



Cross-chain swaps that connect Cardano to the real world

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1 Disclaimer

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2 Abstract

Mynth is an innovative synthetics swap platform that enables seamless conversion of synthetic assets to real-world assets. Synthetic assets can offer lucrative arbitrage opportunities but utilizing them is challenging due to their complexity. Mynth revolutionizes this process by providing a user-friendly mechanism to swap synthetic tokens for their real counterparts. With Mynth’s automatic arbitrage feature, users can effortlessly capitalize on these opportunities without the need for advanced trading knowledge or strategies.

3 Synthetic Assets

Synthetic assets are financial instruments that allow users to gain exposure to various real-world assets without owning the underlying asset. They mimic the performance of traditional assets using financial tools like derivatives or debt, making them more accessible and cost-effective for investors.

Blockchain technology revolutionizes the synthetic asset market by offering transparency, efficiency, low barriers to entry, and decentralization. Synthetic assets can be easily created, traded, and settled on decentralized platforms, fostering a more inclusive financial ecosystem and equalizing the playing field.

An example of a synthetic asset on the Cardano blockchain is iUSD from the [Indigo Protocol](#). iUSD is a stablecoin that mirrors the value of the US dollar, giving users exposure to the world's most widely used currency without holding physical (or digital) dollars. Blockchain technology enables seamless trading and transferring of iUSD across the globe, unlocking new investment opportunities for users worldwide.

4 Problems with Synthetic Assets

Synthetic assets, although innovative and useful in many cases, do have their limitations. One main issue is their inapplicability in real-world situations. Unlike traditional assets, synthetic assets on the blockchain only exist within their original ecosystem, which restricts their practical uses.

Another challenge associated with synthetic assets is the potential for temporary depegging scenarios. In these instances, the synthetic asset's price may greatly differ from the real-world counterpart's price. This inconsistency can lead to confusion and uncertainty for traders and investors, as the synthetic asset's value might not accurately reflect the actual asset's worth.

The complexity of synthetic assets can also create difficulties for users. Many people may not fully understand how to use synthetic assets or take advantage of the arbitrage opportunities offered by synthetic platforms. This lack of knowledge can result in missed opportunities and potential losses for those who are not familiar with the complexities of trading synthetic assets.

5 Solution

Mynth offers a smooth, user-friendly platform for exchanging synthetic assets with their real-world equivalents. By connecting synthetic and real assets, Mynth enables users to enjoy the advantages of synthetic assets while easily converting them into tangible assets when necessary. This improves the overall usefulness and relevance of synthetic assets in everyday transactions and investment situations.

Temporary depegging events can cause significant changes in synthetic asset values, leading to instability and unpredictability for users. Mynth provides an effective and dependable method for swapping assets, contributing to the stabilization of synthetic assets. The platform's non-custodial and fast exchange process ensures that users can securely and swiftly convert their synthetic assets into real-world assets, reducing the effects of temporary depegging events and preserving the stability and value of their investments.

Mynth streamlines the management and conversion of synthetic assets by handling the complex arbitrage and conversion process for users. By managing the intricate aspects of asset conversion and offering a simple method for asset swapping, Mynth removes the challenges and difficulties often linked to synthetic asset management, making it more accessible and attractive to a broader range of users.

6 How it Works

Mynth is a platform that enables users to trade synthetic assets for their respective non-synthetic counterparts. The process is straightforward and user-friendly, requiring only a few steps to complete a transaction.

1. Users select the synthetic asset they want to exchange.
2. Users provide the receiving address for the non-synthetic asset they wish to obtain. Mynth will use this address to send the exchanged asset after the transaction is complete.

Mynth maintains a pool of assets to facilitate these transactions. When a user initiates a trade, Mynth draws from this pool to send the desired non-synthetic asset to the user's provided address. This process ensures quick and efficient transactions.

Behind the scenes, Mynth employs a team of professional arbitrage traders who manage asset conversions with the help of artificial intelligence. These traders and automated intelligent systems replenish the asset pools by taking advantage of price differences in various markets. This ensures that Mynth can continue facilitating trades for its users.

6.1 Trustless Cross-chain Swaps

A common issue with centralized exchanges is the need for users to trust that the exchange will execute the swap as promised. Cryptocurrency technology aims to eliminate trust and instead focus on verification. Mynth enables users to swap assets between its liquidity pools across blockchains without trusting centralized parties. The implementation consists of two versions: the version uses Cardano multisig wallets, and the second version

employs Cardano decentralized oracles. Initially Mynth will launch using the first version, and then later is intended to be updated to use the second version.

