Omzo.io Whitepaper

1. Introduction

Omzo presents a pioneering AMM platform built specifically for direct access from the Bitcoin blockchain and for the native use of Bitcoin-standard assets. AMM solutions have primarily existed on Ethereum, thanks to its advanced smart contract capabilities. Since the introduction of Uniswap, the Ethereum ecosystem has evolved significantly.Bitcoin, on the other hand, lacked not only native token standards but also the foundational technology needed to build Uniswap-level AMMs. The introduction of Runes and Ordinals marks a technological breakthrough that the BTCFi space needed — and the industry is now ready for the next wave of innovation.

In recent times, Bitcoin has become known for its superior security, stability, and wide decentralization, making it an ideal candidate for DeFi applications. Despite these strengths, Bitcoin traditionally lacks native support for complex smart contracts, limiting its utility in DeFi. Omzo.io utilizes Midl technology to access Bitcoin's secure transaction infrastructure with Ethereum Virtual Machine (EVM) capabilities, effectively enabling comprehensive DeFi applications directly on Bitcoin.

The core feature of Omzo.io is the integration of Runes, fungible digital assets native to the Bitcoin network, similar in concept to Ethereum's ERC-20 tokens. Users of Omzo.io can easily exchange Bitcoin and Runes, establish and manage liquidity pools, and create custom digital tokens without complicated processes or centralized intermediaries.

By combining the established strengths of Bitcoin with Ethereum-compatible smart contracts through Midl, Omzo.io offers a secure, robust, and user-friendly AMM platform. This platform enhances the ease of liquidity provision and asset trading while promoting innovation in a decentralized, transparent financial environment, supporting financial inclusion and broader ecosystem growth.

This whitepaper provides detailed information about Omzo.io's vision, technical foundation, economic model, security protocols, practical use cases, and future development plans, clearly outlining its role in shaping decentralized finance using the Bitcoin blockchain.

2. Background

Decentralized exchanges (DEXs) have transformed digital asset trading by replacing centralized intermediaries with peer-to-peer transactions facilitated by smart contracts. Central to this transformation is the Automated Market Maker (AMM) model, popularized by platforms like Uniswap, which use liquidity pools instead of traditional order books. AMMs offer significant benefits, including decentralized management, transparency, and the continuous availability of liquidity.

Ethereum has been the dominant blockchain supporting AMMs due to its sophisticated smart contract ecosystem. Yet, despite Ethereum's pioneering role, its scalability limitations, network congestion, and high transaction fees have become increasingly problematic, particularly during periods of heightened market activity.

Bitcoin, the oldest and most secure blockchain, has traditionally been overlooked for decentralized finance due to its limited smart contract capabilities. However, Bitcoin's inherent properties—robust security, decentralization, and widespread adoption—make it uniquely suited for DeFi applications if enhanced with suitable smart contract functionality.

Omzo.io leverages Midl technology to effectively combine Bitcoin's secure transaction network with Ethereum Virtual Machine (EVM) compatibility. This technological integration allows developers and users to benefit from Bitcoin's foundational strengths while accessing advanced smart-contract capabilities, which have become essential for modern DeFi applications.

Runes, fungible Bitcoin-native assets similar to Ethereum's ERC-20 tokens, form the cornerstone of Omzo.io's asset management and trading system. Runes enhance Bitcoin's utility in DeFi, allowing seamless creation, management, and trading of digital assets directly within the Bitcoin ecosystem.

3. Omzo Protocol

Omzo.io operates on a decentralized protocol that enables asset trading, liquidity pool management, and token creation within the Bitcoin ecosystem utilizing Midl technology. The Omzo Protocol ensures secure, efficient, and transparent interactions among users, supported by Bitcoin's unmatched decentralization and Ethereum-compatible smart contracts.

Token Swaps

Omzo Protocol facilitates direct asset exchanges between Bitcoin and Runes through a straightforward, user-friendly interface. Users initiate swaps by signing Bitcoin transactions, funding corresponding Ethereum-compatible smart

contracts through Midl. These integrated mechanisms enable efficient execution of decentralized trades without intermediaries or custodians.

