TITAN - White Paper

09-24-2020

1. Introduction

In 2020 DeFi exploded, with hundreds of projects flooding the market. The DeFi innovation workshop introduced extensive feature combinations through multiplexing modules such as DEX, decentralized lending, derivatives, decentralized stablecoins, DAO, Oracle, etc. While innovation often coexist with it greed for unlimited profits. In the early days of DeFi, we observed numerous DeFi shortcomings and immaturity which revealed opportunities for creative solutions to these issues such as risk control, user experience, etc. Solving these problems spawned DeFi space further innovations.

1.1 User Experience of DEX

The experience of DEX users is still very different from that of CEX. Users who are familiar with traditional financial market trading or digital currency centralized exchanges may have a learning curve when they start using a decentralized exchange. In Uniswap, for example, users are unable to access the historical price of a trading pair through the interface, and thus they lack a clear understanding of what range the current bid price is in relation to recent prices. Additionally, Uniswap does not allow orders to be placed at a specified price which restricts flexible control over the execution of trades. What's more, Uniswap doesn't have intuitive features to help traders understand the profit and loss after the purchase (swap) of digital assets. Due to the congestion of transactions on the DEX chain, it often takes several minutes to know the final status of a transaction, which can incur a high (GAS) cost.

1.2 DEX Cross-chain Support

The reliance of many current DeFi applications upon Ethereum contracts has led to congestion in the Ethereum network that is compounded by the lack of mature, cross-chain support. However, other network assets have a strong motivation to participate in DeFi, which leads to the fragmentation of the DeFi market. Though DeFi has given rise to the rapid growth of cross-chain assets, such as renBTC, WBTC, tBTC, etc., only the most mainstream assets offer corresponding cross-chain solutions. Because many digital assets can not be mapped on Ethereum there is a need for the formation of a unified and broad supported DeFi market.

2. Titan

TITAN is a de-financialization center that stands on the shoulders of DeFi's predecessors, offering new millennials and Generation Z complete control of their financial products without any centralized custody. TITAN offers a solution for using a small number of digital

assets, without the need to understand complex on-chain transactions or to have advanced financial knowledge. TITAN consists of the following main elements.

-TITAN Swap: a DEX based on an automated market-making mechanism.

-TITAN: the governing token of the TITAN DAO, with proposals and voting rights that will together determine the future of TITAN. It also provides incentives for liquidity providers and traders.

-TITAN Automated Order: an AMM-based automated order mechanism that can be set to automatically execute orders in queue order when they reach a predetermined execution price. Provides arbitrageurs with automated tools to improve the AMM price formation mechanism.

-TITAN Smart Route: TITAN's smart routing of orders across chains enables automatic selection of multiple mainnet liquidity pools. Support for more pairs and smaller slippage.

-TITAN Address Audit: CoinGecko identifies the address of the token contract in a trading pair to avoid a Scam Coin.

-TITAN Adaptive Bonding Curve: TITAN's Adaptive Bonding Curve combines greater liquidity and better price discovery for different asset classes.

-TITAN Layer2 Support: Leverages the Layer2 protocol to dramatically increase the efficiency of on-chain clearing and settlement and effectively reduce GAS consumption ahead of ETH 2.0.

2.1 TITAN Uses and Acquisition

Possession of TITAN will have the following purposes.

-TITAN is the governance token of the TITAN DAO which provides proposals and voting rights to collectively determine the future of TITAN. Some of the governance rights include:

- TITAN time-weighted voting coefficient

- Increase or decrease of the TITAN Pool fee depending on the volatility of the trade.

- Adjusting the speed of liquidity mining to release TITAN

- Adjusting the TITAN allocation weights between different liquidity pools

- A bonus weighting factor for locked voting

- Minimum collateral requirements to become a brokerage

Holding and pledging TITAN to become a decentralized brokerage that offers a rich implementation of the TITAN Automated Order to its Traders. The brokerage will receive a percentage of the commission and will reward or penalize TITAN. Rewards and penalties are determined according to whether the service provided meets its goals.

Users can earn TITAN rewards by building for the TITAN ecosystem.

- Inject liquidity into the TITAN Pool liquidity pool and become a liquidity provider.

- Use TITAN Swap to complete transactions and activate the ecosystem of TITAN

decentralized financial center.

- Total TITAN 1 billion. The allocation ratio is as follows.

