CONCEPT NOTE:

PROJECT TITLE:SEC DOC

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ACRONYMS

EGA ----------Egovernment Agency.

1. INTRODUCTION

Technology has been growing very fast and therefore promoting changes in every aspect of human life. Technological changes have contributed to changes in political, economic and social sectors of human life. In order to cope with these changes world governments are adopting technology in the provision of social services in their sectors. However, the adoption of ICT in the provision of social services improves performance and, on the other hand, impose security challenges on the other side.

The Sec doc system is expected to provide the following functionalities with respect to stakeholders in order to address the security challenges faced due to document sharing.

- Document storage

With a sec doc system document will be stored in a distributed network in form of block using a block chain technology and hence making tampering with documents a little bit harder

- Document verification.

Sec doc system will allow the stakeholders to verify and check if the document received has been tempered or not by checking a against the original document that was initially uploaded in the system. If the document will match then there is assurance that the document has not been tempered and if the document does not match then there is a possibility that the document was tempered

- Document sharing

Document sharing is another key functionality that will be provided by sec doc system. How ever the sharing technique provided by this system is different from commonly known techniques' doc will provide the secured mean of document sharing.

1.1.0 BACKGROUND OF THE STUDY.

Information sharing is a key issue of concern in daily activities within the government. Assurance that information cannot be tempered with the existing system is somehow a challenge. This challenge is posed due to the fact that information is stored in a central database with well-known encryption technologies. This situation leads to some challenges which in one way or the other reduce the effectiveness of the government personnel. With the issue of security especially integrity and confidentiality.

In current centralized systems, all data and transactions are stored in one site which imposes many issues concerning the integrity and availability of data. Data is mutable which means that one can change the data easily and compromises its integrity. There is also one point of failure which may also compromise the availability of the data. Having these issues with the current system, the need for more advanced technology is inevitable. The need for securing data and transactions is very high. Currently there is emerging technology which is of great interest, blockchain technology. This is the technology that involves securing electronic transactions in an immutable way. This technology provides an immutable decentralized system which solves many issues of centralized systems.

Speaking in a government context, there are a lot of initiatives to digitize government work. Some of which are like electronic government, electronic payments gateways. All these produce a lot of digital data, as a result the need for efficient storage, transfer, and verification of data can not be neglected.

Several studies have been conducted and initiatives considered. Some of which include qr codes, digital signature and watermarking. Though these kindly perform well, they do not generalize well. This is where secure docs get power.

1.1.1 PROBLEM STATEMENT.

Currently within government, information is stored and shared using database technologies which are more centralized. The data is immutable and can easily be tempered, there is also one point of failure. Which all can cause issues on availability and integrity of the data. Secure docs system will provide a solution to this problem as the technology uses decentralized systems and hashing mechanisms to store, secure and share data in a distributed manner (using decentralized servers). With this solution data integrity, availability and confidentiality is assured.

1.1.2. CONCEPTUAL DIAGRAM.

From the system there will be three users, namely System Admin, Organization Admin and Organization Staff. Public institutions will have to request in order to participate in the system. System admin is the one responsible for registering organizations or institutions to the system. System admin is responsible for creating an Organization Admin who is then responsible for registering Organization staff.

Organization Staff will be able to enroll in the system and share the documents with other organization staff or even staff from another organization. They will also be able to securely store documents in the system and retrieve them whenever they want.

