

ExoniumDeX - tEXO

Unifying Digital Assets for the Entire Financial Ecosystem

Exonium.one

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Abstract

ExoniumDEX is a decentralised exchange (DEX) primarily designed to be a unifying exchange of all cryptocurrencies and synthetic assets through a unique oracle concept and bridging function. It will be used to support all on-chain or off-chain assets on various blockchain, providing significant liquidity to the decentralised finance (DEFI) universe by being all-inclusive. As a one-stop DEX, ExoniumDEX will be positioned as a pivotal platform in the cryptocurrency space, allowing inter-exchange of all assets regardless of blockchain technology in a safe, transparent and permissionless environment. For technical details, do refer to our documents as we will be constantly updating progress and development.

Background

Since 2019, Exonium was founded to propel cryptocurrency into mass adoption. Merging the best of the centralised exchange ecosystem and the principles of social network platforms, the exchange aims to put the power back in the hands of the community by empowering and enabling traders. ExoniumDEX was conceptualised during the decentralised finance (DEFI) movement of 2019/2020. DEFI continues to reach a high level of user adoption and financial commitments. Total value locked in emerging projects like Uniswap, Sushiswap has achieved all-time high values of several billions in dollars. The value proposition of the blockchain and cryptocurrency space has never been more promising, filled with opportunities and solutions. A large part of the increase of participation in DEFI is due to the adoption of Uniswap/PancakeSwap as well as conceptual yield farming. However, existing AMM does come with certain limitations, which ExoniumDEX is positioned to solve and more.

ExoniumDEX developers come from a diverse group of DEFI projects, having launched several high profile and successful ones. With such experience, the developers have identified crucial problems that inhibit further growth in DEFI and blockchain adoption—that of the exclusiveness of DEFI in separate blockchains e.g Tron, Ethereum, Binance Smartchain, with close to zero interoperability and exchange between them on a easy to use unifying platform.

DeFi challenges the CeFi system by disempowering middlemen, and empowering everyday people via peer-to-peer transactions.

Decentralized finance is an unbundling of traditional finance. DeFi takes the key elements of the services provided by banks, exchanges and insurers today — like lending, borrowing and trading — and puts it in the hands of retail investors or the unbanked.

The Success of Ethereum based DEXes

As seen in the success of UNISWAP and its peers, millions of users are keen to trade or swap ERC20 tokens in a decentralised and trustless manner. Users who trade on these DEXes enjoy a one-stop platform where each trade is conducted safely and without inhibition.

Through UNISWAP, thousands of projects based on Ethereum (ERC20 Tokens) are able to list instantly and provide liquidity without a middleman, thus bypassing the need for huge fees and long delays seen in centralised exchanges. As a matter of fact, exchange volumes of UNISWAP exceeded \$250 million in a single day, exceeding even top exchange volumes.

The key to the success of DEXes is that all trades are conducted on-chain. Millions of users are now familiar with using wallets such as Metamask or Imtoken to connect and conduct trades instantly on DEXes permissionless-ly. The ease of use, simple UI and safety makes DEXes such as UNISWAP stand out against centralised exchanges.

The DEX problem with multiple blockchains

The biggest issue with multiple blockchains is that each economy and ecosystem grow largely separately, without the ease of interconnectivity seen in the case of UNISWAP for the thousands of Ethereum tokens. This is a significant inhibitor to growth of the entire cryptocurrency universe. While a blockchain like Ethereum prospers with huge capital injection, other upcoming blockchains solving scaling trilemma issues are not able to enjoy similar network effects. In fact, Ethereum is currently bloated with transactions, requiring long confirmation times and high gas fees, whereas Binance Smart Chain has extremely fast confirmation times and low fees, but does not yet have the network effects necessary to accelerate a booming project ecosystem.

Network effects and their importance to the ecosystem

It is well understood that Ethereum has the prime blockchain of choice for the DEFI space. This is in the face of obvious limitations in scalability. The reason for this is the emphasis of the network, both for users and projects, therefore producing the strongest user-base and community, which in turn spins off a network effect of user propagation.

Network effects can only be prevented or stopped at the boundaries, which in blockchain, is clearly defined as the lack of interoperability between Ethereum and the others.

