Darkpaper

Sqrow Chain

Unveiling the potential of
UTXO-compatible
omnichain solutions

Document structure

1. Introduction

In the rapidly evolving blockchain environment, innovation is of paramount importance. Blockchain technology has already demonstrated its transformative potential, but further advancements are needed to unlock new possibilities. One promising avenue is the expansion of UTXO (Unspent Transaction Output) usage. The UTXO concept (Unspent Transaction Output) is a fundamental component of many well-known blockchain networks, such as Bitcoin and Litecoin.

In this document, we delve into the fundamental aspects of Sqrow Chain: its vision, technology, and the benefits it offers to the blockchain community. By combining the strengths of the UTXO model with smart contracts and interchain interaction, Sqrow Chain aims to make blockchain more versatile, scalable, and developer-friendly.

1.1 Background

Blockchain technology has rapidly evolved since the creation of Bitcoin in 2009. It has gone beyond its initial goal of enabling cryptocurrencies to encompass a wide range of applications, from supply chain management to decentralized finance (DeFi) platforms.

1.2 UTXO and its potential

The Unspent Transaction Output (UTXO) model is fundamental to many well-known blockchain networks. For example, Bitcoin uses UTXO to record unspent funds from previous transactions. However, it is crucial to note that, despite its efficiency and security, UTXO-based networks often lack the capability for complex smart contracts and seamless interaction between chains.

1.3 Sqrow network vision

Sqrow Chain is a blockchain platform developed based on UTXO to create and maintain digital ecosystems where users can interact with each other and various applications based on Bitcoin-compatible networks. Sqrow Chain was conceived, in part, to address the limitations mentioned above. The solution utilizes the capabilities of UTXO in tandem with a unique structure for efficient and universal smart contracts.

The Sqrow Chain platform offers:

- Smart contracts that are secure, efficient, and easy to develop.

- Omnichain interaction, ensuring seamless interaction with other UTXO-based networks.

- A developer-friendly environment that encourages innovation and reduces complexity.

- The ability to expand the use of blockchain technology to a broader range of applications.

2. UTXO Model

In Bitcoin and similar blockchain networks, the UTXO model is based on a simple yet powerful concept. Instead of tracking balances on accounts, the network records unspent outputs from previous transactions. These UTXOs represent funds available for future transactions.

How it works:

In networks using the UTXO model, each transaction creates a set of outputs (UTXOs), representing a specific amount of cryptocurrency. These outputs remain unspent until used in future transactions.

Each UTXO has two key characteristics:

1. Amount: The amount of cryptocurrency represented in a given UTXO. For example, 0.5 BTC.
2. Reference to the previous output (transaction): Each UTXO points to the transaction from which it was created. This allows tracking the chain of transactions.

When someone wants to send cryptocurrency to another user, the system selects one or more UTXOs whose sum is sufficient to execute the transaction. They then create a new UTXO representing the transferred amount and, if necessary, another UTXO for the change. Change is the remaining amount after completing the transaction.

2.1 Strengths and weaknesses of UTXO

UTXO networks have several advantages:

- **Security:** UTXO-based networks exhibit a high level of security due to the immutability of transaction output data.

- **Efficiency:** UTXO facilitates efficient transaction verification and simplifies fee calculations.

- **Privacy:** UTXO provides a certain level of privacy as it is not directly linked to a user's identity.

- **Scalability:** The UTXO model ensures efficient scalability of the blockchain network.

Drawbacks and limitations of many UTXO networks:

- **Limited smart contract capabilities:** Bitcoin's script language is intentionally limited to ensure simplicity and security. While it allows some smart contract functionalities, it lacks the complexity of other platforms like Ethereum.

- **Lack of omnichain interaction:** Many UTXO-based networks operate in isolation, limiting their ability to interact with other blockchain networks.

3. Features of Sqrow Chain

Sqrow Chain utilizes the UTXO model as its foundation, retaining its benefits and expanding its capabilities to support more complex use cases and interchain interactions.