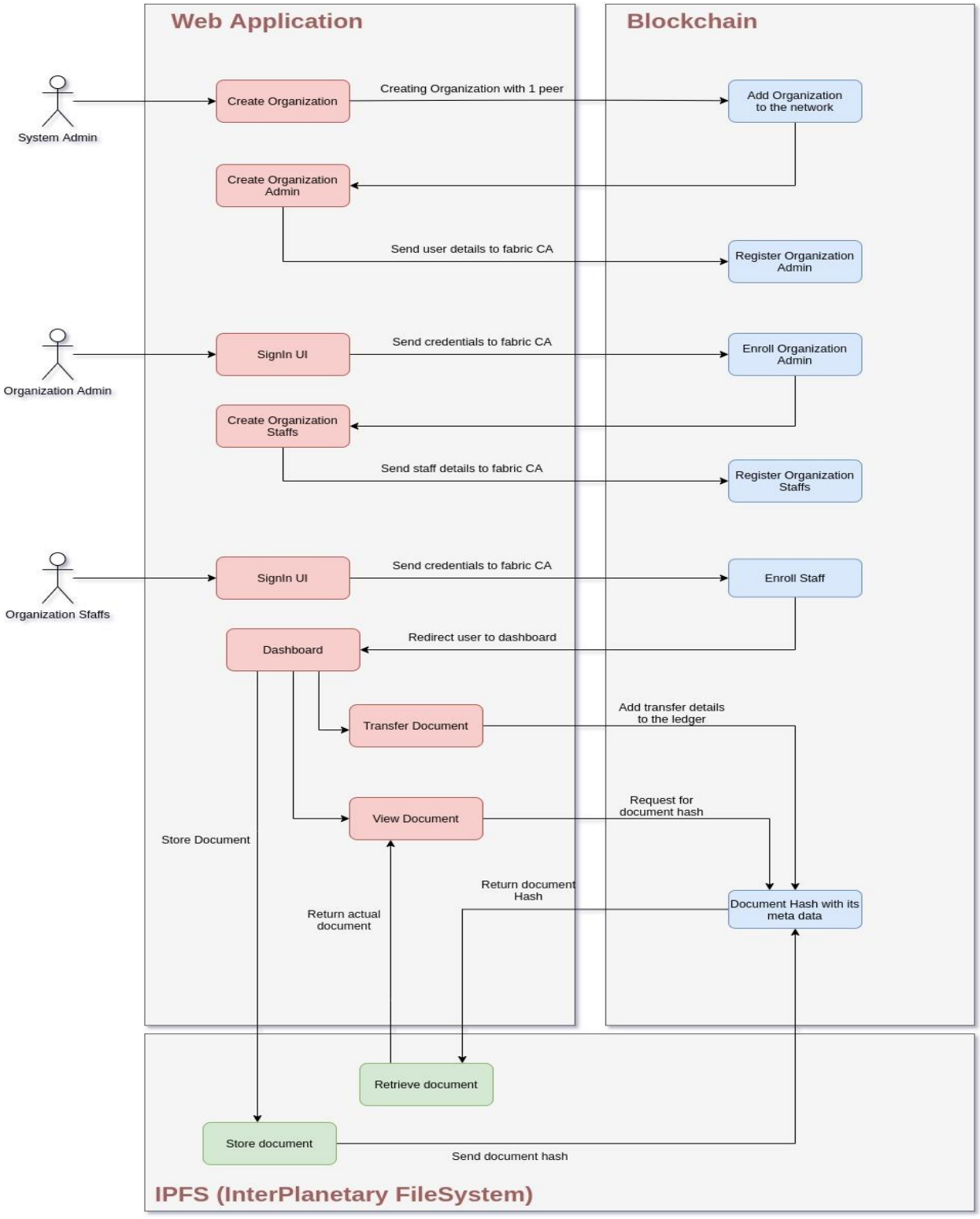

Figure 1.conceptual diagram .

2. WHY SUGGESTED SOLUTION.

In cent year document leakage and manipulation has been grown at higher level this is due the weak technology which has been used to store and share these documents. We have decided to come up with this solution due to the fact that the proposed solution has shown the following traits.

i. Highest level of integrity and security.

   The proposed will use block chain as the underlying technology that will be used to store and share data among the government institution

ii. Cost effectiveness.

   With the block chain technology to be specific with hype ledger fabric data storage is very is especially when the system is integrated with external dap such as IPFS.

iii. Increased trust.

   With the use of this solution the trust between the members sharing the information will increase due to the fact that the entities can validated the file before using it to see if it has been tempered.

All these characteristics are exhibited by block chain technology and hence increase the level of confidence to the users.

3.0 PROJECT OBJECTIVES

3.1 MAIN OBJECTIVES

To design and implement a well secured information system that will allow sharing, storage and securing documents that will be used in government institutions with minimal cost.

3.2 SPECIFIC OBJECTIVES.

- Research and study different systems that currently exist and assist sharing of information within the government institutions
- Study and select minimal cost among available technology that will be used to assist development of the system.
- Design and implement a blockchain network that will be used to store and retrieve data.
- Design and implement a suitable user Interface that will allow users to interact with the system.

4.PROJECT SCOPE.

To develop a web-based system that will have a user interface, networking capabilities that will allow the personnel within the government institutions to share documents in a secure way in Tanzania.

Sec doc project will have the following stakeholders:

- Ega (Government agency)

E-government Authority, will be the one responsible to monitor the whole system including registering other public institutions interested in the system.

- Public institutions.

Public institutions will have interest in sec doc as the system will provide a secure way to share, store and verify the integrity of government documents.

5.CONCLUSION.

With successful implementation, the Sec doc project will improve communication within government institutions by providing a secure channel of sharing documents and hence preventing document tempering and leakage as it has been observed in recent years.