In version one, users deposit assets into a time-locked 3 out of 5 multisig wallet. This means that either 3 out of 5 signatures are required to unlock the tokens, or the user can retrieve the tokens after the time-lock expires. Users can choose the verifiers for each swap, with Mynth's user interface selecting verifiers by default. Verifiers are responsible for confirming transactions on non-Cardano blockchains. To unlock a token, the verifier checks if a transaction occurred. If the verifier agrees, then unlocking is allowed, and the verifier returns a signature. If 3 out of 5 verifiers return valid signatures, the token can be unlocked and transferred to Mynth's Cardano liquidity pool.

For example, a user wants to swap iUSD on Cardano for USDT on Tron using Mynth. The user initiates the swap through Mynth's application, and metadata is embedded into the Cardano transaction containing necessary information for a third party to validate the swap. The iUSD is sent from the user's wallet to a Cardano multisig wallet. After validation on the Cardano blockchain, Mynth transfers USDT to the user's Tron wallet. Mynth then calls upon verifiers to unlock the iUSD on Cardano and transfer it to Mynth's Cardano iUSD liquidity pool. Verifiers check the Tron transaction and return signatures to permit the unlock. In the end, the user has iUSD withdrawn from their Cardano wallet and USDT deposited into their Tron wallet, while Mynth has iUSD deposited into their Cardano liquidity pool and USDT withdrawn from their Tron liquidity pool.

In version two, Mynth uses Cardano oracles like Charli3 or Orcfax to verify transactions on non-Cardano blockchains. Oracle nodes periodically update data on the Cardano blockchain, and if consensus is reached among the nodes, the data is considered valid. Users initiate swaps on Cardano and deposit tokens into a Cardano smart contract. Tokens remain locked in the smart contract until on-chain data verifies the tokens' transfer on the non-Cardano blockchain.

Oracle nodes cross-reference locked tokens on Cardano with transactions on non-Cardano blockchains. If the cross-reference is valid, the oracle node marks the Cardano input transaction as valid. All validated transactions are concatenated, hashed, and stored on-chain. To unlock the tokens, the Cardano smart contract checks the oracle on-chain data and compares the hashes. If the hashes match, the unlock is validated and permitted, allowing the transfer of tokens to Mynth's Cardano liquidity pool.

For example, a user wants to swap iUSD on Cardano for USDT on Tron using Mynth. The user initiates the swap through Mynth's application, transferring their iUSD into Mynth's smart contract. Oracles periodically update on-chain data. When the USDT is transferred to the user's wallet, the oracle marks the transaction as valid during its update process. Mynth then executes the smart contract's unlock feature to transfer the iUSD to Mynth's Cardano liquidity pool. In the end, the user has iUSD withdrawn from their Cardano wallet and USDT deposited into their Tron wallet, while Mynth has iUSD deposited into their Cardano liquidity pool and USDT withdrawn from their Tron liquidity pool.

7 Swap Limits

Mynth will enforce minimum and maximum limits on swap sizes. The minimum swap size will be \$100 equivalent in value, whereas the maximum swap size will be \$10,000 equivalent in value. If Mynth's asset supplies become low, temporary restrictions might be applied to swaps until the supply is restored.

8 Mynth Token

Mynth Token (MNT) is a Cardano native token with a fixed total supply of 100,000,000. It serves as a utility token within the Mynth ecosystem, allowing users to pay for swap fees when exchanging assets on the platform.

Users can stake MNT. MNT stakers will gain access to the Mynth DAO, enabling them to vote on decisions related to the platform's development and governance, such as enabling profit sharing of Mynth's collected fees.

8.1 Mynth Fee

The Mynth Fee is a transaction cost applied to users when they perform a swap on the Mynth platform. The fee calculation is based on two factors: a percentage of the transaction value and a minimum fee in MNT tokens. The fee will be equivalent to 1% of the value of the exchange or 1 MNT, whichever value is higher.

For example, let's consider a user who wants to swap 1,000 iUSD on the platform and a scenario where MNT is trading at \$0.01. In this case, the fee will be calculated as 1% of 1,000 iUSD, which equals \$10. Since the value of \$10 is higher than the minimum fee of 1 MNT (\$0.01), the user will be charged \$10 worth of MNT for this transaction (i.e., 1,000 MNT).

To illustrate the minimum fee scenario, let's assume a user is exchanging an amount equivalent to \$50, and MNT is trading at \$1. In this case, the fee would be 1% of \$50, which is \$0.50. However, since the minimum fee of 1 MNT (\$1) is higher than \$0.50, the user will be charged 1 MNT for the transaction instead.

