National ID: A Proof of Identity or Privacy Ghost

Mr. Manoj Kumar & *Ms. Priti Jagwani***

Aadhaar project by UIDAI is one of the most ambitious projects of the government of India. All the possible efforts are made to provide unique identification to all the people living in India. The need for unique identification was felt from long ago as the government was not able to implement its programme with high success. Aadhaar has made the programme implementation very convenient and easy for the government as leakage in the system has been be mitigated by directly reaching to the beneficiary using Aadhaar. With Aadhaar, beneficiaries get benefits directly in their legitimate accounts. However due to some privacy threatening factors the Aadhaar project is not gaining so much of the people's confidence that it should do. It seems that privacy of data is at the stake and users are not satisfied with the level of the privacy that the government is maintaining with respect to Aadhaar. Thus it is the need of that hour to improve the infrastructure of the privacy maintenance and built a clear cut guideline for Aadhaar implementation. Cooperation from the people is also expected in the manner that they should comply with the guidelines set up by the government.

Keywords: UIDAI, Aadhaar, Privacy, Identity.

INTRODUCTION:

With 1.2 billion inhabitants in both rural and urban areas India is the second most populous country and largest democracy in the world. Demography of total population of India is possessing sea differences and varieties. For the active participation of inhabitants in the governance as imposed by democracy, the need is for identification of every human being present in the country is indispensable.

Identification is the idea of binding a human being with a specific identity. Token based identification and knowledge based identification are widely used techniques. But now a day for verification and identification tasks of human being's biometrics has attained highest avenues. Biometric identification refers to identifying an individual based on his or her distinguishing characteristics. Apart from many well established applications, Aadhaar – India's national id system is one of the biggest civilian applications of biometric.

Aadhaar is a 12-digit unique identification number issued by Government of India. All residents of India including children, trans-gender and differently abled can get Aadhaar card. The card contains Name, Address, Mobile number, Date of birth, Gender and biometric details.

Till date around 1.9 billion people aged between 18 and above have been enrolled in Aadhaar which covers the 99% of the country's population. Aadhaar card is being extensible used for various purposes which requires verification, authentication etc. Figure 1[1].
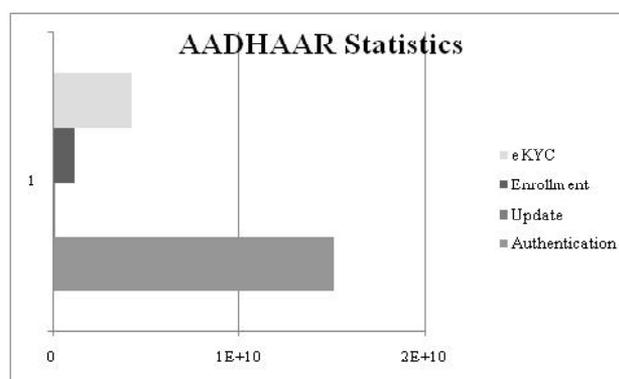

Figure 1. Growing uses of Aadhaar.

World Bank Chief Economist Paul Romer described Aadhaar as "the most sophisticated ID programme in the world" [2]. Indian government is making it mandatory to possess Aadhaar for various usage. The wider uses of Aadhaar are coming into perspective for different government programmes. On one side the Aadhaar project is benefiting and empowering common people of India, the other side of the spectrum there are cases of privacy breaches and misuses of Aadhaar. However, privacy breach using Aadhaar data has been regarded as the most important concern. Owing to the increasing apprehensions around privacy various steps are being taken to mitigate the risk of data theft. However, in country like India it is still a big challenge to protect data sovereignty and fraud.

*Student @ Dept. of Computer Science, Aryabhatta College, University of Delhi.
**Asstt. Prof., Dept. of Computer Science, Aryabhatta College, University of Delhi.

UIDAI Project

UIDAI is a statutory authority established in 2009 by the Government of India under the provision of Aadhaar (Targated Delivery of Financial and other Subsidies, benefits and services) act,2016. UIDAI was created with the objective to issue Aadhaar to all residents of India. It was considered as robust as it is capable of eliminating duplicate and fake identities. Another important avenue of Aadhaar is that it should be verified and authenticated in a trivial and cheaper way. Aadhaar project is the world's largest national project launched by the Government of India which seeks to collect biometric and demographic data of residents and store these in a centralised database. Aadhaar number is a 12-digit random number issued by the Unique Identification of India (UIDAI) to the residents of India after satisfying the verification process laid down by the Authority [3]. The rational as described by government behind this ambitious project is facilitating good governance, value integrity and striving towards excellence in services to residents.