Liquidity Pools

Liquidity providers can deposit asset pairs into Omzo's liquidity pools, enabling continuous and decentralized market-making. Pool participants receive proportional shares of transaction fees, creating financial incentives to maintain healthy liquidity levels. Omzo's smart contracts automatically adjust pricing based on market dynamics, ensuring fair and efficient trading.

Rune Assets

Runes are Bitcoin-native fungible tokens that users can create and manage directly within the Omzo ecosystem. The integrated Rune Etcher simplifies the minting process, allowing customization in terms of supply, divisibility, and minting capabilities. This provides broad accessibility and flexibility for project creators, communities, and decentralized autonomous organizations (DAOs).

The Omzo Protocol, by leveraging Midl's EVM integration, significantly enhances Bitcoin's DeFi capabilities, offering robust tools for users to engage in decentralized financial activities. This section highlights the technical functionalities, operational procedures, and benefits provided by Omzo's innovative decentralized financial system.

4. Technical Architecture

Omzo.io is built on a combination of robust technologies designed to bring decentralized financial capabilities directly to the Bitcoin blockchain. At its core, the technical architecture of Omzo.io revolves around integrating Bitcoin's highly secure transaction layer with Ethereum-compatible smart contract functionality provided by the Midl network.

Midl Technology: Bridging Bitcoin and Ethereum Smart Contracts

The most critical component of Omzo.io's technical stack is the Midl network. Midl provides the critical missing link by integrating Ethereum Virtual Machine (EVM) compatibility directly onto Bitcoin's blockchain infrastructure.

Specifically, Midl allows Ethereum-style smart contracts to be executed alongside Bitcoin transactions by introducing a specialized transaction type known as an "Intent." Intents function by coupling an Ethereum-compatible smart contract execution request with an actual Bitcoin transaction for funding. Validators on the Midl network execute these intents after the corresponding Bitcoin transaction

receives at least one block confirmation, ensuring security and consistency with the Bitcoin blockchain.

This intent-based transaction model is uniquely beneficial. It allows Ethereum-compatible DeFi logic to exist securely within Bitcoin's environment, blending Ethereum's programmability with Bitcoin's security. Users interact with smart contracts in a familiar Ethereum-like manner while utilizing Bitcoin for asset transfers and transaction settlements.

Runes: Bitcoin-Native Fungible Assets

Runes form an essential part of Omzo's architecture, allowing the issuance and management of fungible tokens directly on Bitcoin. Technically, Runes are assets conforming to a specific protocol standard native to the Bitcoin blockchain. Through Midl integration, these Runes are treated similarly to Ethereum's ERC-20 tokens, enabling them to interact seamlessly with Ethereum-compatible smart contracts deployed within Omzo.

When users mint a Rune using Omzo's integrated Rune Etcher tool, they create a Bitcoin-native digital asset, specifying parameters like total supply, mintability, and divisibility. The assets are then managed and traded via Ethereum-compatible smart contracts running on Midl. Users can provide liquidity pools, swap Runes for Bitcoin, or integrate Runes into complex DeFi applications, all while securely transacting on the Bitcoin network.

Transaction Lifecycle Example

A typical Omzo.io transaction involving asset swaps occurs as follows:

1. **The user initiates a transaction** through Omzo's frontend interface (e.g., a token swap).

2. An **Intent** is created—a structured Ethereum-compatible request linked to a corresponding Bitcoin funding transaction.

3. The user's Bitcoin wallet signs and broadcasts the BTC transaction containing required funds.

4. Once confirmed by Bitcoin miners, Midl validators process the intent, executing the Ethereum-compatible smart contract logic securely and transparently.

5. Post-execution results, including updated balances and liquidity pool states, become immediately verifiable via Omzo's blockchain explorers.

Wallet and Interface Integration

Omzo.io prioritizes ease of use and broad accessibility. It supports popular Bitcoin wallet integrations such as the Leather wallet, providing clear step-by-step interactions for funding, transactions, liquidity management, and Rune issuance. Furthermore, Omzo's frontend interface simplifies complex blockchain interactions, ensuring users can efficiently execute trades, manage liquidity, and create assets without deep technical expertise.

