

Document Digitalization Through Use of Cloud Computing Technology

¹Smita Agade, ²Shivani Gokhe, ³Pallavi Chilamkar, ⁴Ujwala Gurnule, Prof. S. D. Zade
Department of Computer Science and Engineering
Priyadarshini Institute of Engineering and Technology, Nagpur.

Abstract: Even today, a large number of organizations collect data using paper forms. However, it can be difficult to aggregate, and analyses the data collected using paper forms. Better management and processing of documents is indispensable to improving customer experience.

Document Digitalization System is an essential approach that should be managed well to ensure an effective and faster overall working process in an organization. Hardcopy document has been one of the items that most organizations need to manage in a safe and secure manner due to high dependency on most of their working procedure especially in government organizations hence we proposed a new framework using cloud computing technology to improve the weakness of the existing Document management procedures in a government organization. Government organizations are utilizing a paperless documentation method to save their overall running cost as well as reducing the need to store massive amounts of physical papers. Government departments are still using paper-based documentation. This is because of the inefficient security system.

Keywords: Document Management System, Information Retrieval.

I. INTRODUCTION

This paper aims to describe Document Management information system, which makes the process of government organization paperless. It helps improve the productivity and efficiency of the business processes. It helps eliminate the cost of storage, shipping, as well as the paper-based costs.

Physical document storage is one of the biggest problems that most organizations come across. It adds to the operational costs and the organization has to hire someone to maintain those files. Document Digitalization offers easy storage in cloud where all the files are electronically stored. Since all the documents are kept in a central repository, the users can easily retrieve a specific document with a quick search.

Data security is one of the most important features

of Document Digitalization that ensures all your mission-critical data will remain completely safe.

Objectives:

- Documents can be scanned and electronically stored in a centralized, configurable content management system, thereby reducing costs associated with physical storage of paper copies (in shelves, cabinets, boxes, rooms etc.).
- Keeping digital documents in the “cloud” can enable access from anywhere (only by approved users with required credentials) as long as a computer with Internet access is available.
- A digital document management system helps users to access the required data quickly and precisely, thereby enabling better customer service.
- Digital documents are saved in secured environments (servers, databases, encryption etc.), and can be accessed only by authorized users, which provides more security compared to a paper-based system, where a misplaced or mishandled document is a common problem.
- An entire organization’s documents can be stored in just one computer instead of rooms of shelving, boxes etc. Also, digital documents are easily backed up. In case of any disaster – natural or man-made, recovery from a backup is much easier and faster with digital documents than with paper documents. And if the digital version is stored in “cloud”, it’s there always

II. LITERATURE SURVEY

- In “Paperless University-How we can make it work?” by Prof. Masuda Isaeva proposed the system which is going to provide Paperless is important for a current ecological situation universities can help to save natural resources but the most important thing is that it is the way of improve the university management and make administration process much easier and faster.
- In “Digitization of Documented Signals Using Vertical Scanning” by Prof. Rupali Patil proposed the system which provide the Document Digitization can be used for onversion of historical text records to equivalent sounds signals, which is useful for blind people.
- In “ELECTRONIC DOCUMENT MANAGEMENT SYSTEM” by Prof. D. O WCZAREK proposed the system which has The main aim of this work is an attempt to create web application which provides fast, easy to use interface for documents publication and management. The point is to create application that do not need a printable copies of documents. upcoming companies and other activities.
- In “Digitization and Paperless Processing through the use of mobile imaging Technology” by Prof. Jinal Shah, proposed

III. PROPOSED SYSTEM

• Cloud Document Security System

We proposed Cloud computing environment- based document security management model is introduced. It includes several modules such as the system designed and implemented ACE, a mobile application running on the Android platform that uses computer vision to automate digitization of data filled in paper forms. Even though the project was conceived to digitize paper forms, the underlying algorithms implemented can very well be extended to solve much bigger problems as these algorithms can identify objects of interest and extract useable text data.

