Unidouble: An autonomous e-commerce platform

Why

An e-commerce platform stored on a blockchain has these characteristics compared to traditional e-commerce website:

I. Full privacy of its users

II. No blacklisting of users and items sold

III. No data collected

IV. Removes predatory dark patterns

V. All the money made by the e-commerce is available for items delivery or for charity.

The objective of Unidouble is to be a better version of eBay.

How

Unidouble is made of Solana programs and a frontend application. The Solana programs are the heart of Unidouble. Multiple frontend applications can be made for the same programs.

A user can create a seller account that contains a public key. They must keep the corresponding private key the same way they keep the private key of his/her account. Then, they can list new items, that are stored on-chain. Items have a country, category, price, quantity, title, image and a description.

Another user can buy this item. In that case, 94% of the item price will go to the seller, 5% to the Solana program and 1% kept by the program. This 1% will be given back to the buyer once they will review the item. A 5% fee is necessary to stop a seller from buying his/her own item and making a fake review.

The delivery address of the buyer is stored encrypted on-chain. The seller is the only one to be able to decipher it, thanks to the Diffie–Hellman key exchange algorithm.

Solana and IPFS

Solana has been chosen for his fast and cheap transactions. The data is temporary stored on-chain. Listing an item costs less than 0.1 Solana that the seller get back when he removes the item.

Only a front end is needed since everything is stored on-chain. We can therefore host the website on IPFS to make it unstoppable.

It should be better to store all the data on IPFS and to only keep a hash as a proof of ownership on the Solana blockchain. By storing everything on-chain, The current implementation of Unidouble is a first step towards an autonomous e-commerce platform.