SUPPLYDECK A Blockchain Based Pharmaceutical Supply Chain Management

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Abstract

With the rising competition among pharmaceutical companies, the current drug supply chain market has become more competitive with high-quality product segments. The rapid growth of internet pharmacies has made it more difficult to standardize drug safety throughout in complex distributed supply chain networks. There is a high chance of introducing counterfeit drugs which are almost the same as the original pharmaceuticals. Due to the lack of transparency the possibility of tampering with drugs in the current manual and web-based pharmaceutical systems is extremely high. Throughout the past recent years, these counterfeit drugs were recognized as the one of major worldwide problems. This situation is worsen in developing countries. The unavailability of verifying the legitimacy of drug suppliers and poor mechanisms to trace the drugs were identified as critical points that need to be resolved. SUPPLYDECK comes as a solution for the critical scenario mentioned. This solution addresses the above problems using blockchain technology, as a distributed digital ledger that ensures transparency, traceability, and security. This can show promise for solving some global supply chain management problems using smart contracts and user authentication along with IoT technology and machine learning concepts that are critically examined with this potential application.

Keywords

Drug Supply Chain, Pharmaceutical, Blockchain, Smart Contracts, User Authentication, IoT, AWS