Food Delivery Systems

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Background

Platform Business Models

seamless

airbnb

DOORDASH

Problem Statement

Problem: Food delivery Platforms such as GitHub increase the costs of transactions by collecting commissions on their service. Fees have been known to take up to 30 % of the price of the food.

Solution: Blockchain can be used to initiate a transaction between two unknown parties in such a way that transaction fees can be reduced.

Performing a Transaction

Customer
<Private Key>
<Public Key>
<Random Generated Key>

(1) Submits Order

Order Info
<Public Key>
<Hashed Random Generated Key>

Restaurant
<Private Key>
<Public Key>
<Random Generated Key>

(2) Confirms Order

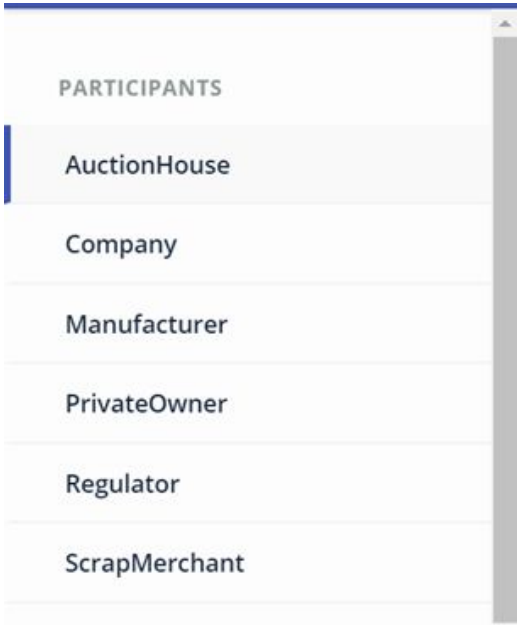
Confirmation message
<Public Key>
<Hashed Random Generated Key>

(3) Transaction Confirmation

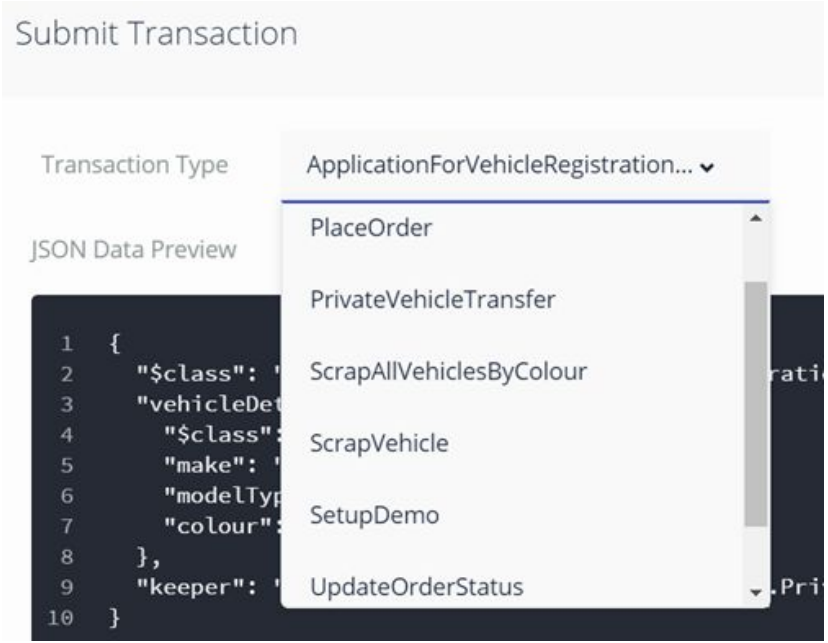
Restaurant checks if, <Hashed Random Generated Key> (1) = Hashed <Random Generated Key>
Customer checks if, <Hashed Random Generated Key> (2) = Hashed <Random Generated Key>
Customer's money is transferred and transaction is broadcasted

The Role of Hyperledger

Easy connection between Participants and a clear transaction history



Hyperledger Continued



Multi Agent System Aspect

In order for users to trust deliverers MAS can be used. Users acting as agents will develop a credit rating system.

Users can broadcast to network and check to see if anyone had used this deliverer before.

This is very common. Think Yelp.

Timeline

April 16th to April 20th : Integration of multi agent aspects, create a simply transaction between two parties that are logged on to a blockchain in ledger

April 23rd to April 27th : Website detailing the project

April 30rd to May 4th: Code allowing for the submission of an order, updating status of order

May 8th: Project demonstration in class

References

1. Forbes, P.; *GrubHub Charges Restaurants on Average 13.5 % Commission Per Order*; https://www.eater.com/2014/3/3/6270739/grubhub-charges-restaurants-an-average-13-5-commission-per-order, (accessed April 11th 2018).
2. Business.com; *Should Your Restaurant be on GrubHub*; https://www.business.com/articles/is-grubhub-good-for-restaurants/, (accessed April 11th 2018).
3. Ramachandran, R.; *The Blockchain of Food*; https://www.forbes.com/sites/themixingbowl/2017/10/23/the-blockchain-of-food/#3305df1b775f, (accessed April 11th 2018).
4. Haring, B; Munchee Brings Blockchain to Food Reviews and Delivery - ICO Soon; http://blocktribune.com/munchee-brings-blockchain-food-reviews-delivery-ico-soon/, (accessed April 11th 2018).