Group Assignment –

Blockchain Use cases

Group No : 9

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Group Assignment: - Identification of Use Cases

"Each set of participants within a group helps collectively come up with 3 relevant ideas where blockchain would add value. A collective github page document for every group to be submitted."

Identified Use Cases

The blockchain use cases that have been identified by the group 9 members are as stated below.

1. Criminal Prosecution Blockchain
2. Food Product Standard Approval Blockchain
3. One Point Access Blockchain

Use Case 1: Criminal Prosecution Blockchain

Origin of the Problem

The criminal prosecution process in India is a complex tedious task which takes an exhaustive amount of time.
The criminal prosecution can be initiated for two categories of offences – a. cognizable and non-bailable offence (Table 1 – Schedule 1 Cr. P.C.) [1] and b. non-cognizable and bailable offence (Table 2 – Schedule 1 Cr. P.C.) [1]. A criminal prosecution for these offences can be initiated based on the rules of section 156 (1) or Cr. P. C. , Section 190 pf Cr. P. C. and Section 155(2) of Cr. P.C.

Criminal prosecution in India has been known to have inefficiencies which have led to years of trial, hung verdict and leaving criminals free due to certain reasons.
Firstly, a criminal prosecution involves multiple disjoint departments which have their own unique functions to carry out. Though ideally all departments must work in harmony, there are issues of mistrust , poor handling of common documents and unreasonable delay in certain tasks assigned to the departments.

A criminal prosecution includes a creation of a volume of documents such as the Incident Report, chain of custody., evidence form, grievance form, First Information Report, witness testimony, plaintiff/ defendant documents, charge sheet, exhibit documents and many more.
It is a well -known fact that frequently during the criminal prosecution many documents have been tampered and destroyed which has had a major impact on the final verdict of the prosecution.

The criminal prosecution process is complex and involves a high number of man power creating mis-trust and slower prosecution due to inefficiency of the man-power involved and complex.

The below diagram gives an overview of the complex criminal prosecution life cycle in India.

