DECENTRALISED SOCIAL MESSAGING PLATFORM

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Abstract : A fully democratized social messaging platform for Web3.0 through which users can create a digital identity, socialize using wallets, send/receive payments with those identities and contribute to various communities instantly, all while being anonymous, the Web3 way. Aims to bring a safer and easier way to manage web3 communities and stand by the core Web3 principles: Decentralization, Security, and Anonymity.

I. INTRODUCTION

For decades, the media industry has been around with traditional legacy systems and business models running the distribution game.

However, since the digitization of content, only a few players have managed to keep up and dominate the market. Their monopoly in the space has led them to squeeze profits from content creators, creating much dissent in the industry. Considering the extent of the imbalance in the system, it seems like only a decentralized digital platform like the blockchain can even scale to ensure fair distribution and profit-sharing.

How is Blockchain making a difference in the current setup?

1.1 Disintermediation of content

Intermediaries in the social media industry take most of the profits, resulting in the original content creators being compensated unfairly. The decentralized nature of the blockchain allows content creators to distribute their work directly, ensuring that they receive their due profits without intermediaries grabbing a chunk.

1.2 Direct and secure monetization of assets

Smart contracts on the blockchain help manage and enforce copyright terms without the extra cost and hassle of expensive legal intermediate parties. Therefore, creators can be completely sure that they will receive the profit proceeds fairly each time their copyrighted content is shared or distributed.

1.3 Efficient peer-to-peer distribution with micropayment options

Most content aggregators require users to purchase monthly or annual subscriptions to access advertising and media content. However, many users would prefer a pay-per-use model for its affordability and convenience. The blockchain keeps a record of every instance of content access, implying that once a content creator does something, or in layman's terms, registers his/her content on a blockchain platform, they need not worry about keeping track of consumption manually or through an intermediary. Blockchain's efficient, time-logged tracking system allows creators to offer real-time, flexible, and transparent consumption-based pricing mechanisms like metered billing. With smart contracts on the blockchain, automatic micropayments can be executed securely between the consumer and the creator.

Almost a decade and a half ago, there was a huge push toward internet commerce and social media which seems fair, given how the internet and social media have changed the way people connect and interact with each other.With the birth of Bitcoin back in 2009, a new revolution started to take stride over the last few years with people believing in the power and benefits of decentralization.Currently, there are around 300 Million crypto users around the globe, equivalent to almost 6 percent of all smartphone users.

Platform envisions catalyzing the onboarding process for the first billion users to Web3.0 as the only way to do it is through socializing the next generation of the internet and solving the user problems that are still not addressed at the core level.

With growing market demand, user-generated content has created billions of dollars worth of value for the shareholders of social media giants, such as Reddit, Twitter, Facebook, and Telegram to name a few. We aim to support the current Web3 communities by returning much of this content's value to the people who provide valuable contributions through activity based rewards model.

1.4 Recognizing Contributions

Platform is designed from the ground up to address the major barriers to the adoption and monetization of a social media-based economy. Our thesis is that the same techniques used to grow major social media platforms can be used to bootstrap a scalable Blockchain based messaging protocol. Economic incentives enabled by tokenization can dramatically facilitate the growth of a new social media platform. It is the synergy between wallet infrastructure and social media that we believe may give platform a powerful advantage in the market.

The challenge faced by us is deriving an algorithm for scoring individual contributions that most community members consider to be a fair assessment of the subjective value of each contribution. In a perfect world, community members would cooperate to rate each other's contributions and derive fair compensation. In the real world, algorithms must be designed in such a manner that they are resistant to intentional manipulation for profit. Any widespread abuse of the scoring system could cause community members to lose faith in the perceived fairness of the economic system.

Existing platforms operate on a one-user, one-vote principle. This creates an environment where rankings can be manipulated by sybil attacks and the service providers must proactively identify and block abusers. People already attempt to manipulate the Reddit, Discord, and Twitter with fake users and bots when the only reward is traffic or engagement be it authentic or artificial..

Platform envisions itself as a social messaging platform aiming to provide a seamless and safer way to manage and build token-gated communities.Our Socialize & Earn (S&E) protocol allows Web3 users to create chain-agnostic identities to socialize and communicate in an anonymous & effective way.We aim for every Web3 user to access our Universal Digital Identity, becoming the One-Stop Web3 Community Management platform with safety and ease of use as core features.