Scalability and Future-Proofing

Recognizing Bitcoin's slower block time compared to Ethereum, Omzo.io's smart contracts and interfaces are explicitly designed to manage transaction expectations transparently. Mechanisms for batching intents and efficiently utilizing Bitcoin's transaction space help optimize performance, minimize fees, and provide a balanced user experience.

Moreover, Omzo.io is structured for continuous adaptation, readily integrating future Bitcoin enhancements such as scalability improvements, layer-two solutions, or protocol upgrades. Midl's technology stack ensures ongoing compatibility and responsiveness to future innovations in both Bitcoin and Ethereum ecosystems.

5. Tokenomics

Omzo.io leverages a clear, transparent tokenomics structure built around Bitcoin-native fungible tokens known as **Runes**. Runes serve as the primary asset type within the Omzo ecosystem, facilitating liquidity provision, decentralized trading, and community-driven project funding.

Overview of Runes

Runes are fungible digital assets created directly on the Bitcoin blockchain and integrated into Ethereum-compatible smart contracts through Midl technology. Unlike typical Ethereum ERC-20 tokens, Runes derive their value and security directly from Bitcoin's robust proof-of-work blockchain, benefiting from enhanced decentralization, security, and long-term asset stability.

Liquidity Provision Incentives

Liquidity provision lies at the heart of Omzo's economic model. Users who deposit pairs of assets (e.g., Bitcoin and specific Runes) into liquidity pools become liquidity providers (LPs). In exchange, LPs earn proportional shares of the transaction fees generated from swaps within their pool. Omzo's smart contracts

automatically adjust pool pricing based on a constant-product formula, ensuring fair trading conditions and sustainable returns for liquidity providers.

This model incentivizes continued liquidity provision, thereby maintaining stable and active trading environments across the ecosystem.

Fee Structure and Revenue Distribution

Omzo.io implements a simple, competitive transaction fee model:

- A standardized percentage fee applies to all asset swaps conducted within liquidity pools.

- Fees collected are automatically distributed to liquidity providers in proportion to their contributed liquidity, ensuring transparent, automatic, and fair rewards distribution.

- Future governance mechanisms could allow community-driven adjustments to fees, reflecting market conditions and user preferences.

Community and Governance Potential

In the future, Omzo.io plans to integrate community governance functionalities. Such mechanisms would empower Rune holders to influence important protocol decisions, including adjustments to liquidity pool fees, introducing incentives for liquidity providers, or prioritizing feature developments. This decentralized governance structure aligns the interests of token holders, liquidity providers, and the broader Omzo ecosystem, creating long-term alignment and community-driven growth.

Tokenomics Sustainability and Growth

Omzo.io's tokenomics is intentionally designed for sustainability, aligning user incentives with long-term ecosystem health. By operating on Bitcoin's stable blockchain and utilizing transparent Ethereum-compatible smart contracts, Omzo ensures resilience against manipulation, volatility, and centralization risks.

Additionally, ongoing incentives for liquidity provision, coupled with potential future governance structures, create strong economic fundamentals, supporting sustained user growth, active market participation, and continuous project innovation within Omzo's decentralized financial ecosystem.

6. Use Cases

Omzo.io unlocks numerous practical decentralized finance (DeFi) scenarios directly within the Bitcoin ecosystem by leveraging the unique combination of Bitcoin's security and Ethereum-compatible smart contract capabilities via Midl technology. This section outlines several key real-world applications where Omzo.io adds substantial value to both users and the broader blockchain community.

Decentralized Asset Trading

The most immediate and intuitive application of Omzo.io is decentralized asset trading. Users seamlessly swap Bitcoin for Bitcoin-native Runes or exchange Runes for other Runes without relying on centralized exchanges. This reduces counterparty risks and eliminates the need for trusting third-party custodians. For example, users holding Bitcoin can instantly diversify into other blockchain-native tokens within the Omzo ecosystem, benefiting from price exposure, portfolio diversification, and strategic asset allocation.

Liquidity Provision and Passive Income

Omzo.io empowers users to actively participate as liquidity providers (LPs). By depositing pairs of assets—such as Bitcoin paired with specific Runes—into liquidity pools, LPs facilitate smooth trading and earn passive income from transaction fees. This scenario is ideal for long-term holders of Bitcoin who seek additional returns without selling their holdings. Additionally, crypto projects and communities can establish dedicated liquidity pools to enhance market availability and stability of their tokens, incentivizing community engagement and market participation.

