one of the most populated country with more than 1.31 crore people travelling and accessing different services. For Each service, people have to carry its own document like bus pass for bus Travelling and for traffic police verification we have to carry different papers such as license, PUC etc. This consumes more paper and time which indeed brings the development ratio down. So we need to Solve this problem and for that, we introduce the new way of accessing services. we are creating the ARC band system that uses the RFID technology that improves the accessibility of different services with single unique id. we give the unique identification number to every registered user. If the user opts for bus pass service then his unique id linked to that service and if the user opt for another service then again this unique id is linked to second opted service. So only one unique id can be used for different services. The first user needs to register on the web portal After that user assign one single unique id and that unique id is placed into the RFD tag present in ARC band. The user then needs to opt for services and after opting User can now access the service by tapping the ARC band at the receiver and receiver Authenticate the single unique id from Web database and perform operation accordingly.
Keyword: RFID, opt, license, PUC, unique id, document.

I. INTRODUCTION

The main purpose of this paper to design a device that improves the accessibility of services and reduce waste of paper. So we creating a band termed as ARC Band, This band contains unique id that is linked to all the services. This band can be used for multiple services with single unique id. Each individual has its own unique id. This band contains RFID tag which has unique id whenever a user tries to access the service the reader reads the RFID tag containing unique id and fetch the appropriate information and performed the necessary operation. This band is casual to use and make the user daily life easy and faster.

A. What is RFID?

The applications of RFID are widely increasing but its adoption is still relatively new and hence many features of the technology are not well understood. Developments in RFID technology continue to yield larger memory capacities, wider reading ranges, and faster processing. Though the RFID technology is advantageous as compared to barcode technology, it is highly unlikely that the technology will ultimately replace barcode technology, even with the inevitable reduction in raw materials coupled with economies of scale, since the integrated circuit in an RFID token will never be as cost-effective as a barcode label. If some RFID standard is established, whereby RFID equipment from different manufacturers can be used interchangeably, the market will then grow exponentially. Extending the benefits of wireless communication to a communication of data to and from portable low-cost data carriers, we can appreciate the nature and potential of Radio Frequency Identification (RFID).

B. What is Arduino Mega 2560?

The Arduino Mega 2560 is a microcontroller board based on the ATmega2560. It has 54 digital input/output pins (of which 15 can be used as PWM outputs), 16 analogue inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with an AC-to-DC adapter or battery to get started. The Mega 2560 board is compatible with most shields designed for the Uno and the former boards Duemilanove or Diecimila. The Mega 2560 is an update to the Arduino Mega, which it replaces The Mega 2560 board can be programmed with the Arduino Software (IDE). The ATmega2560 on the Mega 2560 comes preprogrammed with a bootloader that allows you to upload new code to it without the use of an external hardware programmer. It communicates using the original STK500 protocol You can also bypass the bootloader and program the microcontroller through the ICSP (In-Circuit Serial Programming) header using Arduino ISP or similar. The ATmega16U2/8U2 is loaded with a DFU bootloader, which can be activated by On Rev1 boards: connecting the solder jumper on the back of the board (near the map of Italy) and then resetting the 8U2.On Rev2 or later boards: there is a resistor that pulling the 8U2/16U2 HWB line to ground, making it easier to put into DFU mode. You can then use ATMEL FLIP software (Windows) or the DFU programmer

(Mac OS X and Linux) to load a new firmware. Or you can use the ISP header with an external programmer (overwriting the DFU bootloader.

II. EXISTING SYSTEM

In a general way, if you buy bus pass then the bus service provider will give you pass in the form of the paper card and user use this pass for the bus ticket. Traffic service will give you licence and other documents in the form of paper etc. and this document user need to carry every time whenever user using the vehicle. a user needs to show this all the document to traffic police if he/she asked for it. Like this way, there are different services and it has its own documents that you have to carry in daily life. If you lost any document then you have to apply for duplicate document and this consuming lots of paper and time, so we need a new technology that eliminates this problem.

III. NEED OF NEW SYSTEM

In old system wastage of paper and time is more and for each service, you have to carry documents related to that services. so we have to create the new system that eliminates this problem and improves the accessibility of services. If you look at the old system, if you lose the document then you have to apply for duplicate document and that takes lots of valuable time and you have to carry lots of document with yourself in your day to day life for accessing services. so we creating a platform that centralized all the services and this services can be accessed through ARC band that contains the unique id that differentiates the individual and their services. And all the documents are in digital format so the problem of the document lost is eliminated.