Many solutions can be found, trying to provide some interoperability. However, these solutions either fail at the usability level (too difficult) or user adoption level (too early, too different). The current surge of users who are familiar with Ethereum-based DEXes

and wallets makes it a great opportunity like never before, to merge the interoperability of chains through an Ethereum based unifying platform.

An interoperability Solution

Blockchain interoperability is complex on two major fronts:

1. Entirely different codebases of cross platforms
2. Thousands of blockchains with varying degree of technological differences

These complexities exacerbate the existing problems of interoperability to the extent that solving it using simple solutions becomes impossible and extremely expensive, from a development point of view.

A solution to interexchange interoperability needs to be sought, where developers from individual blockchain can design their portions easily to meet the supply/demand of an Ethereum-based DEX. The concept of oracles, in this case, defined as a third-party Decentralised system providing contracts with external systems (external to Ethereum) could be useful.

During the initial launch phase, ExoniumDEX will leverage on the existing Binance Smart Chain infrastructure before mainnet launch. The ExoniumDEX team concluded that BSC will be the best option for equitable distribution and community growth during the early stages of development. Features built on Binance Smart Chain during initial phase will consists of but not limited to -

- 1) Staking Pool
- 2) Liquidity Mining
- 3) Synthetic Assets
- 4) Yield Aggregator
- 5) tEXO (Platform Token)

*There will be no pre-sale, private sale, VC or any other form of tEXO token sale. All tEXO will be distributed to seed staking participants before launch for equitable distribution.

Friction In Blockchain - tEXO as a Solution

Blockchain distributed ledger is a type of database that is shared, replicated and synchronized across all members of the decentralized network. Transactions like the exchange of digital assets by users of the network are all recorded on the ledger. Records which are updated on the ledger are agreed upon using consensus mechanisms by members of a network. This also means that the network is governed by all members and no intermediaries or centralised authority is involved. Every record in a blockchain distributed ledger has a timestamp and unique cryptographic signature enabling the ledger to be auditable. This also means that the historical transaction in the network is immutable.

The current world is all connected and integrated which means business activity takes place in business networks that span across national, geographic and jurisdictional boundaries. One can compare a business ledger to how a blockchain distributed ledger can be utilized.

Let's picture the consistency in business ledgers. Business activity often occurs at a marketplace where the members such as suppliers, producers or any stakeholders exercise their rights and entitlement on assets which are items with value tied to them. These assets can be tangible like properties or intangible like stocks.

The transaction that produces value on this business network occurs when the assets ownership is transferred. These transactions usually involve various individuals like buyers, sellers and intermediaries where all the agreements and contracts are recorded in a ledger. Businesses use multiple ledgers to keep track of things, more so on those that have multiple lines of business.

These ledgers are simply a system that have all business activities recorded. Looking at the description above, we can see that business ledger used currently is not effective or efficient. Aside from being inefficient and costly, they are also subject to being tampered.

The probability of disputes caused by lack of transparency increases which could possibly raise the cost tremendously as reversing transactions and providing insurance is expensive. The tendency for corruption and fraud is also higher which can lead to missed opportunities. There are also times where certain ledgers are not updated causing delayed actions or worse, business decisions made based on historical and inaccurate data.

All the mentioned issues from the current business ledger can be eliminated if not all improved by using a blockchain based distributed business ledger. An example of this is where different business segments store or maintain their own business ledgers. The duplication of this could cause discrepancies which will result in a scenario where disputes happen requiring a much longer time for settlement and cost associated in resolving these disputes. By using blockchain based ledgers, this risk can be eliminated as those transactions once written and validated, cannot be altered which greatly reduces cost due to the risk and time saving. Blockchain consensus mechanisms also produce consistent datasets which will greatly reduce errors and also allow members to alter certain data elements when a consensus is reached.

From a security perspective, blockchain technology also increases trust and integrity as the origin of the source pertaining to the information on the ledger is not owned by one of the participants of the network. By being immutable, businesses also benefit from the lowered cost of audits and improved transparency from a compliance perspective. Being immutable also means that activity executed on a blockchain based business network is automated and final which leads to faster execution and reduced risk enabling a better revenue stream model for clients' interaction.

Ever since the 1960s, the global economy has been in the process of digitization. We often see how digital technologies are being used to improve business processes by enabling delivering of results in a safe and fast manner.

