Payment Protection

The problem is to protect payments to prevent fraud when a consumer orders goods from a retailer via an e-commerce environment. There is a time delay from when the order is made to when the goods are received. This gives the retailer an opportunity to commit fraud.

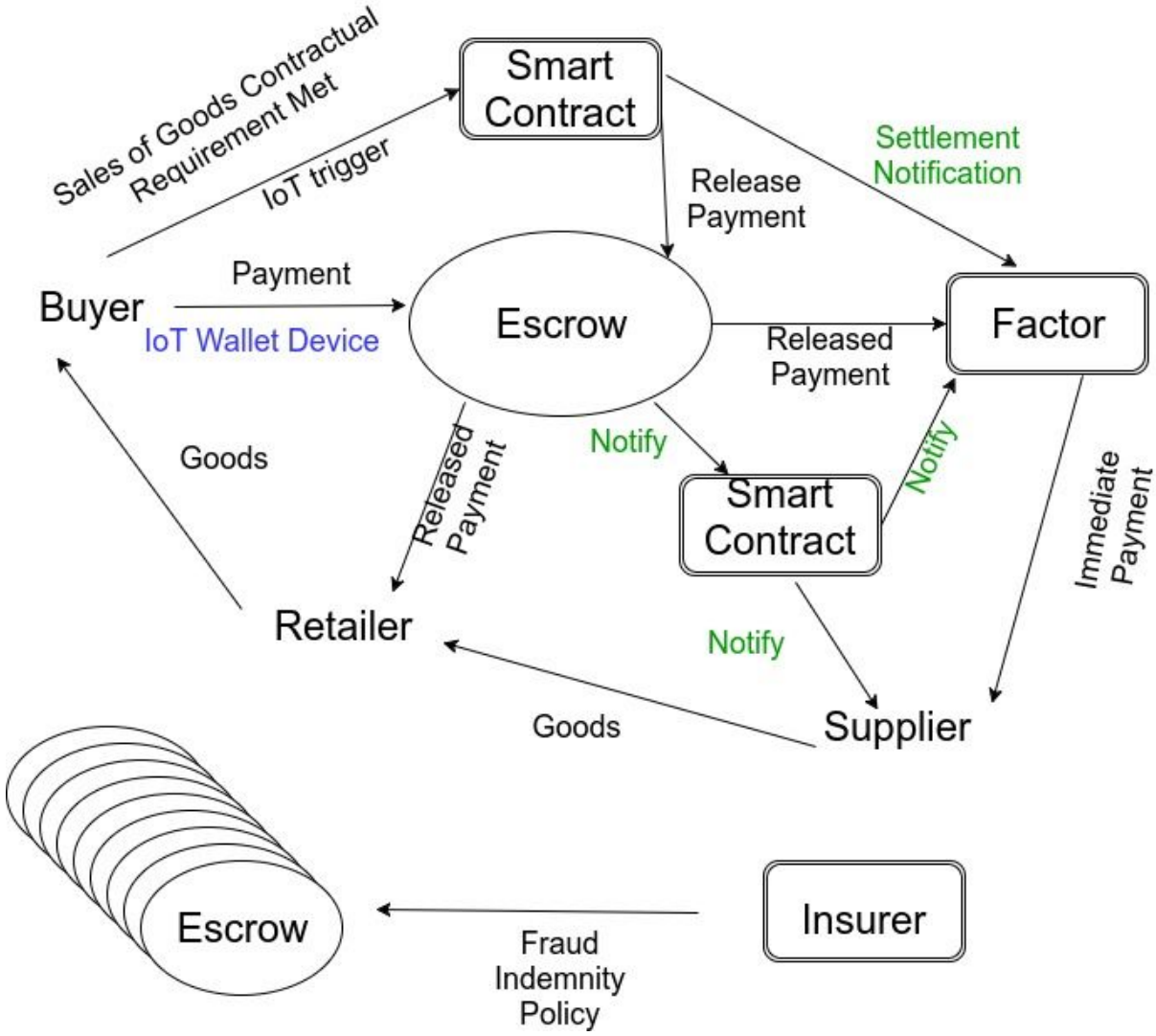
Design

The solution is designed to meet a certain criteria:

1. Cash flow should not be interrupted. i.e. normal escrow would not work.
2. There can be no possibility that the fraud is committed by the buyer and seller being the same person and falsely claiming money was lost when the buyer actually paid himself.
3. The system should be automatic to lower costs.

Solution

1. The consumer pays money into an escrow fund when the sales of goods contract is formed. There is an optional IoT device for wallet access.
2. A factoring company recognises the asset and then immediately pays out a percentage of the escrow fund which is equal to the actual cost of the goods to the retailer minus any operating fee to the factoring company.
3. The factor pays immediately the Supplier based on the security of the escrow fund.
4. The supplier supplies the goods to the retailer since the supplier was already paid.
5. The retailer delivers the goods to the consumer (buyer).
6. After delivery and IoT event confirms the contract was met and a smart contract releases funds.
7. The released funds are paid to the Factor and the Retailer. The retailer in effect receives his profit only.
8. If the contract fails, then the money is refunded back to the buyer and the factor recovers the money from the Supplier. The retailer never receives any money to recover for a failed contract.
9. There have been many instances of escrow funds being lost on the blockchain. Hence the solution would involve an insurance company insuring the escrow funds against loss due to cyber fraud.
10. Claims would be paid via an arbitration process.


Sales of Goods Contractual Requirement Met
IoT trigger
Smart Contract
Settlement Notification
Release Payment
Payment
Buyer
IoT Wallet Device
Escrow
Factor
Released Payment
Goods
Released Payment
Notify
Smart Contract
Notify
Immediate Payment
Retailer
Notify
Goods
Supplier
Escrow
Insurer
Fraud Indemnity Policy