We are on a mission to simplify the community engagement process for the Blockchain project and ease the integration of token-gated experiences.In the current scenario, people who are not very technically proficient face difficulties understanding the tedious technicalities of the crypto world.Primary aim is to reach the masses by reducing the tech barrier to entering Web3, further scaling, and facilitating Web3 adoption. Our chain agnostic, no code digital identities enable non-tech savvy users to easily get acquainted with the system and interact within the communities, easily monetizing the presence.Our Socialize-to-Earn protocol ensures that everyone who contributes to the platform, be it any type of content, should receive pro-rata ownership from it.

We have a firm belief that all forms of capital are equally valuable, meaning those who contribute their scarce time and attention towards producing and curating content for others are just as valuable as those who contribute their scarce cash. In the words of Plato, "Beauty lies in the eyes of the beholder because the sense of beauty is itself transient in nature." The line resonates with the solution that we yearn for. TripleA's 2021 report shows over 300 million crypto users worldwide with an average global crypto ownership rate of 3.9%. Out of this, a mere 1.5% of users have minted a digital identity, not to forget that multiple identities have also been minted by users.

With around 80,000+ crypto communities actively running, Discord is one of the most widely used platforms for community management and all this to find that this is a mere 1% of the total number of crypto users around the globe. A large number of these users are not a part of a lot of communities just because they find the process of verification highly tedious, not to mention that this verification is needed to be done every time the user joins a new community. Platform not only takes care of the existing grey areas around the industry but also provides a lot of incentives, rewards, and other lucrative benefits for its users.

Also, out of the 300 million crypto users worldwide, a mere 1.5% of them own digital decentralized identities, putting the other 98.5% at risk of getting scammed or hacked. A study estimates a loss of a whopping $100,000,000 plus worth of assets stolen by hackers through Discord, ALONE!!

The global cryptocurrency and NFT markets are anticipated to grow at a CAGR of nearly 35.0% during the forecast period (2022-2028). The major factor expected to drive the market growth is the rising venture capital funding and investments in blockchain technology. Furthermore, a rise in demand for remittances in developing countries, an increase in data security, and an improved market capitalization will further drive market growth. Moreover, the untapped potential of emerging economies and the increase in demand for cryptocurrency among banks, and financial institutions are encouraging the growth of the market. Additionally, blockchain has great potential in various application areas, such as banking, cybersecurity, and IoT (Internet of Things). These are some causes that propel the growth of the market during the forecast period. With such an attractive growth rate, a rapid increase can be expected in the number of users getting added to the ecosystem, which concludes that a secure and hassle-free solution for their onboarding is more or less going to be the need of the hour.

II. Methods and material

2.1 SocialFi :
Traditional social media is controlled by large organizations and there have been reports of privacy and security leaks in the past. SocialFi is a way of networking that controls the privacy and safety of users and gives them more control of their identity. SocialFi platform allows users to earn income from their content or by the way they interact and engage on the platform.

2.2 Instant Community Access :
With new users adopting Web3, a gray area still waiting to be voiced is the tedious process of becoming a part of existing Web3 communities.

Users face a lot of hassle while entering or becoming a part of an existing community. There are a hell lot of verifications that they have to go through to start interacting within the community, which is a problem that needs to be addressed at the earliest.
Addresses this issue with its Instant Community Access Feature. As soon as you signup on the platform, You will be already given access to all the token-gated communities thanks to our Real Time Asset AUthentication without any additional efforts or complicated verification processes.

2.3 Anti-phishing checks :
As more users fall prey to a phishing or spear-phishing attack, anti-phishing has become a critical piece of technology for organizations everywhere. Anti-phishing refers to efforts to block phishing attacks. Phishing is a kind of cybercrime where attackers pose as known or trusted entities and contact individuals through email, text, or telephone and ask them to share sensitive information. Typically, in a phishing email attack, the message will suggest that there is a problem with an invoice, that there has been suspicious activity on an account, or that the user must log in to verify an account or password. Users may also be prompted to enter credit card information or bank account details as well as other sensitive data. Once this information is collected, attackers may use it to access accounts, steal data and identities, and download malware onto the user's computer.

Anti-phishing solution scans the links and attachments on the platform and blocks users from accessing them if they are determined to be suspicious.

2.4 Token Gated Experiences :
Token-gating is the future we can't escape in the constantly evolving crypto space. Platform helps you interact with specific crypto communities in which you hold the tokens or the digital assets that are in your possession. This enables you to access exclusive content and services for yourself without getting into unnecessary redundant communities.

2.5 Digital Identity :
Chain agnostic Digital Identities, or as we call them, Web3 identities are the core of Platform. With multiple security breaches coming to light in the past few months, a solution addressing the security and anonymity of users is the need of the hour. Proposed solution ensures the transfer of assets, be it tokens, NFTs, or any digital asset, without sharing your wallet address to the person concerned. This significantly reduces the risk of infringement by any swindler. Digital Assets can be readily transferred to your friends over chat through , provided you hold a unique digital identity(an existing example would be xyz.eth or abc.nft) assigned.

