Yubiai

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Abstract

Yubiai is a community-driven decentralized marketplace built on top of Ethereum, as such it brings together buyers and sellers in a single platform, allowing them to easily find and transact with each other's services, digital products and goods using cryptocurrency. It has some key features such as Proof of Humanity sybil-resistance protocol as authentication method to avoid bots, and Kleros Escrow and Curate to handle disputes and curation of listings.

1. Introduction

"Who controls commerce controls freedom"

Marketplaces have existed for thousands of years and can be traced back to ancient civilizations such as Mesopotamia and Egypt. In these early marketplaces, people would gather to trade goods and services, often using bartering as a form of payment.

As civilizations developed and grew, so did the importance and size of marketplaces. In medieval Europe, large open-air markets were held regularly in cities and towns, allowing people to buy and sell a wide range of goods. These markets were often controlled by merchants and guilds, who regulated prices and ensured fair trade practices.

In the 18th and 19th centuries, the rise of industrialization led to the creation of more specialized markets, such as stock exchanges and commodity exchanges, which facilitated the buying and selling of stocks and commodities.

In the 20th century, the advent of the internet and e-commerce revolutionized the marketplace, allowing for the creation of online marketplaces where buyers and sellers could interact and trade goods and services digitally. Today, marketplaces exist in various forms, from physical markets and bazaars to online platforms and app-based services.

Web3 marketplaces are a new type of marketplace that are built on decentralized, blockchain-based technology. These marketplaces are designed to be more open, transparent, and secure than traditional online marketplaces.

Web3 marketplaces are still in the early stages of development, but they have the potential to disrupt existing marketplaces by offering more control and autonomy to users, as well as new opportunities for peer-to-peer transactions and decentralized finance.

Currently, web3 marketplaces are still relatively small and niche, with a limited range of goods and services being traded. However, as the technology and infrastructure behind web3 marketplaces continue to mature, it is likely that they will become more widely used and accepted.

Yubiai is a web3 marketplace that connects service providers and clients to perform secure and efficient transactions. The platform uses several smart contracts running on the Ethereum Virtual Machine (EVM) to facilitate transactions, and uses Proof of Humanity (PoH) as an authentication method to verify the identities of its users and build trust.

Additionally, the platform uses Kleros Escrow Smart Contract to ensure secure payments and to mediate disputes between parties. Overall, Yubiai aims to provide a secure and user-friendly platform that can attract a wide user base and achieve greater adoption within the industry.

2. Background

"*Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments. While the system works well enough for most transactions, it still suffers from the inherent weaknesses of the trust based model. Completely non-reversible transactions are not really possible, since financial institutions cannot avoid mediating disputes. The cost of mediation increases transaction costs, limiting the minimum practical transaction size and cutting off the possibility for small casual transactions, and there is a broader cost in the loss of ability to make non-reversible payments for nonreversible services. With the possibility of reversal, the need for trust spreads. Merchants must be wary of their customers, hassling them for more information than they would otherwise need. A certain percentage of fraud is accepted as unavoidable. These costs and payment uncertainties can be avoided in person by using physical currency, but no mechanism exists to make payments over a communications channel without a trusted party."*
This excerpt from Bitcoin white paper explains clearly why a web3 marketplace with this mechanism is the best way to tackle these problems.

Vision:
To become a leading decentralized marketplace that offers secure and cost-effective transactions for service providers, product sellers, NFT creators, and clients globally. We see an internet of value that enables frictionless transactions between individuals, regardless of geographical boundaries and time zones.

Mission:
Yubiai's mission is to empower entrepreneurs and individuals by providing a secure web3 marketplace environment where they can interact, transact, and innovate safely. We aim to build trust through our Proof of Humanity (PoH) authentication process and Kleros Escrow Smart contract so that users can have peace of mind when conducting business on the platform. Additionally, we are committed to provide an engaging user experience with continuous development of features that make our platform attractive for both buyers and sellers.

3. Use Case

Step 1: Bob goes to the web3 marketplace and identifies services offered.

Step 2: Bob selects Alice based on her portfolio of work and the fee for services.

Step 3: Both parties' roles, rights, obligations and fees are captured in a smart contract that is used to govern the collaboration.

Step 4: The funds are transferred via cryptocurrency from Bob's wallet to the web3 marketplace's escrow service as a deposit for Alice's compensation.

Step 5: Alice does her part of the project as agreed upon and uploads it in the web3 platform.

Step 6: Bob confirms that he is satisfied with Alice's work and releases payments using cryptocurrency which will be released to Alice's wallet.