Token Creation and Community Projects

With Omzo's integrated Rune Etcher, individuals, communities, or decentralized autonomous organizations (DAOs) can mint customized Bitcoin-native tokens effortlessly. Practical use cases include:

- **Community Incentives:** Projects can create custom Runes to reward active community participation, foster user engagement, or fund development initiatives.

- **Decentralized Crowdfunding:** Startups and blockchain projects can raise funds transparently and securely by issuing dedicated tokens representing project stakes or governance rights directly on Bitcoin.

- **Asset Representation:** Businesses and platforms can issue tokens representing real-world assets, commodities, or stablecoins, leveraging Bitcoin's blockchain security for transparent and secure asset

management.

Integration with Existing DeFi Ecosystem

Omzo.io also complements existing Ethereum-based DeFi solutions by extending Bitcoin-native assets to Ethereum-compatible applications. Through Midl's bridging capabilities, users benefit from the established DeFi ecosystem (including lending, borrowing, yield farming) using assets secured on Bitcoin. This interoperability expands Bitcoin's utility beyond a store-of-value, integrating seamlessly into complex DeFi strategies and financial services.

Cross-chain Financial Services

Omzo.io positions itself as a natural hub for cross-chain asset management and decentralized financial services, connecting Bitcoin-native assets (Runes) to Ethereum-compatible smart contract functionality. Users can:

- **Execute Cross-chain Swaps:** Seamlessly trade between Bitcoin, Runes, and Ethereum-based tokens.
- **Create Multi-Asset Portfolios:** Build diversified investment portfolios containing Bitcoin-backed tokens alongside Ethereum-native assets, all managed through a single, secure, decentralized interface.
- **Access Decentralized Lending and Yield Optimization:** Leverage Bitcoin-based collateral to access decentralized lending platforms, yield-generating protocols, and sophisticated DeFi products, all while retaining Bitcoin's underlying security.

Simplified User Experience

Omzo's user-friendly interfaces, integrated wallets (like Leather Wallet), and intuitive onboarding simplify traditionally complex blockchain interactions. Non-technical users easily mint tokens, provide liquidity, and participate actively in decentralized finance, reducing barriers to widespread blockchain adoption.

7. Security Considerations

Security is a foundational priority in the design and implementation of Omzo.io. Given its integration with Bitcoin's blockchain and Ethereum-compatible smart contracts via Midl, Omzo.io adopts comprehensive security measures to protect users, assets, and ecosystem stability.

Leveraging Bitcoin's Security Model

Omzo.io directly benefits from Bitcoin's proven security and decentralization model, powered by robust Proof-of-Work (PoW) consensus. Bitcoin's network has consistently demonstrated resilience against malicious attacks, making it an ideal foundation for asset transfers and settlements. By anchoring all transactions, swaps, and asset creations onto the Bitcoin blockchain, Omzo ensures the highest level of security, transparency, and immutability available in decentralized finance.

Midl's Intent-Based Security

The Midl network introduces an innovative intent-based transaction model, enhancing the safety of Ethereum-compatible smart contracts running on Bitcoin. Each Ethereum-compatible smart contract action (intent) is explicitly funded and confirmed via an associated Bitcoin transaction before execution. This approach ensures:

- **Atomicity:** Transactions either execute fully or do not execute at all, avoiding partial states or asset losses.

- **Double-Spend Protection:** Bitcoin's confirmations guarantee that intents execute only after secure, verifiable funding.

- **Validator Verification:** Validators on Midl ensure the accuracy of transactions before execution, reducing smart-contract manipulation risks.

Secure Smart Contract Practices

Omzo.io's smart contracts follow best practices from leading Ethereum-based AMMs (e.g., Uniswap), significantly reducing common DeFi vulnerabilities, such as reentrancy attacks, front-running, or economic manipulation. Regular audits and transparent codebases further reinforce Omzo's smart contract reliability, giving users confidence in asset security.

Specifically, Omzo smart contracts:

- Undergo routine independent audits to identify and resolve vulnerabilities proactively.

