

LITERATURE SURVEY OF FOOD TRACKING SYSTEM USING BLOCKCHAIN - TECHNOLOGY (*)

*) One of the foremost blockchain-based food tracking systems is the "Food Trust" system developed by IBM. Announced for the first time in 2017, Food Trust has provided traceability in food supply chain to 80 different brands so far by using blockchain technology. Announcing that more than 5 million food products already on the shelves are included in the system, IBM seems confident that this platform will grow strongly.

*) Walmart has used blockchain to record where every piece of meat it buys from China comes from, where it is processed, and all transactions related to its sale, along with its historical course. All detailed information about the farm where the meat comes from, the factory where it is processed, the storage temperature of the product and transportation can be tracked on the blockchain. In addition to the benefits of processing speed, information sharing and transparency, the main purpose is summarized as increasing food safety.

*) prouname has conducted a blockchain-based pilot project in Indonesia to transparently track the movement of products from sea to table in the fishing industry. The seafood trade consist of very large fishing network, and it is very difficult sector to control quality. There is no reliable audit in sector. The aim is that the use of blockchain technology will facilitate transparency, tracking and auditing, thus the ensuring the safety of food products, preventing illegal and excessive fishing. (*)

*) Daniel Tse et al. focus on the increasingly serious problem of food safety in china and propose a blockchain solution for the agriculture supply chain, based on the information and transaction security between all the involved parties.

*) Francesco Marinello et al. offer a blockchain based solution focusing on the animal products supply chain in Italy. Kumar et al. propose a rice supply chain system that uses blockchain technology to assure the safety of rice during its flow through the supply chain.

*] Bagha et al. proposed work to monitor the food supply chain tracking system on cloud-based architecture. The proposed system, called cloud track, provides the global information of the entire fleet of food supply vehicles and is proposed to be used to track and monitor a large number of vehicles in real time.

*] Caro et al. propose an integrated solution of a blockchain platform named Agri-BlockIoT in the agriculture in the supply chain. Agri-BlockIoT is a fully distributed system that uses blockchain technology in combination with IoT devices to collect and distribute traceability data. The proposed solution was tested with two Ethereum and Hyperledger Sawtooth blockchain platforms. Agri-BlockIoT enables the integration of IoT and blockchain technologies, creating transparent and auditable records which can be used for an agri-food traceability system.

*] Titan proposes a blockchain based food tracking based system, especially to solve the recent problem related to food tracking in China. Arguing that traditional agriculture supply logistic system.

do not fully meet market needs, he proposes a more dynamic RFID-based food supply chain management system. with the proposed system, transferring and sharing the original data of agri-food in production, processing, storage, distribution, and sales connections.

CONTRIBUTIONS OF PROPOSED STUDY

⇒ A total of 0.038s for latency was gathered with the proposed system, which is 435 times better than Ethereum, one of the most popular blockchain Infrastructure.

⇒ A transmission per second value of 285, reception per second value of 335, and CPU load value of 19.22 are obtained with the proposed blockchain based system.

⇒ It is first study in which the user use of blockchain-based food tracking system is carried out and the satisfaction survey is carried out.

⇒ A total of 15.31% of users who use application liked the interface of application; 97.54% of the users stated that they found the application extremely useful and that they would like to use it again in the future.