2.6 Authentication:
Users should be able to toggle between registering and logging in. If not registered, users should be able to connect any of their wallets including but not limited to Metamask, Trust Wallet, and Phantom. Once connected, the user should be able to set a unique username and a strong password which should be encrypted before storing in the database. Username, password, and wallet address should be stored for the authentication process.

If it's a registered user, they should be given an option to log in either by connecting any of the registered wallets or by username and password. The backend should check for all the connected addresses and once the user is authenticated, a JWT should be assigned for the session authentication which is currently decided to be 48 Hours.

### 2.7 Token Gated Communities :

The system should create token-gated communities based on the contract address and the name associated with the contract. Each community should have a unique contract address(es) assigned to it which will be used for giving instant entries to users, taking a snapshot of the Blockchain to assign voting power, and also for assigning roles to verified members.

While creating a new community, the backend should check for similar communities with the same contract address and if it exists, the platform should prompt the user to claim ownership of the community by signing a message with the wallet through which the token contract is deployed.

2.8 Payments:

When a username is selected to send the tokens, the user should be given the option to choose the chain ID based on the receiver's connected addresses. For this to happen, the wallet addresses should be stored in the user schema according to the chain IDs and a default address should be assigned to multiple chains.

The platform should track the gas fee and alert the user if it's higher than average (around 100 Gwei for Eth) to help users save gas fees and also avoid the failure of transactions.
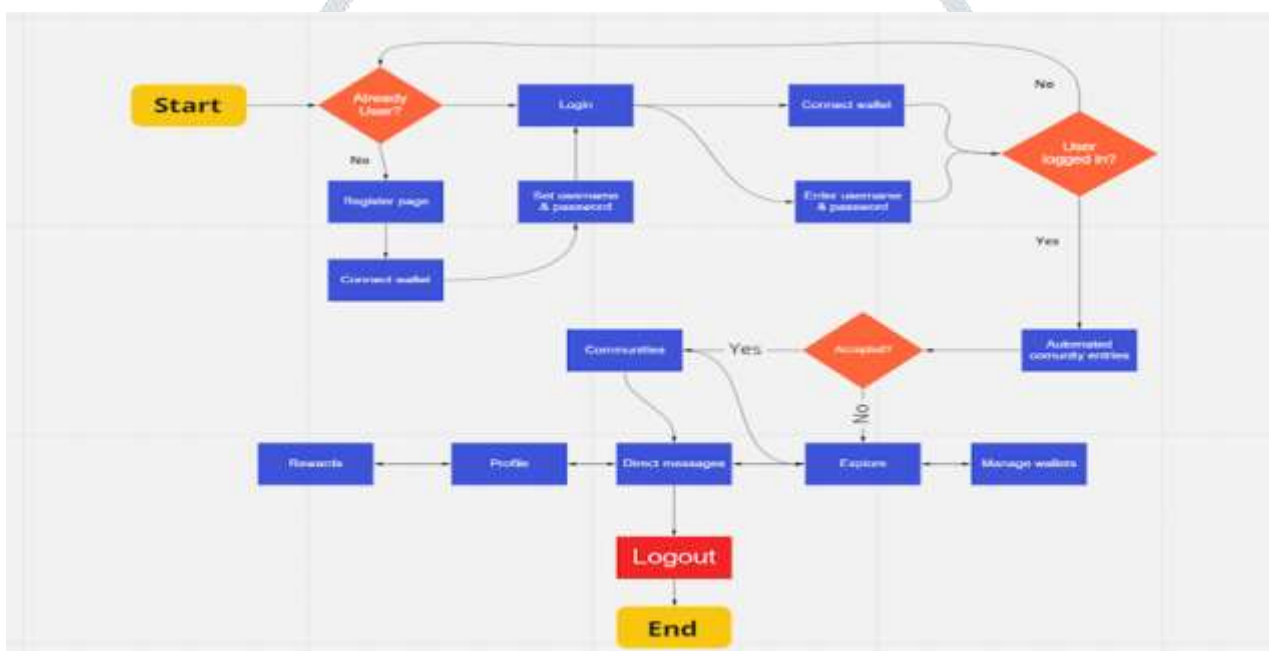
2.9 Community Creation Workflow :
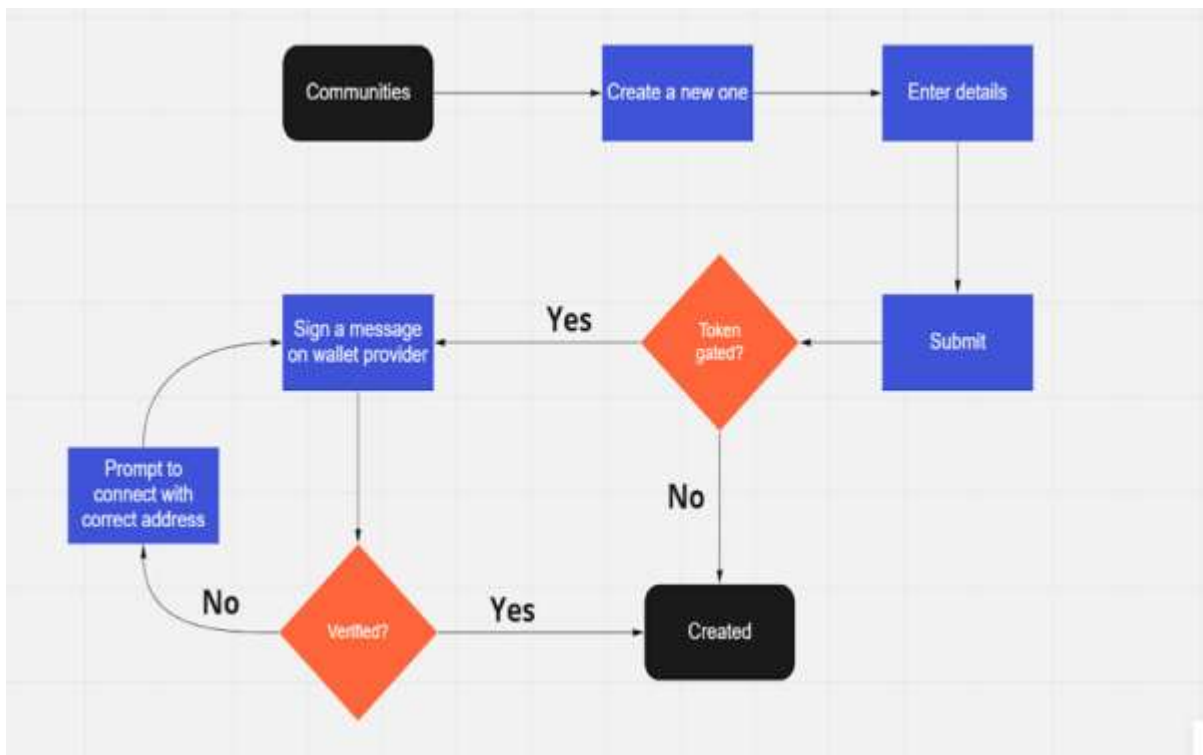
III. Results and discussion