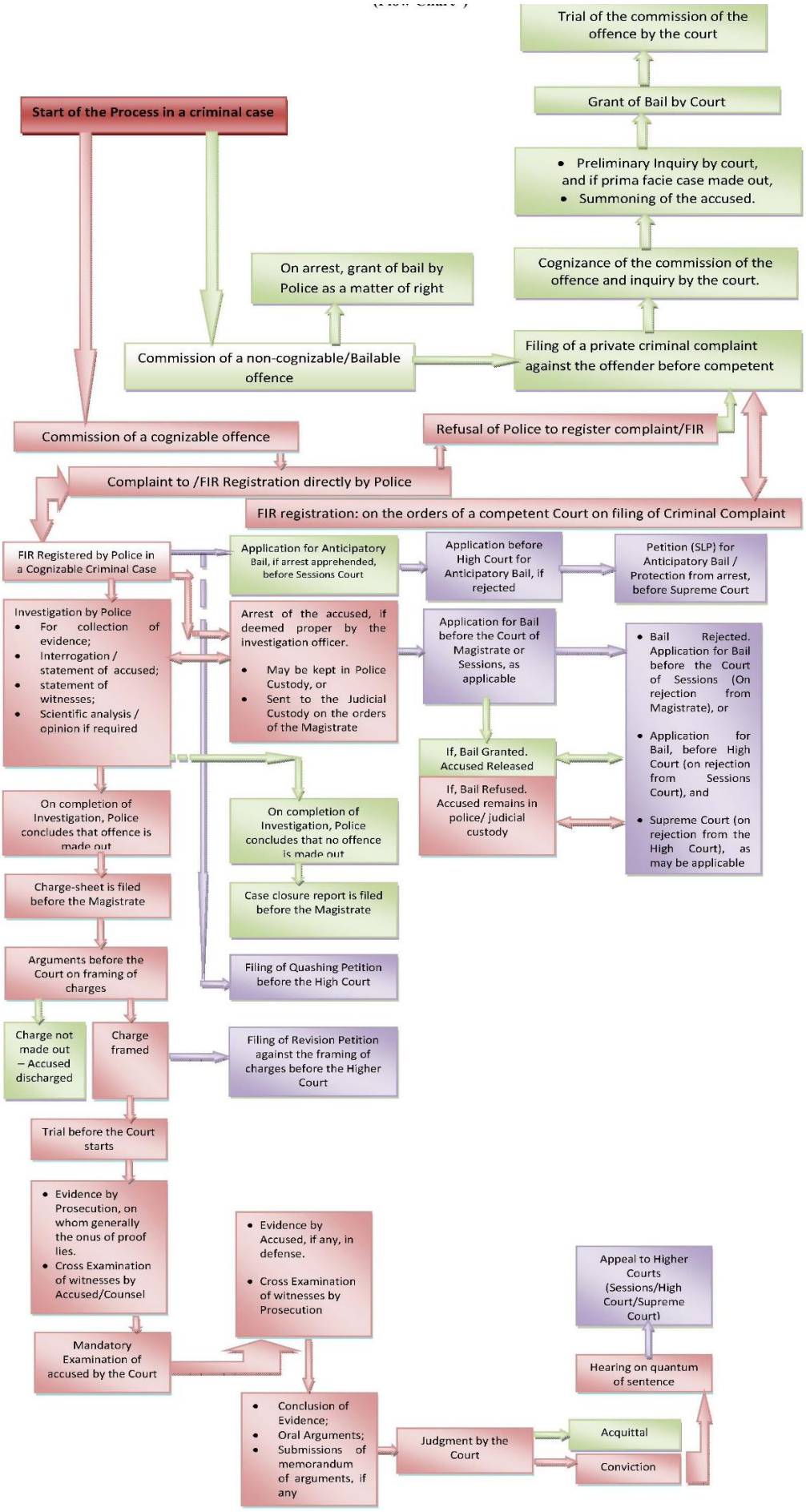

Figure 1: Prosecution of Criminal Cases in India [2]

Objective

The objective of the criminal prosecution blockchain is to create a blockchain for the entire criminal prosecution process initiating from the incident response to the final verdict of the case.

Blockchain Category

The type of blockchain that the group proposes to use for the criminal prosecution blockchain is the consortium blockchain.

Outcomes

- Simplified process
- Less tampering of documents (blockchain immutability)
- Higher level of trust due to transparency
- Easy to use, easy maintenance
- Efficient and shall save crucial time
- As a future scope, like Aadhar Card, if a database of criminals is created, this blockchain could be extended to link with the criminal database which will provide an easy way to identify a potential suspect pool

This blockchain aims to make work easier for the police officials, forensic investigators, lawyers, court officials and other departments involved in the criminal prosecution process in India. The conviction rate in our country is low which is one of the reasons that has lead to an influx in the number of crimes. This kind of blockchain if implemented, could save a considerate amount of time, simplify the prosecution and bring a level of trust through the transparency that would come due to the use of blockchain.

Use Case 2: Food Product Standard Approval Blockchain

Origin of the Problem

Regulatory compliance is a major concern in the current world since each day in the market you comes across with various products and it is very hard to check its compliance with different government and regulatory bodies. such authenticity can be managed with blockchain oriented system where in the item will have a unique id and decentralized environment will make the solution more genuine and hassle free origin tracking.

Currently, FSSAI has been appointed the duty of forming the Regulations. It is a sole body responsible for snsuring safety in food. The body is autonomous to Ministry of Health and Family welfare which has been the parent body of the newly formed young regulatory.

Existing standards of FSSAI:-

1. Prevention of Food Adulteration Act, 1954 [19]
2. Fruit Products Order, 1955 [20]
3. Meat Food Products Order, 1973 [21]
4. Vegetable Oil Products (Control) Order, 1947
5. Edible Oils Packaging (Regulation) Order 1988 [22]
6. Solvent Extracted Oil, De- Oiled Meal and Edible Flour (Control) Order, 1967 [23]
7. Milk and Milk Products Order, 1992

The various departments of FSSAI include

1. Import Division
2. Eat Right India Movement
3. International Co-operation
4. Regulatory Compliance Division (RCD)
5. Food Safety Management System (FSMS) Division
6. Risk Assessment and R&D division (RARD)
7. Information Education Communication (IEC) Division
8. Regulation and Codex Division
9. Quality Assurance/ lab Division
10. HR Division
11. Standards Division

Major issues

According to [3] and [4], the basic issue in the regulatory is the ambiguity in the law which leads to different interpretation by different departments and states throughout the country. Another issue is the lack of updating of laws, lack of standards for some products, issues of mistrust between big MNCs and local production houses, delay in shipment, high food testing expenses, lack of validation for food origin, discrepancies in food traceability and dynamic unreasonable pricing.

Objective

The objective of the Food Product Standard Approval blockchain is to create a secure – decentralized blockchain to identify and control any kind of false regulatory standards in the food industry in India.

Blockchain Category

The group proposes that the Food Product Standard Approval blockchain could be either public or consortium in nature.

Outcomes

- Authenticity can be easily validated and verified
- False regulatory promises can be easily identified
- Duplicates or copying of item can be monitored
- Easy access to validate with such bodies which is currently not that easy for common customers.

References

[1] "Criminal Complaints: Claims & Defenses," 30 October 2020. [Online]. Available: https://www.lawskills.in/ResourceDetails/22/criminal-complaints-claims-and-defenses.

[2] "PROCESS OF TRIAL OF CRIMINAL CASES IN INDIA," 30 OCTOBER 2020. [Online]. Available: http://saralkanoon.com/process-of-trial-of-criminal-cases-in-india/.

[3] "FSSAI – LOW STANDARDS OF STANDARDISING," 30 10 2020. [Online]. Available: https://www.thedollarbusiness.com/magazine/fssai-low-standards-of-standardising/15312.

[4] "Blockchain food traceability can revolutionize the industry," 30 10 2020. [Online]. Available: https://openlink.com/en/insights/articles/blockchain-food-traceability-can-revolutionize-the-industry/.