Digitalization of Documents

[#1]Kunal Jagtap, [#2]Vishal Mahandule, [#3]Satyajeet Chavale, [#4]Prathamesh Awale, [#5]N.B Pokale.

[1]kunaljagtap77@gmail.com
[2]vishalmahandule19@gmail.com
[3]satyajeet1077@gmail.com
[4]prathameshawale1@gmail.com
[5]nbpokale@gmail.com

[#12345]Department of Computer Engineering
TSSM's, BSCOER, Narhe, Pune.

ABSTRACT

The ubiquitous nature of the Internet allows most of today's information technology systems to provide services that are of a global scope. A student in the INDIA may use Facebook to chat with her family anywhere in the world and to send them a gift via Amazon. As online users enjoy the convenience of global services, data transmission across borders and information privacy becomes an important consideration. Therefore, providing services and systems that are privacy-preserving to users across the regions is a challenging mission. So, what we are experiencing nowadays is digital life, in every day to day life we are dependent on digital way of doing that work. But there is still one case where we are using papers for doing that work which is government documents or any documents educational, medical etc. We have to carry file of documents while we are going for any government work such as for issuing driving license. So we are proposing digital solution on this problem by replacing bunch of documents with just single RFID card.

Keywords: Digital signature, RFID, Access control, Smart card

ARTICLE INFO

I. INTRODUCTION

The project is to design and implement central repository for all documents by using software and hardware. The ultimate goal is that the ideas and planning demonstrated through this model system can then be easily upgraded to an actual document management in government sector. As the system is to be implemented for government and such long organizations, there are a number of performance specifications that have to be met to ensure the system operates correctly and efficiently. Most importantly, The Development of our system interface must send and receive the appropriate information.

II. LITERATURE SURVEY

[1] The essentials of keystroke dynamics is not what you type, but how you type. In this paper, it mainly presents our proposed authentication system supporting with keystroke dynamics as a biometric for authentication. We uses inter-key delays of the password and the account for user identification in the system design. There are suggestions in the literature, that a combination of key-hold time with the inter-key delay can improve the performance further.

[2] We propose to use RFID technology to combine functions of physical access control, computer's access control and management, and digital signature systems. This combination allows to drastically increase systems' security. Even low-end RFID tags can add one security level into the system, but high-end RFID tags with cryptographic possibilities and slight modification of digital signature calculation procedure make it possible to prevent obtaining digital signatures for fraudulent documents. The further evolution of the proposed scheme is permanent monitoring by means of periodical controlling user's RFID tag, whether authenticated user is present at the computer with restricted access.

[3] Mobile SNS is one of the most popular topics of mobile Internet. In order to fulfill the user demand for self-maintained independent social network and ensure the privacy of their personal information and resources, the paper proposes system architecture of decentralized mobile SNS. The mechanism and algorithm are devised for user profile complete deletion when users are going to quit the service for the temporary scenarios.

[4] An encryption scheme for exchanging item level data by storing it in a central repository. It allows the data owner to enforce access control on an item-level by managing the corresponding keys. Furthermore, data remains confidential even against the repository provider. Thus we eliminate the main problem of the central approach. We provide formal proofs that the proposed encryption scheme is secure. Then, we evaluate the encryption scheme with databases containing up to 50 million tuples. Results show that the encryption scheme is fast, scalable and that it can be parallelized very efficiently. Our encryption scheme thereby reconciles the conflict between security and performance in item-level data repositories.

[5] Developed a smart ration card using Radio Frequency Identification (RFID) technique to prevent the ration forgery as there are chances that the shopkeeper may sell the material to someone else and take the profit and put some false amount in their records. In this system, a RFID tag is used that carries the family member details and the customer needs to show this tag to the RFID reader. The microcontroller connected to the reader will checks for the user authentication. If the user is found authentic then the quantity of ration to be given to the customer according to the total number of family members will be displayed on display device.

III. PROBLEM STATEMENT

For Public Sector and Government Agencies, with tens or hundreds of thousands of documents, a document management system is becoming a mandate to organize, index and control their documents in a hassle free manner. Public Sector and Government Agencies deal with Documents which range from Public View documents, Tenders, to the most Confidential and Secret Documents which are intended only for view of certain designated personnel. Storing all these documents as physical records not just consumes a lot of space but also is a tedious affair to file these documents and manage them safely with restricted access. So we are providing one digital solution to this problem with RFID card and fingerprint scanner. User will get authenticated by unique id of RFID associated with each document.
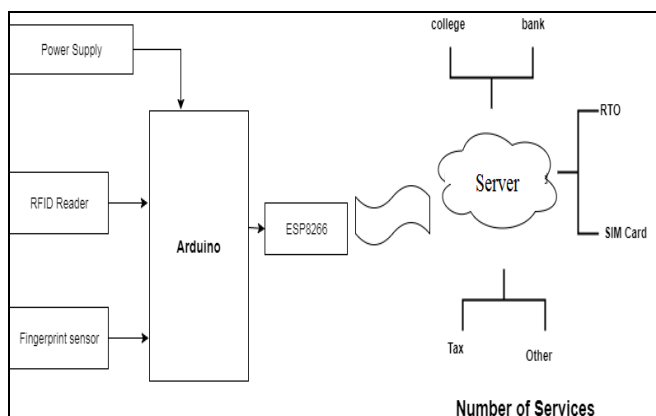
IV. PROPOSED SYSTEM