The MNT token fee collected during swaps is burned and permanently removed from the circulating supply. This process reduces the overall supply over time.

8.2 Mynth Tokenomics

MNT has a total supply of 100,000,000 tokens. The distribution is as follows:

1. **Mynth DAO Treasury (50%):** 50,000,000 MNT is locked in the Mynth DAO Treasury to ensure the long-term sustainability of the project.
2. **Core Mynth Team (25%):** 25,000,000 MNT is allocated to the core Mynth team. This allocation vests over a 3-year period to encourage the team's dedication to the project. Vesting takes place monthly on the last day of each month, having started the month after MNT was minted.
3. **Mynth Funding Initiatives (10%):** 10,000,000 MNT is allocated to Mynth funding initiatives and expenses, such as partnerships, marketing, development, trading, and fundraising, to support the growth and development of the ecosystem.
4. **Mynth Airdrop (10%):** 10,000,000 MNT is allocated to the Mynth airdrop, allowing the community to participate and receive free swaps.
5. **Mynth Protocol Owned Liquidity (5%):** 5,000,000 MNT is allocated to MNT liquidity on DEXs and locked in the Mynth DAO Treasury, allowing MNT to be available to the public. This distribution plan ensures a balanced allocation of MNT tokens, supporting the long-term growth and success of the Mynth project.

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9 Mynth v1

Version one of Mynth is designed to be a simple and focused platform with a limited feature set. The primary function of this initial version is to facilitate the swapping of iUSD to USDT on the Tron blockchain. By concentrating on this specific use case, the Mynth team aims to determine product-market fit, identify potential users, establish a strong community, and lay the groundwork for the Mynth ecosystem.

This first iteration of Mynth serves as a foundation for future development and expansion. As the platform evolves, additional synthetic assets will be supported, expanding the range of trading options for users. Moreover, Mynth will extend its reach to other blockchains, broadening its appeal and utility across the cryptocurrency landscape.

10 Mynth Roadmap to Bridge the Gap Between Synthetics and the Real-World

Mynth aims to bridge the gap between synthetics and the real world, focusing primarily on integrating the Indigo Protocol—the largest synthetics protocol on Cardano—and connecting the Cardano and Tron blockchains. Below is a roadmap outlining the key milestones for Mynth's development and growth.

10.1 Phase 1: Initial Focus

During the initial phase, Mynth will focus on connecting the Cardano and Tron blockchains. This will be achieved by tailoring the Indigo Protocol, enabling seamless interaction between the two ecosystems. This crucial step lays the foundation for Mynth's future endeavors.

10.2 Phase 2: Post-Launch

Following a successful launch, the Mynth team will shift their attention to supporting swaps between iBTC and BTC, as well as iETH and ETH. This will allow users to easily exchange synthetic assets for their native counterparts, increasing liquidity and promoting greater adoption of the Mynth and Indigo platforms.

10.3 Phase 3: Expansion and Growth

As Mynth gains traction and user adoption, the team will explore additional opportunities to expand the platform's capabilities. Potential expansions include integrating more blockchain networks, supporting a wider range of synthetic assets, and developing new features to enhance the overall user experience.

11 Why USDT and Tron?

USDT and Tron are chosen for their unique advantages and strong compatibility with the DeFi ecosystem. Tron, as the second-largest DeFi blockchain by TVL, offers a more accessible development environment compared to Ethereum. Its low transaction costs and wide-ranging integrations make it an attractive platform for developers and users alike.

Tron's established connection with a banking partner used by the Mynth team simplifies arbitrage execution. Furthermore, Tron's support across various exchanges in the Americas, Europe, and Asia ensures a global reach and increased adoption potential.

USDT, the most popular stablecoin, offers many exchange and fiat integrations. This allows users to effortlessly transfer USD to their bank accounts. Although alternatives like USDC or TUSD could be considered, they currently lack the infrastructure integrations that USDT provides. This gives USDT an advantage in terms of accessibility and ease of use.

12 Summary

Mynth is a new platform that addresses the challenges and limitations associated with synthetic assets. It provides a user-friendly mechanism to swap synthetic tokens for their real-world counterparts. By connecting synthetic and real assets, Mynth allows users to capitalize on the benefits of synthetic assets while ensuring their practical use in everyday transactions and investments. As Mynth continues to develop, it will support a growing range of synthetic assets and expand to other blockchains, bridging the gap between synthetic and real-world asset markets. With its innovative approach, Mynth aims to transform the synthetic asset landscape and create a more inclusive, accessible financial ecosystem for users worldwide.