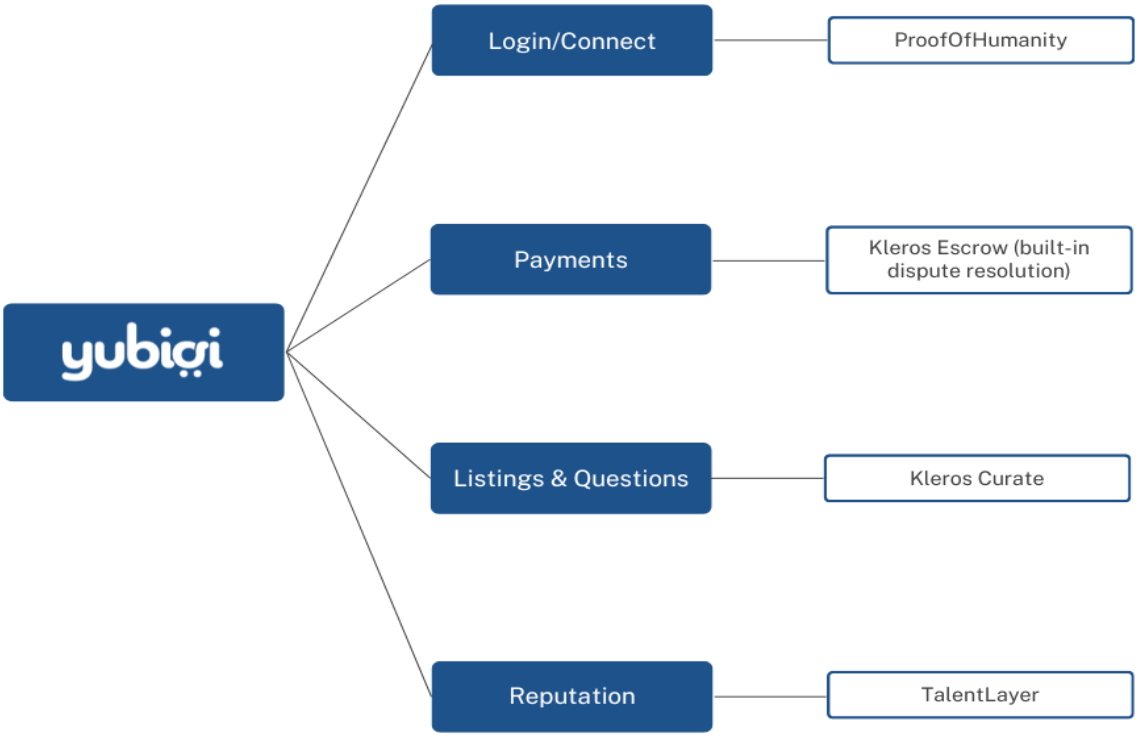
4. Project Description

4.1. Peer to peer transactions

Yubiai is a project that aims to be a web3-based online marketplace on a first basis for hiring and offering services. The goal is to provide a safe and reliable platform for service hiring, where users can easily find and hire qualified professionals.
One of the key features of Yubiai is the use of an escrow system based on Kleros, a decentralized arbitration platform built on blockchain. This system allows users to deposit an escrow before starting a project, and in case of a disagreement between the client and the provider, an independent panel of arbitrators can resolve the issue in a fair and transparent manner.
Additionally, Yubiai also employs a proof of humanity protocol to ensure that only human beings interact on the platform, thus preventing the participation of bots or automated programs.
In summary, Yubiai is a decentralized platform that offers professional services, with a decentralized escrow system built on blockchain and a proof of humanity protocol to ensure the safety and reliability of the platform.

4.2. Smart Contracts

The primary function of the smart contract in Yubiai is to hold payments in escrow until the service has been completed and both parties are satisfied with the outcome. The smart contract also enforces the agreed upon terms and conditions of the service agreement, so customers can be sure of receiving the promised service in exchange for payment.



4.2.1. Authentication Method

The main authentication method that Yubiai uses is Proof of Humanity (later referred as “PoH”), a system combining webs of trust, with reverse Turing tests, and dispute resolution to create a sybil-proof list of humans. This web3 kyc protocol provides a layer of security and confidence to the users that are interacting with a real human and not a bot. Which is tied with their reputation using TalentLayer reputation module infrastructure.