Blockchain technology is an improved version of digital technology where one can use it as an exchange of value. With the ongoing optimization and evolution of Blockchain technology, enterprise grade blockchain technology features key characteristics like a shared, permissioned ledger visible to all authenticated members and consensus protocols agreed by participants on the business network. Besides that, there is also the use of cryptography elements and Hyperledger Fabric like chain code to maintain the integrity of the transaction.

With that being said, there are many challenges ahead that can recognize blockchain's disruptive value before mass adoption. Issues in areas related to legality, technology and cooperation will need to be solved as well. In terms of compliance, governments will develop new regulation in time which is causing blockchain based businesses to progress slowly due to compliance factors. When we mention compliance, one could be compliant

one day, and be noncompliant the next.

There is no regulation that defines the standardisation to follow which limits the technology's ability to scale. The major technological factors also require mass cooperation from different businesses to create the required network effect. In the business world of today, competition tends to have a higher ratio which could lead to slow adoption from this frontier. However, looking at how the world's economy is changing, businesses that align with the law of innovation are moving towards the path of building a reputable solution while saving costs at the same time.

Blockchain technologies represent a fundamentally new way on how business is transacted. Blockchain together with the use of smart contracts and digital assets will enable a much safer, faster, efficient and scalable solution. Together with the inclusion of more participants will drive the path toward a more decentralized manner. Blockchain technology can also deeply change the way we organize and conduct economic activities.

BSC, ERC20, POLKADOT are some of the many other popular blockchain empowering the Decentralised Finance ecosystem.

\$tEXO is a next generation dApps powerhouse supporting projects based on various ecosystems. We serve as a modernised super-dAPP where you have access to a variety of protocols.

\$tEXO has a comprehensive interoperable DeFi solution that aims to integrate projects from different blockchain protocols to enable an interoperable DeFi ecosystem within \$tEXO.

Decentralized Apps are making huge progress but the current blockchain ecosystem is not prepared to scale as per the demand. The issues of slow block confirmations and high gas fees need to be solved before we target mass adoption by mainstream users. Most importantly, it needs a great user experience. We aim to change that by simplifying the interaction between users and the decentralized world. We want to make interacting with the decentralized ecosystem so easy that anyone can do so without worrying about the complexity of the underlying system.

ExoniumDEX is developing a blockchain-based platform that aims to provide a bridge between synthetic assets and fiat money, cryptocurrencies, stocks and other financial instruments.

The recent expansion of DeFi projects brought multiple innovative platforms to the ecosystem but most projects are still centralized or governed by a small group of participants making it difficult to make a smooth integration with other platforms.

We aim to aggregate all current and future DeFi applications under the same ecosystem that can be managed in a decentralized way without unnecessary fragmentation. This approach will allow for quick development and a more efficient market for users.

DeFi protocols like tEXO are the future for savvy investors to mitigate regulatory risk in a world of uncertainty. CEX can always pause withdrawals and has control over your funds. With a DEX, you remain in full control.

ExoniumDEX Synthetic Asset Infrastructure

Synthetics offer investors tailored cash flow patterns, maturities and risk profiles, structured to suit the needs of the investor.

Synthetic assets are new primitives made possible by the maturation of Ethereum and the DeFi ecosystem. Synthetic assets represent open and global access to existing financial markets, itself an important primitive.

But cut deeper and you can see the innovation behind markets for anything. We can potentially use these primitives to construct novel, new financial markets that can fundamentally align incentives and change the way we live our lives.

Synthetic assets are a combination of securities and/or assets in such a way that they produce the same financial effect as the ownership of an entirely different asset would. This allows investors to make use of multiple financial instruments instead of focusing only on one.

Synthetic assets are tokens that are digital representations of derivatives. Synthetic assets can tokenize physical assets and bring their value onto the blockchain.

The value of all derivative contracts is currently estimated to be upwards of \$1.2 quadrillion. That amount is exponentially more massive than the global debt (\$215 trillion), global real estate (\$217 trillion), the world's supply of gold (\$7.7 trillion), and global stock markets (\$73 trillion) combined.