- Utilize well-tested, industry-standard contract libraries to avoid introducing unforeseen risks.

- Provide clear and transparent transaction visibility, allowing users and auditors to verify each action easily.

Asset Management and Wallet Security

Omzo.io integrates seamlessly with widely trusted Bitcoin wallets, such as Leather Wallet, minimizing risk through secure asset custody. Wallet integration ensures users retain full control over private keys and assets, significantly lowering the risks associated with third-party custody or centralized exchanges.

Further, Omzo offers comprehensive user guidelines, helping users securely manage private keys, set up wallets correctly, and understand best practices for maintaining account security.

Continuous Monitoring and Incident Response

Omzo's development team implements robust monitoring systems and real-time analytics to swiftly detect unusual activities, potential vulnerabilities, or transaction anomalies. Proactive threat detection enables immediate responses and security updates, preventing potential exploits or minimizing their impact.

In case of critical vulnerabilities or incidents, Omzo employs transparent communication protocols, promptly notifying users and taking corrective action. Clear escalation paths and dedicated incident response plans further enhance community confidence in Omzo's operational security.

User Education and Community Awareness

Recognizing that user behavior significantly impacts overall security, Omzo actively educates its community. Regular communications, comprehensive documentation, tutorials, and security-focused content ensure that Omzo's users remain informed and vigilant, reducing human-related security risks.

Future Security Improvements

Omzo.io commits to ongoing security innovation and improvements aligned with industry standards and emerging blockchain developments. Future enhancements may include integrating additional decentralized insurance mechanisms, adopting advanced cryptographic standards, and collaborating closely with the broader blockchain security community.

By embedding security throughout its architecture, operations, and community practices, Omzo.io ensures a safe, trustworthy environment for decentralized finance directly within the Bitcoin ecosystem.

8. Ecosystem and Community Development

Omzo.io emphasizes strong community engagement and ecosystem growth, viewing active participation from developers, users, and partners as vital for long-term success. This section describes Omzo's strategies to build and sustain an active, informed, and supportive community around its decentralized finance platform.

Developer Community and Open-Source Contributions

Omzo.io strongly supports the open-source ethos, providing extensive developer resources, including comprehensive documentation, SDKs, and API guides. The platform encourages open-source contributions, offering clear guidelines and structured support for developers to build, test, and deploy decentralized applications (DApps) directly on Bitcoin using Midl technology.

Educational Resources and Training Programs

Recognizing the importance of education for blockchain adoption, Omzo.io plans to offer a range of learning resources and training opportunities. These include:

- Detailed tutorials for both technical and non-technical users.
- Workshops and webinars covering decentralized finance, liquidity management, and secure asset handling.
- Collaboration with blockchain educational institutions and initiatives to expand broader awareness of Bitcoin-native DeFi solutions.

Strategic Partnerships

Omzo.io will continuously seek meaningful partnerships with blockchain projects, traditional finance entities, decentralized autonomous organizations (DAOs), and community-driven platforms. These partnerships will enable shared growth, cross-platform integration, and broaden the practical application of Bitcoin-native decentralized finance.

Community Incentives and Reward Programs

To encourage active participation and growth, Omzo.io will introduce community-driven incentive programs. Examples include:

- Reward programs for liquidity providers, token creators, and active ecosystem contributors.

- Competitions and hackathons designed to stimulate innovative development within the ecosystem.

- Recognition and grants for developers and community members who make significant contributions.

Transparent and Community-Driven Governance

Omzo.io is committed to transparency and decentralized decision-making. The project will gradually introduce governance mechanisms enabling users and token holders to voice opinions and contribute to strategic platform decisions. Community proposals, voting mechanisms, and transparent decision-making processes will empower users, aligning project direction closely with community priorities.

Sustainability and Long-Term Engagement

Long-term community engagement is central to Omzo's ecosystem sustainability. Regular communication channels, such as community forums, social media, and dedicated support teams, will ensure users stay informed, engaged, and satisfied. Omzo.io prioritizes responsiveness to community feedback, continuously iterating platform features and ecosystem initiatives based on user input.

By focusing on community development, Omzo.io ensures that its decentralized financial platform remains vibrant, relevant, and capable of adapting effectively to evolving market dynamics and user needs.