1. Greater trust: By using PoH to verify the identities of its users, a web3 marketplace can demonstrate its commitment to transparency and trust, which can help build confidence in the marketplace among its users and stakeholders.
2. Enhanced user experience: PoH can make it easier for users to access the marketplace, as they won't need to remember complex passwords or go through multiple authentication steps. This can improve the overall user experience and make it more convenient for users to interact with the marketplace.
3. Increased adoption: By offering a secure and convenient way for users to verify their identities, a web3 marketplace that uses PoH may be more likely to attract a wider user base and achieve greater adoption.

Overall, using PoH as an authentication method can help a web3 marketplace become more secure, trustworthy, and user-friendly, which can help it thrive in a competitive environment.

4.2.2. Payments: the Kleros Escrow Smart Contract

"Kleros is a decentralized application built on top of Ethereum that works as a decentralized third party to arbitrate disputes in every kind of contract, from very simple to highly complex ones. It relies on game theoretic incentives to have jurors rule cases correctly. The result is a dispute resolution system that renders ultimate judgments in a fast, inexpensive, reliable and decentralized way." https://kleros.io/whitepaper.pdf
An escrow smart contract is a self-executing contract with the terms of the agreement between the buyer and seller being directly written into lines of code. The contract holds and releases funds as agreed upon by the buyer and seller, making it an effective way to facilitate online transactions. In the case of a dispute, the contract can be programmed to either reimburse the buyer or pay the seller, depending on the specific terms of the agreement.

Yubiai highlights the importance of security and cost efficiency in the platform's design. One key feature that addresses these concerns is the use of Kleros Escrow to facilitate transactions. By utilizing Kleros Escrow, Yubiai can ensure that funds are held and released in a secure and transparent manner, reducing the risk of fraud and improving trust among buyers and sellers. Additionally, by operating on EVM chains/roll-ups such as Gnosis/BNB/Arbitrum/Polygon, Yubiai can also greatly reduce transaction costs, making the platform more accessible and cost-effective for users.

4.2.3. Listing & Questions

Kleros Curate allows users to create open curated registries of just about anything. These registries are maintained through a combination of financial incentives and dispute resolution technology provided by the Kleros protocol.
"Is this item following the marketplace rules?" By creating a list, defining guidelines and putting curation in the hands of the community you make a marketplace to operate according to our own systems of rules.
The same applies to the questions of the listings, this ensures that whatever a user asks about a listing will be relevant and have quality questions and information, improving UX and security.

4.2.4. Reputation

TalentLayerID is a work identity that allows ownership and growth of reputation across many gig marketplaces. TalentLayer IDs are ERC-721 NFTs that live inside crypto wallets; this means that reputation is self-custodied by the wallet owner and lives separately from integrated platforms. TalentLayer IDs are "soul-bound" in that they can not leave the originating wallet unless a recovery is initiated.
TalentLayerID is the core identity element for service buyers and sellers when interacting with TalentLayer-integrated marketplaces and freelancing tools. The TalentLayer ID is associated with reviews and represents the overall reputation in the ecosystem.

1. Self-custody: As mentioned earlier, TalentLayer ID is self-custodied, meaning that the reputation of a user is stored in their own wallet and cannot be transferred or modified without their consent. This can give users more control over their reputation and help to ensure that it is accurately reflected on the marketplace.
2. Decentralized: TalentLayer ID is decentralized, meaning that it is not controlled by any central authority. This can provide users with more privacy and security, as their reputation is not stored on a central server that could be hacked or accessed by unauthorized parties.
3. Integration with other platforms: TalentLayer ID is intended to be a single, unified identity that can be used across multiple platforms. This could make it easier for users to build and maintain their reputation as they participate in gig work on different marketplaces.
4. Increased transparency: By using a decentralized identity solution like TalentLayer ID, a web3 marketplace could potentially increase transparency and accountability for users. For example, reviews and ratings associated with a TalentLayer ID could be stored on the blockchain, making them more difficult to alter or delete.

Overall, TalentLayer ID could offer web3 marketplaces a secure and transparent way to manage the reputation and identity of their users, potentially improving the overall user experience and trust in the platform.

4.3. Advantages

In comparison to traditional eCommerce marketplaces such as Amazon or Ebay where companies manage user data for targeted advertisements or sometimes lead to frauds or thefts due to insecure systems; Yubiai promotes trustless transactions that are secure from any kind of malicious attacks or abuse of data through its multi-chain transactional network connected with Ethereum chain resulting in non controlled mediation by third party organizations dealing with sensitive customer information such as addresses or credit cards details. This removes the possibility for claimed losses in private sales which occur due inability to protect buyers and sellers interests because of current platforms security measurements failure especially when handling payments processes, plus anonymity - which highlights maximizing autonomy while trading goods & services since payments reality will remain unable since it's not necessary anymore . Furthermore , transaction fees kept low using side chains(Gnosis),rollups(Arbitrum), layer 2(Optimism) leading to even lower costs than shopping through cooperation organizations like eBay or PayPal .