On one side, these derivatives can be used majorly to help get rid of price risk from various assets like commodities to debt. On the flip side, derivatives can exacerbate and promote market inefficiencies, which will, in turn, encourage a zero-sum game among the traders instead of creating actual market value.

The use of derivative products enables investors to earn returns without a physical settlement, transfer risk, arbitrage trade, and hedge against price fluctuations.

Synthetic Assets on the blockchain

Crypto synthetic assets are designed to mimic the value of other assets, giving investors the leverage to trade digital and traditional assets in the crypto ecosystem.

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But cut deeper and you can see the innovation behind markets for anything. We can potentially use these primitives to construct novel, new financial markets that can fundamentally align incentives and change the way we live our lives.

This includes stocks such as Tesla, Apple, Microsoft, Facebook or fiat currencies like USD, RMB and EUR. Investors can use crypto synthetics to gain exposure to a variety of assets without having to hold them.

Synthetic assets carry unique advantages:

- Permissionless creation: Blockchains like Ethereum empower anyone to construct synthetic asset systems

- Easy access and transferability: Synthetic assets are freely transferable and tradeable
- Global pools of liquidity: Blockchains are global by default, anyone in the world can participate
- No central party risk: There are no central parties with privileged control

DeFi effortlessly tackles the situation by providing equitable financial opportunities across the world. And all people need is a smart phone with an internet connection.

Hence, DeFi-based crypto synthetic assets business models are deemed futuristic.

tASSET - ExoniumDEX Synthetics

Our synthetic asset feature is a protocol powered by smart contracts on the Binance Smart Chain network that enables the creation of synthetic assets called tAssets. tAsset mimic the price behavior of real-world assets and give traders anywhere in the world open access to price exposure without the burdens of owning or transacting real assets.

The minting of tASSETs is decentralized and is undertaken by users throughout the network by opening a position and depositing collateral. ExoniumDEX ensures that there is always sufficient collateral within the protocol to cover tASSETs, and also manages markets for tASSETs by listing them against tDOLLAR.

tEXO is minted by the protocol and distributed as a reward to reinforce behavior that secures the ecosystem. With it, ExoniumDEX ensures liquid tASSET markets by rewarding tEXO to users who stake LP Tokens obtained through providing liquidity. tEXO is valuable as it can be staked to receive voting privileges and to earn a share of the protocol's CDP withdrawal fees.

ExoniumDEX is a project developed and steered by its community: its markets are maintained by its own users through tEXO incentives, and the protocol evolves with new ideas through democratic governance.

ExoniumOracle

DeFi projects have exploded in the FinTech space in 2020. However, accelerated growth will invariably bring with it issues such as hacks and fraud.

One example is the unexpected liquidation of US\$89 million of DAI coins on the crypto lending platform Compound.

It occurred when the oracle that communicates with Coinbase Pro exchange was led to believe that current DAI prices with USDC pairing had spiked. When this information was reflected back to DAI, its blockchain surmised that many loans were undercollateralized and liquidated them.

It is not impossible for such a situation to happen. The prices of coins are live on exchanges but not on the blockchain, which thus requires a blockchain oracle to determine prices.

However, technology can be manipulated by humans. As was this case where the DAI/USDC pairing price was influenced by one user.

So how was this achieved on a system that uses decentralized technology?

What is an Oracle?

Let us first understand what an oracle is. It is a third party decentralized system that uses smart contracts to connect information or systems that are external to Ethereum (off-chain data) with the blockchain.

The oracle assists in reconciling transactions executed on the blockchain, and these include fund expenses, balance, and burn.

Simply put, the oracle is the method or device through which deterministic blockchain is connected with off-chain data and applications.

The Oracle Problem

DeFi projects are built on-chain for the purpose of decentralization. This means that no single entity has control over decisions or actions, and everything operates in a trustless and immutable environment.

However, blockchain technology has no data points or access to data. This where the oracle comes in.

The oracle is what imports data from a single source or node. But in so doing, it becomes a centralized entity, which is counter to the whole concept of decentralization.

This means that the oracle has power over the smart contracts that it facilitates, turning the decentralized protocol into a centralized or regular contract. This is where the oracle is susceptible to hacks.

Since blockchains rely on oracles for off-chain information, what can be done to reduce or prevent similar incidents in the future?

The answer is obviously a decentralized oracle system, such as the ExoniumOracle.