Technical features of Sqrow Chain:

1. UTXO compatibility:
Sqrow Chain operates based on the UTXO (Unspent Transaction Output) model, similar to Bitcoin, Bitcoin Cash, and other Bitcoin-compatible networks. Each transaction creates new UTXOs representing unspent outputs that can be used in future transactions. The UTXO model allows flexible token management and transfer.

2. Omnichain Mode:
Sqrow Chain enables the creation of tokens that can function across multiple Bitcoin-compatible networks simultaneously. This mode, known as "omnichain," extends the audience reach and enhances the usability of tokens in various networks. This differs from BRC20 and ERC-20, which are typically tied to a specific network.

3. Omnichain slot sale capability:
Sqrow Chain allows users to sell and acquire omnichain slots, providing additional opportunities to access the creation of interchangeable tokens.

4. Unique TLD and domain model:

In Sqrow Chain, users can create Top-Level Domains (TLDs) and register domains on these TLDs. These domains can be non-fungible tokens (NFTs) with varying degrees of value. This model offers the creation of unique and lucrative digital assets.

5. Auction model and marketplace:

Sqrow Chain employs an auction model as a way to distribute omnichain slots, TLDs, and other resources. This differs from most standards where token creation and distribution occur without auctions and markets.

6. Smart contract support:

Sqrow Chain supports smart contracts, allowing the creation of complex logic and interactions for tokens and other assets.

3.1 Masternodes:

One of the key features of Sqrow Chain is the masternode system, which plays a crucial role in ensuring the security and efficiency of the network.

Masternodes are nodes in the blockchain that perform specific functions and receive rewards for their work. They provide additional protection and stability to the network and support special features such as instant transactions and privacy.

Key functions of Sqrow Chain masternodes:

★**Verification of accounts in Sqrow Karma:** Masternodes verify and confirm the identity and authenticity of network participants, helping prevent fraud and ensuring transaction security.

★**Status assignment:** Depending on the activity and reliability of network participants, masternodes can assign statuses to accounts. These statuses, such as "gold," "platinum," and "diamond checkmark," may provide additional privileges and opportunities.

★**Confirmation of Sqrow Karma endorsers:** Sqrow Karma is a rating and ranking system for network participants. Masternodes can play a role in confirming endorsers, enhancing trust in user ratings and rankings.

★**Moderation of Sqrow NRG:** Masternodes can also serve as moderators, controlling content and transactions in the network to comply with platform rules and policies.

★**Distribution of omnichain slots:** One significant aspect of Sqrow Chain is the support for omnichain slots, providing access to additional network resources and functions. Masternodes can manage the distribution of these slots among participants.

★**Token generation events (TGE):** Sqrow Chain can conduct TGE events where new tokens are released. Masternodes can play a role in ensuring the security and reliability of these events.

Masternodes receive commission rewards in the form of network tokens and other incentives. This incentivizes masternodes to perform their functions and ensure the stable operation of the network.

3.2 High throughput and scalability

★Reduced spread of unused UTXOs:

Sqrow Chain employs proven methods to minimize the spread of unused (garbage) UTXOs, ensuring that the blockchain remains efficient and scalable. A reduced UTXO set size accelerates verification and enhances the overall network performance.

★Parallel transaction processing:

To achieve high throughput, Sqrow Chain utilizes parallel transaction processing. Multiple transactions can be processed simultaneously, increasing the network's capacity to handle a large number of transactions.

★Transaction data compression:

Implementation of compression algorithms is planned to increase the volume of data that can be accommodated through UTXO.

★**Simplified smart contracts:**

Sqrow Chain offers a simplified smart contract structure optimized for UTXO-based networks. Developers can create and deploy smart contracts without the complexities often associated with other blockchain platforms. The scripting language of Sqrow Chain is designed for efficiency and ease of use.

★**Compatibility Bridge:**

Sqrow Chain acts as a bridge for interaction between different UTXO-based networks, including Bitcoin, Litecoin, Dash, and others. This enables assets and data to move seamlessly between these chains, expanding possibilities for users and developers.