Fig1: Overview of digitalization Using Raspberry Pi

V. INTRODUCTION OF PROPOSED SYSTM

In this system we have several hardware like Fingerprint sensor, Smart RFID reader and tag, Arduino, ESP266, Raspberry pi. Using fingerprint we use different fingerprints id to store in database to identify various peoples in the system. Each person has its own RFID number provided through which he or she can be identified. Data of fingerprints is stored in server using raspberry pi .RFID tag is provided to each user so two authentication is done .RFID tag is connected with fingerprint sensor. After Comparing RFID id and fingerprint the confirmation is given by Arduino, then data of that id can be accessed from raspberry pi which works as a server. All the scanned documents are uploaded to server by user.
Following are steps for working of the system:
1) Initially user need to upload the file of all the scanned copies of document to server. The id is created for every user.
2) RFID tags are provided to each user which connected to server with specific id.
3) It compare id' s and give authority to access the documents.
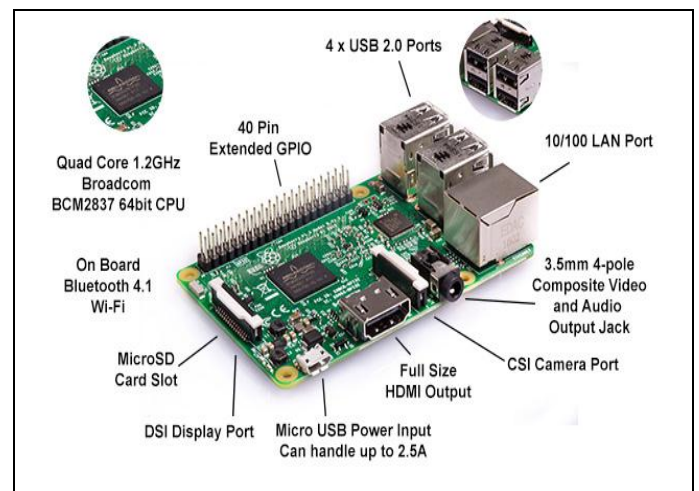
VI. COMPONENTS OF SYSTEM
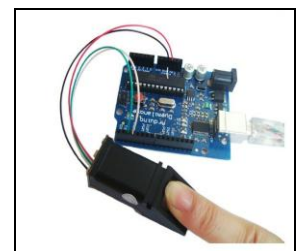

Fig 2: Raspberry pi
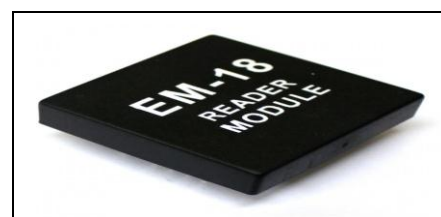

Fig 3: RFID Tag

Fig 4: Thumb Reader

Fig 5: ESP Reader

VII. ALGORITHM

(1) Start.
(2) Centralized server running.
(3) RFID reader is waiting to get a tag.
(4) Data simultaneously send to the controller.
(5)Authentication process identification
(7) All documents check from the database server
(7) Display the customer ID on LCD.
(8) The authentication will be automatically success from the user card.
   If (card is not valid)
      Authentication failure;
   Else
      Card is valid;
(9) After success of the system maintain the users log.
(10) End.

VIII. FUTURE SCOPE

We can create global cloud using raspberry pi , so that different services can be accessible globally. Intellectual RFID tags with possibility of strong mutual authentication with smart cards allow to provide unauthorized access to digital signature secret keys: they can be used after successful mutual authentication only. We proposed several ways to combine RFID-based physical access control systems with digital signature systems to increase their security, including improved digital signature calculation procedure that allows to prevent unauthorized calculation of a digital signature for a fraudulent document. The increase in precision of the calculated delays may further refine the

IX. CONCLUSION

We provide a hassle free and user friendly way to manage documents by using them digitally.All the problems that arise due to current system i.e. carrying copies and original documents with us will be solved by new digital system. Every time it is easy to handle documents digitally.

REFRENCES

[1] **ehun-wei Tseng et.al** Department of Infonnation Management Cheng Shiu University Kaohsiung County, Taiwan Design and Implementation of a RFID-based Authentication System by Using Keystroke Dynamics.

[2] **AndreyLarchikov, Sergey Panasenko, Alexander V. Pimenov, PetrTimofeev**ANCUD Ltd. Moscow, Russia Combining RFID-Based Physical Access Control Systems with Digital Signature Systems to Increase Their Security.

[3] M. Vazquez-Briseno, F. I. Hirata, J. de Dios Sanchez-Lopes, E. Jimenez-Garcia, C. Navarro-Cota and J. I. Nieto-Hipolito. Using RFID/NFC and QR-Code in Mobile Phones to Link the Physical and the Digital World, Interactive Multimedia, Dr. IoannisDeliyannis (Ed.), ISBN: 978-953-51-0224-3, InTech, 2012.

[4] P. Solic, J. Radić, N. Rozic. Software defined radio based implementation of RFID tag in next generation mobiles, IEEE Transactions on Consumer Electronics, vol. 58, no. 3, pp. 1051-1055, August 2012.

[5] A. Juels, R. Pappu, B. Parno. Unidirectional Key Distribution Across Time and Space with Applications to RFID Security, Cryptology ePrint Archive: Report 2008/044. Available at http://eprint.iacr.org/2008/044, 2008.

[6] T. Hollstein, M. Glesner, U. Waldmann, H. Birkholz, K. Sohr. Security challenges for RFID key applications, RFID SysTech 2007, 3rd European Workshop on RFID Systems and Technologies. June, 12-13, 2007, Duisburg, Germany.Proceedings (CD-ROM), 12 pp.

[7] Corporate Information and Personal Data Leakage in 2012. InfoWatch Analytic Report (In Russian).Information Security, #3, 2013.