In order to gather blockchain transaction and reconciliation such as expense, balance and burn functions, it is important to have siloed systems available to all blockchains and their developers, which in turn follows a fixed format that would allow raw data read and eventual swapping with an ERC20 format and vice versa. This is where ExoniumOracle will be introduced to fill the need, as a mainstay product of the ExoniumDEX fleet.

ExoniumOracle will be open-source and developer friendly, allowing the majority of programming languages to be used. ExoniumOracle will serve as the satellite network for ExoniumDEX, processing blockchain data in silo as designed, processing and conversion/translation to the Ethereum-based format (solidity) before porting over the ExoniumDEX.

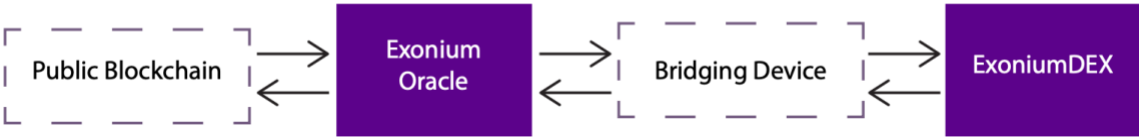


Fig 1: ExoniumDEX brief schematic detailing ExoniumOracle and blockchain data flow

ExoniumOracle is a proprietary product in the development stage, slated for release in Q2 2022. Development of ExoniumOracle follows the principles of simplicity and core bridging functionality similar to the development principles around solidity.

ExoniumBridge

Riding on the principles of a satellite network around ExoniumDEX, there needs to be a standardised form of communications that follows core development principles and complies on the Ethereum format.

Communication between ExoniumOracle and ExoniumDEX therefore needs to be bridged efficiently, safely and transparently. It is vital that the channel does not become a point of network compromisation or bloat. Without such a standardised protocol bridge, it is impossible to network thousands of blockchains and their exponentially growing transactions in a scalable fashion.

ExoniumBridge is a smart contract that actively tallies information flow and data between the ExoniumDEX and ExoniumOracle. It efficiently processes the communication on-chain and forms a binding conduct between both ExoniumDEX and ExoniumOracle.

ExoniumBridge is an open-sourced smart contract to be released in concurrence with ExoniumOracle and will be staged for Q1 2022.

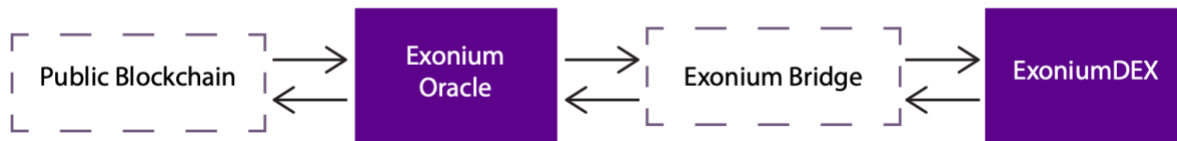


Fig 2: ExoniumDEX brief schematic detailing ExoniumOracle and Exonium Bridge

ExoniumDEX format

As mentioned in previous sections, the success of Ethereum-based DEXes such as UNISWAP and PancakeSwap cannot be understated. The millions of users have clearly indicated their preference of a simple, unified platform that links directly with their Web3.0 compliant wallets such as Metamask and Imtoken.

In this spirit of commercial viability and in order to leverage on ongoing network effects. The ExoniumDEX team naturally gravitated to a similar model of DEX and will develop on the existing AMM DEX model.

This means that ExoniumDEX will share the concepts of swap mechanisms, fee structure and liquidity pools that has made UNISWAP such a commercial success. At the beginning, ExoniumDEX will only support BSC tokens, and will extend this to all major blockchains followed by any public, open source blockchain available. This will flow in tandem with the release of ExoniumOracle and ExoniumBridge.

Date	Q3 2021	Q1 2022	Q2 2022	Q3 2022
Product	tEXO Launch	Exonium Bridge	Exonium Oracle	Full System Launch
Supportability	BSC	Major Blockchain	Major Blockchain	ALL Public Blockchains

Fig 3: Deployability Timeline for ExoniumDEX fleet of products and supportability

Connectivity beyond tEXO

ExoniumDEX aims to be the central point of the blockchain universe for transactions on-chain between different chains. To accomplish this, ExoniumDEX adheres to the spirit of open source development and decentralisation.