★**UTXO-compatible tokens:**

Anyone can create their own tokens within Sqrow omnichain slots. This feature enhances liquidity and compatibility.

★Developer tools:

Sqrow Chain provides a set of developer-friendly tools and resources to encourage adoption. These include SDKs, APIs, and extensive documentation, simplifying the development of applications and smart contracts on the platform.

★User-centric applications:

Sqrow Chain focuses on user-centric applications, aiming to bring blockchain technology to a broader audience. User-friendly interfaces and applications ensure that people can easily access the blockchain ecosystem and derive benefits from it.

3.3 No-code solutions:

Smart contract development is a crucial part of blockchain development, traditionally requiring deep programming knowledge and carrying the risk of errors with serious consequences. Sqrow Chain has developed a "No-Code" system in its network, allowing users to create smart contracts without the need for extensive programming knowledge, reducing the risk of errors.

Advantages of no-code solutions:

★**Accessibility for everyone:** One of the main advantages enables the creation of smart contracts even for individuals with no programming experience.

★**Error reduction:** No-code platforms offer visual tools for creating smart contracts, reducing the likelihood of programming errors when writing contracts manually.

★**Accelerated development process:** Creating smart contracts without writing code significantly speeds up the development process, allowing contracts to be deployed faster.

★**Visual interface:** No-code platforms typically provide visual interfaces, allowing users to easily create and configure contracts using blocks and graphical elements.

★**Modularity and flexibility:** There is the ability to combine different modules and functions to create unique smart contracts that meet specific needs.

3.3.1 Process of creating smart contracts on Sqrow Chain:

1. **Choosing a no-code platform:** Users choose the no-code platform provided by Sqrow Chain for creating smart contracts.

2. **Visual design:** A visual interface is used to design smart contracts, selecting necessary elements and defining their interactions.

3. **Parameter configuration:** Contract parameters, such as execution conditions, deadlines, and data structure, are configured.

4. **Testing and debugging:** Before deploying the contract on the mainnet, users can test and debug it on the testnet to ensure correct operation.

5. **Deployment on Sqrow Chain:** After successful testing of the smart contract, it can be deployed on the main Sqrow Chain network for use.

6. **Copying existing smart contracts:** Users can copy existing smart contracts and deploy them with a single click. However, there will be an indication in the network that the contract was copied.

No-code smart contract creation on Sqrow Chain makes blockchain development safer and more accessible to a wide range of users. This contributes to the expansion of the Sqrow Chain ecosystem and the increase in the number of applications and services based on this blockchain platform.

4. Conclusion

Sqrow Chain aims to become a key player in its segment. Our goal is to stimulate adoption and innovation in the field of omnichain solutions.

We believe that Sqrow Chain, with its focus on simplicity and interchain compatibility, will change the world of blockchain technologies.

Join us on this exciting journey where we shape the future of blockchain and redefine the possibilities of UTXO-based networks.

Thank you for your interest in Sqrow Chain! We look forward to collaboration and advancement in the decentralized technology space.

5. Acknowledgments

We express our gratitude to everyone who contributed to the development and growth of Sqrow Chain. We are thankful for the unwavering support and dedication of our community, developers, and partners.

This project would have been impossible without your involvement, resilience, and trust. We also appreciate the countless open-source projects and blockchain technologies that paved the way for our work.

The Sqrow Chain ecosystem stands on the shoulders of giants, and we thank the broader blockchain community for its constant inspiration.

6. Contacts

To stay updated on the latest events and news related to Sqrow Chain, visit the following resources:

- **Official Website**: www.sqrow.com
- **Community**: Engage with our community and developers on our Telegram channel at https://t.me/sqrann.

For inquiries, support, or partnership opportunities, reach out to our team through the following contacts:

- **General Inquiries**: For general questions and information, contact us at info@sqrow.com.
- **Technical Support**: If you need technical assistance or have development-related questions, reach out to our technical support at https://t.me/sqrsup.