IV. PROPOSED SYSTEM

We are creating ARC band that can access different services with a single id. ARC band will contain the unique id that differentiates the individuals. The ARC band contains the RFID tag that has unique id present in it.The first User needs to register to the web portal and Then User gets the unique id and that it is stored into RFID tag of ARC band and this ARC band is given to the user after that user needs to opt for services present on the web portal. Whenever user going to access the service then the reader will authenticate the individuals by its unique id present in the ARC band. User not only getting unique id but also accessed different services via this single unique id.The ARC band Will make user daily activity faster and easy .for example, First user opt \only for bus pass and after that he/she opt for traffic document then whenever user use the ARC band at conductor terminal it only performed buss pass operation and when user use Arc band at Traffic police for document checking it will show the document in image format for the traffic police so only via single unique id present on Arc band can access different service and that eliminates the paper and that you need to required to carry every day.
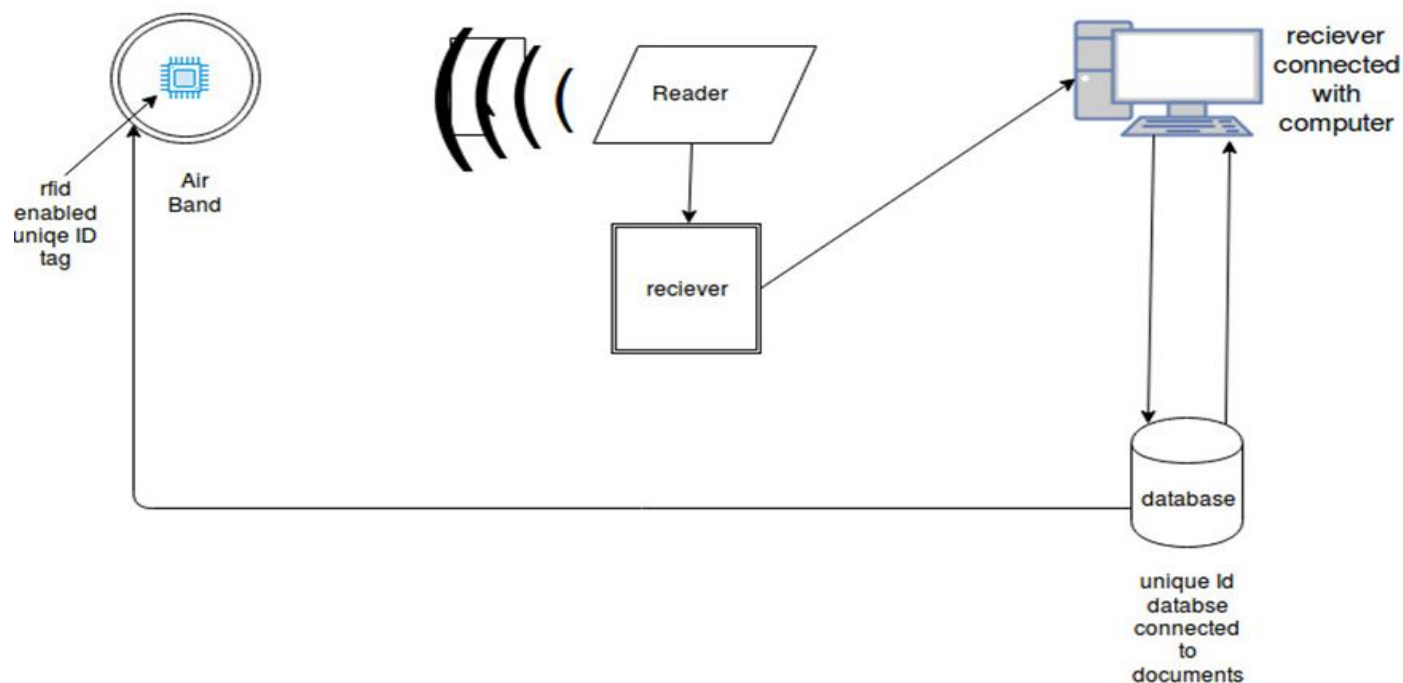
V. CONCLUSION

In this smart world, we need to implement new smarter technology that can improve the daily life of peoples so in this paper we proposed the new system which accesses different services via a single device. Our device is intended to improve the accessibility of different services thereby aiming to enhance the quality of life of the people in the cities.

VI. ACKNOWLEDEMENT

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