



# Federated Digital Identities

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## ABSTRACT

*Federated Digital Identity is an application which comprises of name of the citizen, photograph, basic details and the collection of different IDs of each citizen and provide them Universal Identification Number called FDI Number. It would record every vital information of a citizen. It can be allied to a Smart Cell-phone, Computer or Laptop to access or retrieve the information. It would replace all possible documents procured by an individual during his life time. It would serve as a rescue from the practice of forged identity, duplicity and corruption.*

**Keywords:** FDI number

## 1.Introduction

In India, there is no single universally accepted National ID system. Many Indian residents till date, have several forms of identity documents, for different purposes, such as EPIC for election purpose, a ration card for accessing the public distribution system, PAN card for tax registration, a driver's license on road, and a passport for travelling abroad. These ID documents, in use, were basically derivatives of the services being offered by various agencies such as, EPIC, issued by the Election Commission of India. So as the population of country is growing at the high rate there is a demand for the single universally accepted National ID system.

## 2.Literature Survey

**Smart Card ID: An Evolving and Viable Technology** .In this paper, the principle aim is to discuss the viability of Smart Card technology as an identity solution and its ability to perform various functions with strong access control that increases the reliability of Smart Cards over other technologies. It outlines the overview of smart card technology along with its key applications.[1]

**Security Concerns with National ID Cards** .The main idea of this paper is to look at the main advantages and disadvantages of National ID cards, security properties of resident ID cards, possible threat and security features. Moreover, a number of alternative proposes to the National ID cards are present.[2]

**Multipurpose ID | One Nation-One Identity** .The digital identity ecosystem can work seamlessly across educational sector, healthcare, banking, finance, telecommunications and other services . The ecosystem can also work on a global level to connect different service providers across multiple countries. Organizations can minimize the time spent on tedious tasks that includes customer service calls or entering data from the application forms submitted by the citizens.[3]

**Multipurpose ID: A Digital Tool to Curb Corruption & Augment National Economy** .The present communication deals with a digitally operative Multi-purpose ID Card duly incorporated with an IC. The Integrated Circuit or micro- chip would record all substantive data of a citizen; including name of the citizen, DOB, family details, photograph, biometric details, signatures, bar code, QR-Code, PAN, LPG, bank accounts, financial assets, liabilities, passport and so on .[4]

**Unique Identification System: Challenges and opportunities for India** .This paper focuses on the need for a single national identity system in India and its proposed execution which may actually be linked to citizen life cycle. The other aspects covered and analyzed include current Indian scenario, challenges, existing identification systems and loopholes in the existing systems. Major challenges seem to be coming from enrolments, technology platform choice and strategic design, corresponding policy and legal frameworks. Considering the mammoth and diverse population, the UID can help with technology platform, smart card technology, legal and administrative framework, business model based on Private-Public Partnership (PPP).[5]

**UNIQUE IDENTIFICATION SYSTEM:** The unique identification number will be based on a sophisticated application called SCOSTA, a secured electronic device that is used for keeping data & other info in a way that only authorized persons can view it. The security of the UID database system will be handled by the Biometric technology. The system would provide a database of residents containing very simple data in biometric. The UID systems database is built by collecting data from different existing databases distributed all over the country, combining and storing it in one centralized UID system database helping to develop a card which can be centrally issued and used everywhere.[6]

### 3.Objectives

- The objective of a federated digital identity is to allow individuals to use a single digital identity across multiple platforms and applications.
- Without the need for use of multiple ID's or sharing personal information with each department.
- This can be accomplished through the use of a central, secure identity provider [FDI] that is trusted by all of the platforms and applications that an individual uses.
- This allows individuals to maintain control over their personal information and privacy, while still being able to access the services they need.
- Federated digital identity reduces overlapping of information and duplication of ID's.

### 4.Present System

At present a citizen, during his life time, comes across:

- Endless number of IDs, documents, certificates, licenses.
- Lengthy procedures and official formalities and periodical renewal, which necessitates documentation all over again.
- Difficulty in cross-verification of the documents, as many of them is discrete in nature. Verification of these documents is an additional tedious exercise.
- Leads to corruption, suppression of facts and loss of revenue due to tax evasions.

### 5.Proposed System

The proposed system would

- Ensure freedom from keeping hundreds of documents.
- Preserve the details of issuing authority, secure the documents from tampering.
- Save time & energy of every citizen, issuing officials and verifying authorities, at each level.
- Provide easy access to all personal information or original

documents, anytime and anywhere.

- Deliver all vital information to the competent authority in least time (on just one click).
- Prevent the loss of government revenue (through evasion of taxes).