4.4. Incentive System

Both sellers and buyers have economic and security incentives, from a security perspective we have the Proof of Humanity protocol(from now on PoH) and Kleros protocols(Escrow with its built-in dispute resolution, and Curate). Poh being the main authentication login avoids duplicates, bots and gives to the user the certainty that he is interacting with a human being. Then with Kleros Escrow and Curate the user can rest assured that P2P whereas service,

digital and/or physical goods are secure using the blockchain technology combined with decentralized dispute resolution behind these protocols. From the economic incentive the users have 0% on transactional fees and a possibility to have a premium membership to gain access to additional features. Also the haberger tax ads see 5.4 (Future implementations).

4.4.1. System token: the Yubiai Token ($YBI)

The $YBI can be used as incentives inside the platform such as freemium options on listings, premium listings(increased visibility), leveling up user SBT(soulbounded token) profile and governance combined with PoH 1p1v.

4.4.2. $YBI Use Cases & Demonstrations

- **Freemium options on listings:** $YBI can be used as a form of payment to unlock additional features and visibility within the marketplace. For example, Alice can pay a small amount of tokens to have their listing featured/sponsored on the platform.
- **Premium listings (Increased visibility):** $YBI can also be used to purchase premium listings, which would give a listing increased visibility and higher priority in search results. This could be useful for those individuals who are looking to promote their products or services to a wider audience.
- **Leveling up your SBT Profile:** $YBI can be used as a form of currency to level up a user's profile on a social platform. This could be useful for users who want to acquire a higher status and therefore access more features and visibility on the platform.
- **Governance combined with PoH 1P1V:** $YBI can also be used to participate in the governance of the marketplace, by voting on proposals regarding new features and other decisions that may affect the platform. It uses a proof of “one person, one vote" system, which allows the community to have a say in the direction and development of the platform, and can help ensure that the platform is being developed in the best interests of its users.
- **Harberger Tax Ads** *(future implementation)***:** $YBI can be used as a means for managing and displaying digital advertisements using NFTs and a curation system based on staking and badges. Those who want to advertise a product or service would create NFTs to represent their advertisements and stake a certain amount of a cryptocurrency or token to indicate their commitment to following the rules and guidelines of the ad platform. Advertisements would earn badges based on their quality and relevance and would then be displayed to the user based on their preferences. (*Read more on Harberger tax ads)

4.4.3. $YBI Tokenomics

Utility: The YBI can be used as a means of payment for services and transactions within the marketplace. It can also be used to access premium features, such as access to specialized services, reputation management, and arbitration.

Governance: YBI holders can also have a say in the direction of the platform through a decentralized autonomous organization (DAO), allowing them to vote on proposals that impact the platform's development and operations.

Staking: Users can also stake their YBI tokens to earn a reward in return, this will encourage the users to hold the token and to be more involved in the platform.

Token buyback: Yubiai could also implement a token buyback mechanism, where a percentage of the platform's revenue is used to buy back and burn YBI tokens, this will help to maintain a stable value of the token.

Referral program: Yubiai could also implement a referral program, where users will be rewarded with YBI tokens for bringing new users to the platform.

Airdrop: Yubiai also could implement an airdrop mechanism to give free tokens to the users that join the platform, in order to encourage them to use the platform and to promote it.

4.5. Governance Mechanism

As the Yubiai protocol gains users and use cases(first one is services), it will be necessary to create new policies, to make changes in policies, parameters, fees, ads(future) and to update the platform to new versions with additional features. Such decisions will be made by token holders using a liquid voting mechanism. Token holders will have an amount of votes equal to the amount of $YBI they hold. The governance mechanism can be used to:
1. Set policies for each business unit: Policies are guidelines about how to arbitrate disputes. They are the equivalent of the laws in traditional justice systems. They determine which party should win a dispute when particular conditions are met. They can be specific to a particular subcourt.
2. Add/modify Fees parameters.
3. Modify parameters in subcourts: (a) Arbitration fees. (b) Time of each court session.
(c) Minimum amount of tokens to be staked.
4. Change one of the smart contracts Yubiai relies on. This allows arbitrary changes. This can be used for improvements or in an emergency if it appears that some elements of Yubiai are not working properly.

