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Battling counterfeit goods using blockchain technology

Introduction

Counterfeiting of premium goods is a prevalent issue in society. Companies incur losses due to fake copies of their products floating around. Moreover, the customer is unaware and cannot know whether the product is genuine or counterfeit. To overcome this, we have come up with a way to provide proof of ownership. We connect the physical good to a token on the blockchain, due to which we get undeniable and immutable proof of authenticity and ownership.

https://www.forbes.com/sites/forbestechcouncil/2020/03/17/the-counterfeit-problem-and-how-retailers-can-fight-back-in-2020/?sh=3500872d1f32

https://www.theguardian.com/technology/2018/dec/02/whether-youre-unaware-or-dont-care-counterfeit-goods-pose-a-serious-threat

Similary ownership of Articles and real-world entities is difficult to prove. Receipts of buying can be faked, you can never know if a seller is authentic.

Our project aims to provide ownership and authenticity to every physical item you can think of.

Proof of Concept

We had a proof of concept before we started working on this project. The Aura blockchain is a consortium blockchain that authenticates luxurious goods. It is well established and backed by large companies. However, it has a drawback: it is a consortium blockchain and hence not entirely decentralized. We propose to provide similar services, but the proof of ownership would be on a public blockchain, thus ensuring immutability and complete decentralization.

Workflow

- When a new product is manufactured we mint and link QR codes to that NFT. That QR code is physically attached to the NFT.

- The NFT has a graphic related to the product stored on the ipfs.

- The metadata of NFT contains the ipfs hash and other data. This data is stored in the QR code attached to the product.

- The QR code on scanning shows the NFT graphic and metadata. On further resale of the product, it must be ensured that the NFT is transferred too.

Why it Makes Sense and Gives undeniable proof of Ownership

- The product website defines the the genesis address of the NFT. This can be checked for any NFT before sale.

- A QR code can be copied but it will always link to the NFT of the original holder of the NFT.

- If the seller can transfer the NFT to you, you know undeniably that he was the owner of the NFT till that point

- If he tries and sells you a fake NFT, you can check to which address the NFT was minted, and can match it with that on the site.

Authenticating products with no defined owners; Antiques

- Antiqueties ownership is solely derived from the owner who possesses them at any given moment in time.

- We can attach QR codes i.e. NFTs to those antiques and define a proper system of inheritance and transfer of ownership of those antique items.

- There will have to be a genesis point where we assign an owner to that antique.

Conclusion

This project has some very amazing real world applications. We have a proof of concept as it is being applied. We are doing better. The core usecase can be extruded to multiple areas of application. This can involve making a trustless second hand item selling marketplace (OLX), and others.