ExoniumBridge and ExoniumOracle are designed to be deployable to other ethereum based DEXes as well, and will ensure that liquidity and transactional interoperability can be enjoyed permissionless-ly. This means that should an ethereum based DEX choose to integrate with ExoniumBridge, it would also effectively connect into the ExoniumDEX network, allowing the DEX to enjoy added liquidity of other chains and vice versa, contributing liquidity back to the ExoniumDEX network.

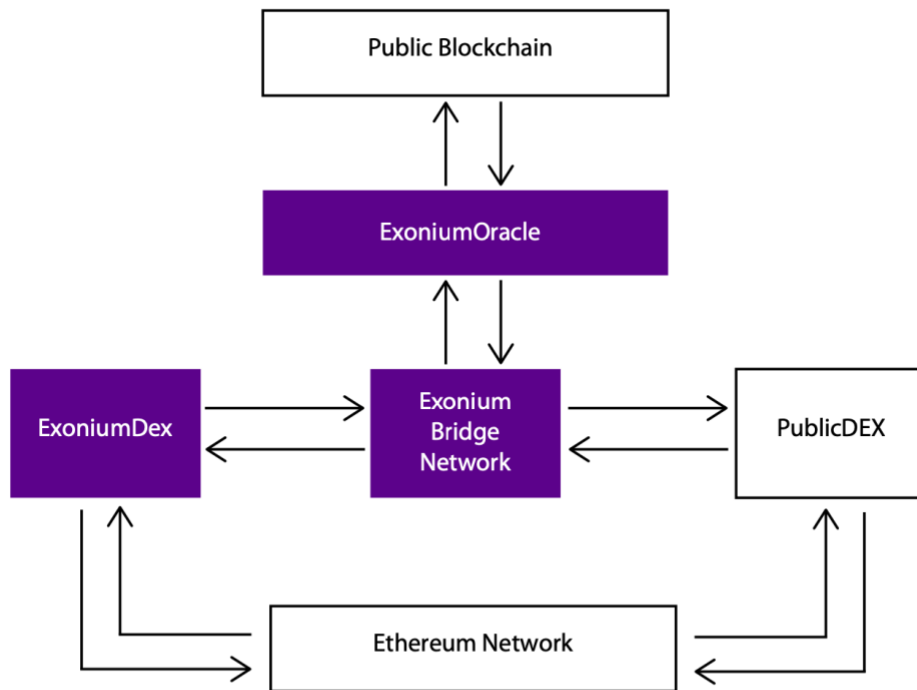


Fig 4: ExoniumDEX satellite network extending to other DEXes

Future of Crypto Synthetics

Crypto-collateralized synthetic currency models powered by smart contracts can have massive implications in the traditional finance industry. In their essence, these models provide crypto holders the leverage that they need to trade traditional assets and their derivatives while remaining within the digital infrastructure the entire time.

Decentralization grants open access to a worldwide community of investors. Prior to crypto synthetic assets, only a few institutional investors could access the global derivatives markets.

With many crypto synthetic asset platforms opening their doors to derivatives for thousands of new investors, only time will determine the kind of impact that a probable flood of new crypto-collateralized derivatives contracts will have on the traditional financial investment landscape.

Imagine the possible popularity level of this investment model in the upcoming years.

Anyone who owns a smartphone, and an intermediate understanding of the synthetic asset operations can access these powerful investment vehicles, without owning any commodity, and still being anonymous.

This is finance on a whole new different level.

Conclusion

DeFi challenges the CeFi system by disempowering middlemen, and empowering everyday people via peer-to-peer transactions.

Decentralized finance is an unbundling of traditional finance. DeFi takes the key elements of the services provided by banks, exchanges and insurers today — like lending, borrowing and trading — and puts it in the hands of retail investors or the unbanked. Adoption of DeFi is powered by the omnipresent nature of blockchain: The same moment a dapp is encoded on the blockchain, it's globally available. While most centralized financial instruments and technologies roll out slowly over time, governed by the respective rules and regulations of regional economies, dapps exist outside of these rules, increasing their potential reward — however, at the same time, also increasing their risks.