According to Wikipedia, from the beginning of the UIDAI project in 2009 to march 31,2017 the government has spent a total of Rs. 8,793.9crore (US$1.4billion) on the Aadhaar project [4]. With this heavy investment the government claims to saved $9 billion by eliminating the middleman and other leakage in benefit transfer. The government now transfer the money directly to the beneficiary account using Aadhaar as authentication [5].

Now a day Aadhaar has become mandatory for any direct benefit transfer from GOI or for obtaining any service. It has become a paperless online anytime-anywhere identity. Government of India has launched digital locker system for the citizen of India which can be signed using Aadhaar.

Few basic issues

Some basic issues relating to Aadhaar includes:

1. **Not a proof of citizenship**: Aadhaar is not a proof of citizenship. Anyone living in India can get enrolled in Aadhaar [6]. And Aadhaar is widely used to get passport or obtain other identity documents.

2. **AADHAR card alone is not an ID**: Possession of a physical Aadhaar card should not be considered as identification in public places such as trains, airports and other places.

   But in reality, on trains, at airports entrance and many other places it is considered as a valid identity document.

3. **Originality of Aadhaar**: A printout of Aadhaar information is being treated as valid document by various entities. There is no concept scrutinize originality of Aadhaar card i.e. it does not contain any security features hologram. So any professional counterfeit artist can recreate the so called Aadhaar document if he knows the basic information's printed on Aadhaar card.

4. **Aadhaar number/data is public**: Many government departments as private entities have made available Aadhaar number public on Internet. One can get access to those Aadhaar number along with other details by simply doing internet search. Searching with key word such as "Aadhaar number name filetype:xls-uidai" can give access to thousands of documents which have Aadhaar number mentioned along with the other details of the person.

   With the wider uses of Aadhaar, some issues such as data security, ownership of data, privacy breaches, private-sector use of consumer data and use of Aadhaar by government for surveillance purposes challenge the very authenticity and usage of the Aadhaar.

Privacy

Under the heading of "information privacy," one of the most influential and a commonly quoted definition was developed by the privacy pioneer (Westin, 1967) which states that:

Privacy is the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others.

"AADHAR" as a Privacy Breach

Of all these problems data privacy is a major concern as any breach of data can lead to havoc in this digital world. The information collected from Aadhaar when combined with the data available on internet will certainly create privacy intrusions. L. Sweeney in the work [7] reported that 61% of the US population was

uniquely identifiable by taking a combination of {gender, ZIP code, full date of birth}. This information was available in public databases. Aadhaar as an identification symbol contain much more information than this. Which could allow unique identification of every Indian resident. The consequences of data leak range from the uncomfortable creepiness of being watched to unwanted revelations of a person's activities to actual physical harm. It could be embarrassing to be found associated with certain places like crack house, AIDS clinic, business competitor, or political headquarters. Aadhaar data along with the data and web databases like yellow pages available on internet is capable of disclosing the above aspects about an individual

Aadhaar as a token of unique identification raises genuine privacy worries. Privacy of data incorporated into Aadhaar it is the need of the hour. As any leakage of Aadhaar data can lead to identity revelation of the user which can further be exploited to gain access to many sensitive information about the user.

Recent news about the billions of Aadhaar card data being compromised and sold for some rupees raises a serious concern as Aadhaar card contains both the demographic and the biometric data so it becomes a risk for an individual as well as government if the data is not secure.

Despite of laws for data privacy, concerns related to Aadhaar are always in news. There are many cases spotted over the period of time about the data leakage and privacy compromise of individuals through Aadhaar. Recently, through social media Union Ministry of Law & Justice and Ministry of IT are informed about Aadhaar data being leaked by the CSC e-Governance Services India Ltd. The CSC e-Governance Services India Ltd. had posted a photo of cricketer MS Dhoni's Aadhaar card as well his finger prints [8].

In a similar case in Kerala, Aadhaar data of over 35 lakh pensioner has been leaked from Kerala state pension department.

