Suizzle: A Peer-to-Peer Electronic Puzzle Game

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Abstract

As blockchain technology continues to dominate headlines, cryptocurrencies – especially their practical applications, and potential to disrupt the financial industry – are of increasing interest. However, the average consumer doesn't understand how to use cryptocurrencies, let alone how the technology behind it works.

As a result, the public application of blockchain is narrow-minded and short-sighted. Likewise, the technology's short-term and long-term implications remain esoteric and largely ignored.

Suizzle will make blockchain technology fun and useful for the average consumer through four main tactics:

* Gamifying features that leverage blockchain's unique applications

* An approachable, consumer-facing brand based on a genuine passion for blockchain technology

* An open platform inclusive to all users of all levels of technical knowledge

* A sustainable revenue-based model (as opposed to an ICO, IDO, etc)

On a more practical level, we plan to experiment within the blockchain space through practical experimentation and application of digital scarcity, digital collectibles, non-fungible tokens (NFTs), NFT interaction, gamification with NFTs, and in-game finance (GameFi).

The Motivation:

By normalizing interactions between NFTs in the context of a peer-to-peer electronic jigsaw puzzle game, we will empower everyday consumers by letting them utilize NFTs in a fun and already popular form.

By adding GameFi elements including in-game token rewards for puzzle solving and puzzle creation, we open new GameFi possibilities.

The Product:

Suizzle enables users to upload their NFT images, associate the correct NFT collection, mint to a Move or Move variant smart contract language - based smart contract[2], and create an electronic jigsaw puzzle from the image.

The puzzle creator can decide and fund the reward for solving the puzzle.

The puzzle creator can be paid per person who buy pieces of the puzzle, at whatever price the creator prefers.

Alternatively, the game can be free, other than nominal charges for the Sui (or other high-throughput, low-fee, secure) blockchain. These technical requirements are essential because although the cost must be nominal at the network-fee level to purchase and utilize puzzles and pieces, we must also minimize risk of common security issues such as theft, fraud, etc. This happens at the blockchain and smart contract level.

Puzzler's choice.

For a sustainable revenue model, we receive a small percentage (3.75%) of each transaction conducted on Suizzle.

For paid puzzle types, Suizzle uses a descending clock auction (credit: CryptoKitties[1]) whereby sellers choose a high opening bid, a minimum closing bid, and a timeframe for which they'd like the auction to run. Buyers are able to choose their purchase price along that spectrum by purchasing when their price is aligned with their perceived value of the puzzle or piece being sold – as long as someone else doesn't buy it before them.

The same goes for combining puzzles and other deals players would initiate as the game evolves.

To combat illicit uploads or copyright infringement, a nominal fee will be charged per upload, and a blockchain address associated with each transaction will be permanently stored on the blockchain and in the Suizzle database. However, Suizzle does not collect personal data other than for users to voluntarily provide contact information for marketing and informational purposes, and for users to express whatever identity they prefer on the in-game leaderboard.

In-Game Components

The Puzzle Board is the main game play stage, where players create and solve puzzles.

The Suizzlary is the repository where puzzles are kept and can be looked at to see which pieces are available and to atomically "check out" puzzles to solve them or add whatever pieces they have, then "check in" the puzzle after they're done.

The Leaderboard is for puzzle solvers and creators who have either solved the most puzzles or earned the most revenue, over some interval of time selected by the user (default: all-time).

The Lab is where you can potentially "breed" puzzles with each other. (Credit CryptoKitties[1] as well... they're the OG. Without them, we might not even have NFTs as we know them. Might as well stand on the shoulders of giant cats.)

For a sustainable revenue model, Suizzle takes a nominal fee (amount to be determined as Sui Network tokenomics are made clear and Sui hits mainnet).

References:

1. CryptoKitties Technical Details: https://www.cryptokitties.co/technical-details

2. Sui Documentation: https://docs.sui.io/build/move