### 5.1 Architecture of System

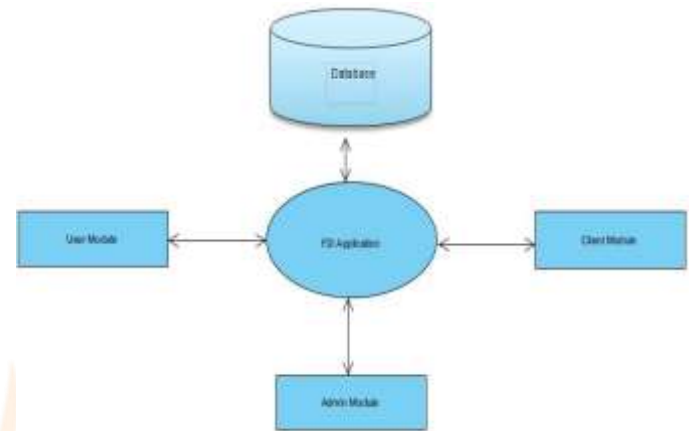


Fig 1 Architecture

#### Modules

- **User Module:** It consists of the basic user registration, followed by the login. Then basic user details are displayed in the dashboard. This also consists of the facility to add the different id documents. Then the user can logout of the application
- **Admin module:** Here the admin manages all the data and checks if the different ids are duplicated or over merged. It is responsible for the managing and usage of the unique Id's to all the user
- **Client module:** In this module the UI(user interface) for the agency/organization who is requesting the documents/Id's of the person is included. The user can give the consent to share the documents of the choice so that the agency/organization can get access to the document/Id's and use it for the further process.

## 5.2 Sequence Diagram

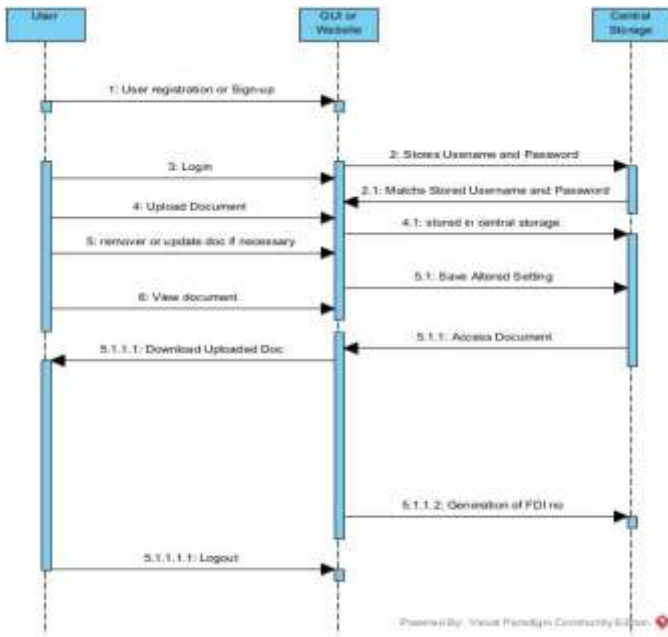


Fig 2 User Side Sequence Diagram

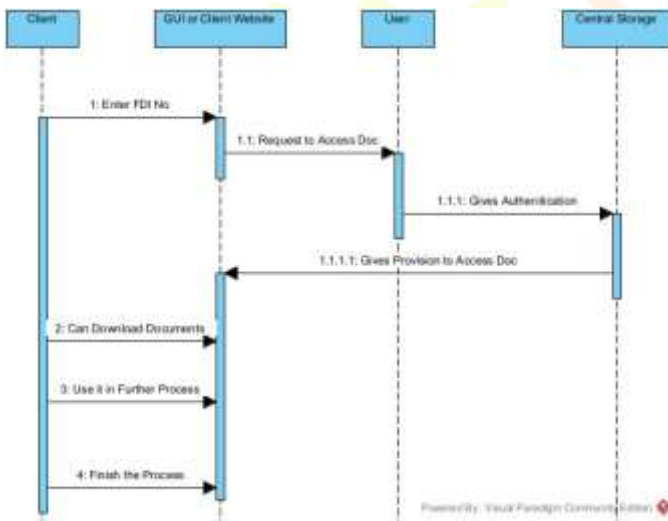


Fig 3 Client Side Sequence Diagram

User or Customer is the main actor. User can login and signup for the application using the application dashboard. After successful logging in user can upload the documents. Which are stored in central storage. Where in the user has provision to remove or modify documents which are already uploaded to storage. After

Client is another actor in scene. Client has privilege to use the FDI no already generated to get access to documents which are stored by user. But to access those documents the client needs authentication from the user. After the authentication is given by user. Client can utilise the documents to attach to his needed works.

## 6. Conclusion

The use of federated digital identity has the potential to improve the security, privacy, and interoperability of digital identity systems and to give individuals more control over their own identity. By centralizing the authentication process; it eliminates the need for users to remember multiple Ids to access different platforms.

## 7. REFERENCES

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