- In “A Framework to Access Handwritten Information within Large Digitized Paper Collections” by Prof. Liana Diesendruck proposed system which provide automated search solutions for digital archives of

handwritten documents will only grow as more paper archives go through the digitization process.

IV. EXISTING SYSTEM

- In RFID (Radio frequency Identification) DMS with e-ink proposed RFID Document Management System with e-ink is developed to close the gap of hardcopy production. It helps to keep the information of the organization from slipping out. This technology is cost saving as it based on ink- jet printing technology with spotlight in simplification of RFID creation process. This technology has been proposed for a hospital clinical management system.
- In Biometric system proposed Biometric or automation recognition of a person based on his/her physiological and/or behavioral, is a system implemented in major library areas include gate checking, circular section, stack entry record and internet searching via digital library. An example is the biometric system implementation by the Paul Sawyer Public Library since October 2008 cloud storage, document encryption and authorization system, thin clients, common terminal and document outsourcing management.

• Scanning of documents

The first unavoidable step for the implementation of a document management system involves the digitalization of the files on paper or in any other physical format. This is carried out, fundamentally, by means of a scanner, which is the tool in charge of creating the digital copy that will later be stored in a central location. Obviously, it is a long, expensive process and, why not say it, quite tedious, but it is essential to make the most of resources. Storage of documents, metadata and electronic signature. Cloud storage and sending large files.

- **Access Documents in the cloud**

As we have said, sending a document, however large, is a relatively fast process when using these cloud storage systems. However, when it comes to opening and sharing documents between users who have access to the system, the process is even more agile. And is that, in most cases, do not even need to make that shipment. Simply place the file in a shared folder to work with it instantly, and even simultaneously.

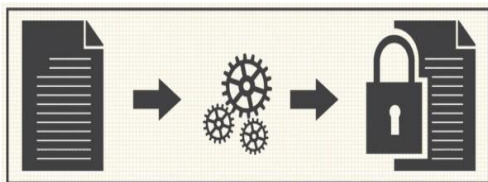
The cloud storage system of document management systems is usually customized for each company. In any case, it is usual to allow restricted access through a user mechanism and password, to which additional security measures can be added. Once inside, any employee can access all documents except those that, due to their confidential nature, have been restricted to only a few.



- **System security**

Document management solves the most traditional problem of physical storage, such as the loss due to deterioration of the physical format. And, thanks to these systems, the elimination of files is practically impossible even if, in the worst case, there is a computer attack that eliminates the information. This is mainly due to the fact that they have mechanisms that create backup copies capable of restoring data without problems at any time.

- We provide one-time password (OTP) is an automatically generated numeric or alphanumeric string of characters that authenticates the user for a single transaction or login session.
- An OTP is more secure than a static password, especially a user-created password, which can be weak and/or reused across multiple accounts. OTPs may replace authentication login information or may be used in addition to it in order to add another layer of security.



V. CONCLUSION

In this paper we are introducing the “Document Digitalization Through Use of Cloud Computing Technology” A document Digitalization system is a process system designed to track, store, manage and control the flow of documents and files.

The storage of the data is carried out in a system known as central location, which will be used by the employees or managers of the organization each time they need to retrieve a document. Until not too long ago, this was done by hard disks of great volume. However technology and the increase in broadband Internet services, today the most recommended option is cloud storage. This ensure the users will need the permission of the administrator in order to access the document This helps prevent any kind of unauthorized access of documents. This also ensure that the user can't make random changes to a certain documents unless and until he is permitted to do the same.