5. Future implementations

5.1. Curate

Another potential future implementation would be used in Yubiai to help maintain a list of approved suppliers, vendors, or products. For example, to create a registry of approved suppliers that have been vetted for quality, reliability, and compliance with certain standards. This registry could be used to help ensure that the marketplace only features high-quality products and services.
In addition, it would be used to create a registry of verified product reviews, allowing users of the marketplace to see which products have been recommended by other users and which have not. This could help to build trust and confidence in the marketplace, as users would know that they are seeing only genuine, unbiased reviews.

5.2. NFT Minting and trading

On Yubiai users will be able to create, mint, and trade non-fungible tokens (NFTs). By uploading digital assets such as art, music, or video, and then minting them on the platform. Once an NFT has been minted, it can be traded on the platform. To trade an NFT, users would need to find a buyer who is interested in purchasing the NFT, and then agree on a price and terms for the sale.
The process for buying and selling NFTs on Yubiai would be similar to that of other web3 marketplaces that support NFT trading. Users would need to connect their digital wallet to the platform, search for the NFT they are interested in, and then complete the purchase through the platform's payment system.

5.3. Liquid Voting Governance

In the section on the Governance mechanism above we described how token holders can make a number of decisions for the platform. In this section, we describe a future plan to allow token holders to delegate their vote if they choose not to vote directly. When a user fails to vote, his voting power will be automatically transferred to his delegate. Vote delegation can also be for other business units(service, NFT’s, physical goods) specific. Users could choose to delegate their vote in some business units but not in others. Note that delegates do not need to be humans. They can be smart contracts implementing arbitrarily complex voting rules (for example voting on updating fees based on market data).

5.4. Products Module

The tangible products business unit plays a critical role in the operation of a web3 marketplace that specializes in the sale of physical goods, as it ensures that the products being offered are of high quality and that customers are satisfied with their purchases.
Benefits from facilitating the exchange of goods:

Increased customer engagement: By allowing users to exchange goods with one another, we encourage more interaction and engagement among its users. This can help to create a sense of community and encourage users to spend more time on the platform.

Increased customer retention: By providing a platform for users to exchange goods with one another, we give users a reason to return to the platform even if they are not actively looking to buy or sell items. This can help to increase customer retention and build long-term loyalty to the platform.

Increased transaction volume: By facilitating the exchange of goods, there is an increase in the number of transactions taking place on the platform. This can help to drive revenue for the marketplace, as many platforms charge fees for facilitating transactions.

Greater appeal to a wider audience: By offering the ability to exchange goods in addition to buying and selling, a marketplace can appeal to a wider range of users. This can help to increase the overall user base of the platform and drive growth for the business.

Overall, facilitating the exchange of goods can help to increase customer engagement, retention, transaction volume, and the overall appeal of a marketplace, which can all contribute to the success and growth of the platform.

5.5. Harberger tax ads

A system for managing and displaying digital advertisements using non-fungible tokens (NFTs) and a curation system based on staking and badges. Here's a potential high-level overview of how such a system might work:
_Advertisers create NFTs to represent their advertisements. These NFTs might include information about the advertisement, such as the product or service being advertised, the target audience, and any relevant terms and conditions.
_Stake a certain amount of a particular cryptocurrency or token to indicate their commitment to following the rules and guidelines for the ad platform. This staked amount could serve as a form of collateral to ensure that advertisers follow the rules.
_Earn badges for their advertisements based on the quality and relevance of the advertisement. These badges could be awarded by a panel of curators or by a decentralized autonomous organization (DAO) that uses a set of predetermined criteria to evaluate the advertisements.
_When a user views an advertisement, the ad component queries the NFT associated with the advertisement to check if it has the necessary badges. If the NFT has the required badges, the ad is displayed to the user. If not, the ad is not displayed.
_The user can click on the advertisement to learn more about the product or service being advertised, and can also click on a link to view and potentially purchase the NFT representing the advertisement.

This is just one potential way that NFTs and a curation system based on staking and badges could be used to manage and display digital advertisements. There may be other variations or approaches that could be used as well.

6. Conclusion

Yubiai's Web3 Marketplace brings both convenience and security to digital commerce experiences enabling direct P2P financial interactions. This, in turn, fuels the decentralization of the ecommerce networks through the use of safety protocols while helping reduce costs associated with traditional trading running on expensive networks. Endorsed scalability on EVM compatibility chains allowing infinite traffic load triggering heavy peaks after ETH mainnet access(Gnosis, Arbitrum, BNB), makes it the perfect low entry point for experiments in specific business models looking for profitable niche markets with minimal investments risks undergone.

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