In Jharkhand a shocking incident happened in which the information consisting of name, address, Aadhaar number and bank accounts of more than a million beneficiaries have been compromised by programming loophole. Details of over a million Aadhaar numbers are published on Jharkhand government website which can easily be exploited by adversary parties [9].

Data protection

In this modern digitized world individuals are concerned about privacy and are vary about its intrusion. **Privacy** concerns exist wherever **personally identifiable information** or other **sensitive information** is collected, stored, and used. Apprehensions about Privacy will become serious depending on who is collecting what data; sharing with whom and for how much time those parties are keeping the data? Technically speaking, achieving 100% privacy and security is a myth in today's digitally revolutionized world.

AADHAR Implementation Project: Towards Improvement

Recent advancement in the domain of information technology offer several novel and powerful ideas to resolve many security and privacy challenges describes above.

There are many loopholes in Aadhaar card project implementation. Some of them can be mitigated by maintaining check points. Security mechanism at each and every level should be perfectly implemented. Table 1 shows some major issues and the key recommendations to handle them. As in security it is often said that weakest link in the process defines how secure the system is, and most of the time it is observed that users are the weakest link so first of all awareness among the users should be the first step toward making the system secure. Besides that, Aadhaar card should have validity period i.e. biometric data should be updated from time to time. The process of authenticating the Aadhaar should be made transparent to the user. The state government can play a greater role in improvement in Aadhaar card data correction by conduction the survey from time to time and matching the data with their central system (Many of the state has this central system). For the long term it is important to have a robust plan of the Aadhaar implementation as in the country like India it becomes very difficult to apply the same measures in every part of the country due to difference in the geography along with the other diversity.

Table 1. Summary of analysis and recommendation

Issues	Shortcoming in UIDAI measures	Key recommendations
Authentication without consent	Biometric and demographic data are public; hence can be used without consent.	Strengthen legal and policy framework.
Verification of Aadhaar	UIDAI has very flexible measure for AADHAR authentication.	Aadhaar data should be verified at the server end based on data given by the user.
Content of the data card	All the data is displayed on the system of the verifier.	Part of the data or hidden character should be inserted.
Fake Aadhaar card	Due to demographic variations accuracy of input data is reduced.	Machine learning models should be trained to mitigate the cause of this problem.
Misuse of the Aadhaar card	No clear cut guidelines for Aadhaar verifications by the private entities.	A clear cut guidelines should be made to curb out this problem.
Validity of information on the Aadhaar card	The user may provide false information on the Aadhaar card.	The Aadhaar data should be verified from the local database and other related relevant sources.
Biometric data	Currently there is no provision for bio metric data upgradation.	The finger print may change with time so biometric data should be updated from time to time.

The government is trying their level best to come up with the solution for data protection and privacy. Many improvements have been suggested to improve upon the security of data at the earliest.

In order to accomplishe its goals, India must pass comprehensive privacy legislation that provides for judicial remedies and other enforcement mechanisms for preventing privacy violations, so that what began as a project to help the poor does not become a tool for increasing violations of Indian citizens' privacy. India should look to the personal data privacy regime of the European Union as a model for its own legal regime. A national privacy law is essential to the success of Aadhaar, and should contain four provisions contained in the EU laws:

1. A prohibition on collecting data about race or caste,

2. The implementation of a role for judicial review as a specific remedy for those whose personal information is improperly used,

3. Mechanisms through which individuals can object to the use of certain personal information,

4. Rules for informing individuals how and why their personal information is being used.

Aadhaar could be a breakthrough for the nameless poor of India, giving identities to those who are all but invisible and granting access to credit markets, bank accounts, government aid, cell phones, and other benefits that were previously out of reach. However, if strict privacy controls and regulations are not enacted the system could become yet another of India's notoriously corrupt government projects, helping only already corrupt government officials.

CONCLUSION:

In order to live up to its title of the world's largest democracy, India must value the dignity and identity of even the poorest of its 1.2 billion citizens. In creating the Aadhaar system, the country has shown that it takes the plight of its poor, many of whom live in the most hopeless circumstances, seriously. It also demonstrates that the highest levels of federal government are focused on reigning in the rampant corruption and graft harming the people of India. But in order to maintain its democratic ideals, India must ensure that the massive amount of information it collects through Aadhaar is used only for the limited and genuine purposes for which it is collected.

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