VI. REFERENCES

- [1] Prof. Masuda Isaeva “Paperless University-How we can make it work?” Published in: 2016 15th International Conference on Information Technology Based Higher Education and Training (ITHET)
- [2] Rupali Patil; R. G. Karandikar, “Digitization of Documented Signals Using Vertical Scanning” Published in: 2015 International Conference on Microwave, Optical and Communication Engineering (ICMOCE) Date of Conference: 18-20 Dec. 2015
- [3] Owczarek, Wojciechowski, Murlewski, Sakowicz, Napieralski “ELECTRONIC DOCUMENT MANAGEMENT SYSTEM” Published in: Proceedings of the International Conference Mixed Design of Integrated Circuits and System, 2006. MIXDES 2006. Date of Conference: 22-24 June 2006
- [4] Jinal Shah; Sukumar Gaonkar; Aashika Shetty; Radha Shankarmani “Digitization and Paperless Processing through the use of mobile imaging Technology” Published in: 2016 International Conference on Circuit, Power and Computing Technologies (ICCPCT) Date of Conference: 18-19 March 2016
- [5] L. Diesendruck, L. Marini, R. Kooper, M. Kejrival, and K. McHenry “A Framework to Access Handwritten Information within Large Digitized Paper Collections” A framework to access handwritten information within large digitized paper collections Publication Type Conference Paper Year of Publication 2012
- [6] Ooi Chia Shen, Financial News, Reviews and Advice: From cashless to card less: Malaysia is on the right track, CompareHero.my, Compare Hero Global Limited, 2016.
- [7] Tiago Duarte, et al., Biometric access control systems: a review on technologies to improve their efficiency, Power Electronics and Motion Control Conference (PEMC), 2016 IEEE International (IEEE), 2016, pp. 795–800.
- [8] S. Patil, et al., Design and implementation of secure biometric based authentication system using RFID and secret sharing, in: 2017 2nd International

- Conference for Convergence in Technology (I2CT), 2017, pp.480–482
- [9] N. Shetty, H. Ragab-Hassen, NFC-based asset management for medical equipment, in: 2015 IEEE 11th International Conference on Wireless and Mobile Computing, Networking and Communications (Wi Mob), 2015, pp. 246-250.
- [10] Jayasree Baidya, et al., Design and implementation of a fingerprint based lock system for shared access, Computing and Communication Workshop and Conference (CCWC), 2017 IEEE 7th Annual (IEEE), 2017, pp. 1–6.
- [11] Thomas Ulz, et al., Secured and Easy-to-Use NFC-Based Device Configuration for the Internet of Things, IEEE J. Radio Freq. Identific., 2017.
- [12] K. Konishi and N. F. Ikeda, “Data model and architecture of a paper-digital document management system,” in DocEng '07: Proceedings of the 2007 ACM symposium on Document engineering. New York, NY, USA: ACM, 2007, pp. 29–31.
- [13] Sandra - Dinora ORANTES-JIMÉNEZ, Alejandro ZAVALA GALINDO, Graciela VÁZQUEZ-ÁLVAREZ, Paperless Office: a new proposal for organizations, ISSN: 1690- 4524 SYSTEMICS, CYBERNETICS AND INFORMATICS VOLUME 13 - NUMBER 3 - YEAR 2015
- [14] Hang Thu Pho, Torben Tambo, “Integrated Management Systems and Workflow-Based Electronic Document Management: An Empirical Study” Journal of Industrial Engineering and Management, pp. 194-217, January 2014.
- [15] L. Ravichandran, Chris Harless and Amit J. Shah, “Novel Tool for Complete Digitization of Paper Electrocardiography Data”, IEEE Journal of Translational Engineering in Health and Medicine, 2013
- [16] N.F. Mohd Nor, et al., Empowering the community through ICT innovation, in: 2011 IEEE 10th Malaysia International Conference on Communications, 2011, pp. 13–17.
- [17] Hasoo Eun, Hoonjung Lee, Heekuck Oh, Conditional privacy preserving security protocol for NFC applications, IEEE Trans. Consum. Electron. 59 (1) (2013) 153–160.
- [18] W. Nick, J. Shelton, C. Sabol, A. Esterline, Federated protocol for biometric authentication and access control, 2017 Computing Conference, 2017, pp.854–862.