Anonymous signups: Signing up in crypto communities gets a lot easier with our multi-chain digital identity. No need to sign up with a different wallet address for another blockchain. Blockchain verified usernames: The minted digital identity is verified over a blockchain that ensures an elevated sense of security, anonymity, and ownership. Blockchain verified usernames: The minted digital identity is verified over a blockchain that ensures an elevated sense of security, anonymity, and ownership. NFT profile pictures: Flaunting #NFTs to a bunch of users who are aware of what it feels to have one is a flex that is lacking in the current setup. With you become a part of communities where such flexes are appreciated, and holding an NFT shows its worth. Linking multiple wallets in one place: Being chain agnostic, digital identity can be used on multiple chains, and similarly, your multiple wallets can be linked in one single place. No need to have N number of wallets for your assets anymore!! (high five!) Community entries through real-time asset authentication: With you automatically become a part of the communities you hold the Tokens of, which means as long as your assets are in your wallet, you can rest assured that the community that you are in, is authentic and not a fake one.

Explore users to connect: Our S2E platform helps you socialize with other users in the industry and hence, connecting with like-minded people around the globe gets a lot easier, without worrying about the authenticity of the user. Discover more communities to join: users will be able to explore and join the communities of our ecosystem partners and benefit from the happenings going on around them. Send crypto to usernames: Being a proud holder of a digital identity, users can transfer assets to other users just by mentioning their usernames. No need to search or remember those complex addresses and the time taking process of authentication.

In-app trades to buy/sell NFTs in the chats with zero fee: facilitates in-app trades of assets within the communities. Hence, trading of NFTs, tokens, and other assets is readily possible without any third-party intervention.

4. Tim Drapper, renowned American investor: Thank you for believing in us.

With their support, we have achieved success and made a positive impact in the market.

REFERENCES

[1] https://ieeexplore.ieee.org/document/9126024

[2] https://ieeexplore.ieee.org/document/8783003

[3] https://ieeexplore.ieee.org/document/8885317