Titan Token Allocation

Investors and shareholders
10%

Liquidity Mining
90%
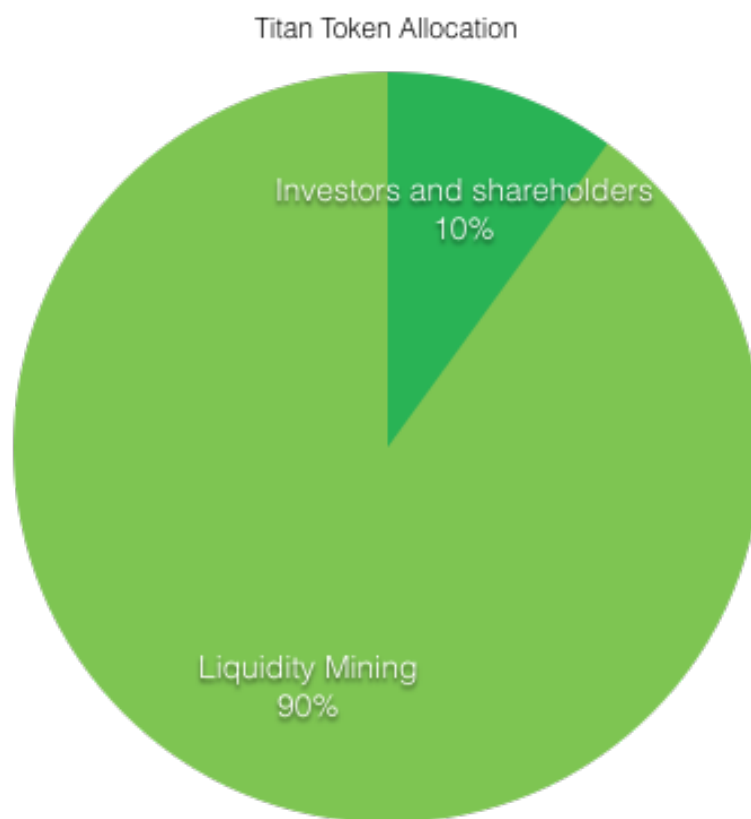
2.2 TITAN Automated Order

TITAN Swap is a decentralized exchange DEX based on AMM's Automated Market Maker (AMM) mechanism, which greatly simplifies the market making process compared to the traditional order book model. TITAN Swap allows anyone to inject liquidity into the TITAN Pool and earn a profit. The Trader has support for a smaller number of order types compared to the order book model. TITAN Automated Order provides the ability to enrich

order types in the AMM mechanism, from limit orders to trailing orders, and even automated arbitrage based on them.

The TITAN Automated Order capability will be provided by a different brokerage, which will be able to track the latest prices and slippage in the TITAN Pool through contracts, operate with the user's authorization when prices meet traders' predetermined values, as well as track orders, CEX and DEX spread arbitrage and more sophisticated functionality. Different brokerages compete with each other by securing TITAN, and when specified conditions for trade are met, the brokerage that fails to complete the order according to the specified logic will be penalized by TITAN, while efficient completion will be rewarded by TITAN. The trader will give preference to the brokerage with lower service rates and more efficient execution to complete the automated order.

2.3 TITAN Smart Route

TITAN Swap will first set up the liquidity pool TITAN Pool on the Ethereum network, however, TITAN Pool is not the only option for TITAN Swap. TITAN Swap will determine the best liquidity pool to use based more on the pairs that the Trader is trading and their order sizes. The primary purpose of the selection criteria is to enable the exchange of more tokens under the Smart Route calculation, and the chosen paths which include TITAN Pool, Uniswap Pool, Balancer Pool, and Curve Pool. This feature is the focus of TITAN Smart Route in Phase 1.

The second phase of TITAN Smart Route will enable orders via cross-chain smart routing with the automatic selection of multiple mainnet liquidity pools. A cross-chain asset exchange will be achieved through anchoring the underlying assets of the mainnet on Ethereum. An example would be a TRC-20 to ERC20 exchange which can be completed through true non-custodial via cross-mainet asset exchange across multiple mainnets, multiple liquidity pools, and multiple exchange steps. This will support more trading pairs and facilitate a one-stop decentralized center for financial services.

2.4 TITAN Address Audit

Scam Coins have become an unavoidable problem in both Uniswap and JUSTSwap. On the first day of Justswap's launch, users enthusiastically used the product only to find a large number of tokens with the same name thus making it difficult to identify the correct token to purchase. Even though the market is decentralized, it doesn't mean the DEX should neglect its responsibility to the consumer. The TITAN Address Audit feature, in conjunction with CoinGecko, identifies token contract addresses in a transaction pair and indicates to users when a token corresponding to a suspicious contract address is found, thus effectively avoiding a Scam Coin.

Additionally, the Foundation has opened a channel to remove tokens from the TITAN Swap if they are reported and verified as Scam Coins, and to reward those who report them.

2.5 TITAN Adaptive Bonding Curve

Under the mechanism of Automated Market Maker (AMM), price discovery and liquidity provider risk is largely dependent on the Bonding Curve. The diagram below shows the Constant Product Market Makers (CPMM) mechanism used by Uniswap and the Stableswap invariant used by Curve. Since Curve trades with stablecoins, Stableswap is more suitable for its scenario, allowing Liquidity providers to achieve minimal impermanent loss while traders can trade with smaller slippage. This is not to say that Stableswap is better, but rather that the two are used in different scenarios. TITAN Adaptive Bonding Curve combines greater liquidity with better price discovery by automatically adapting the bonding curve to different asset classes.
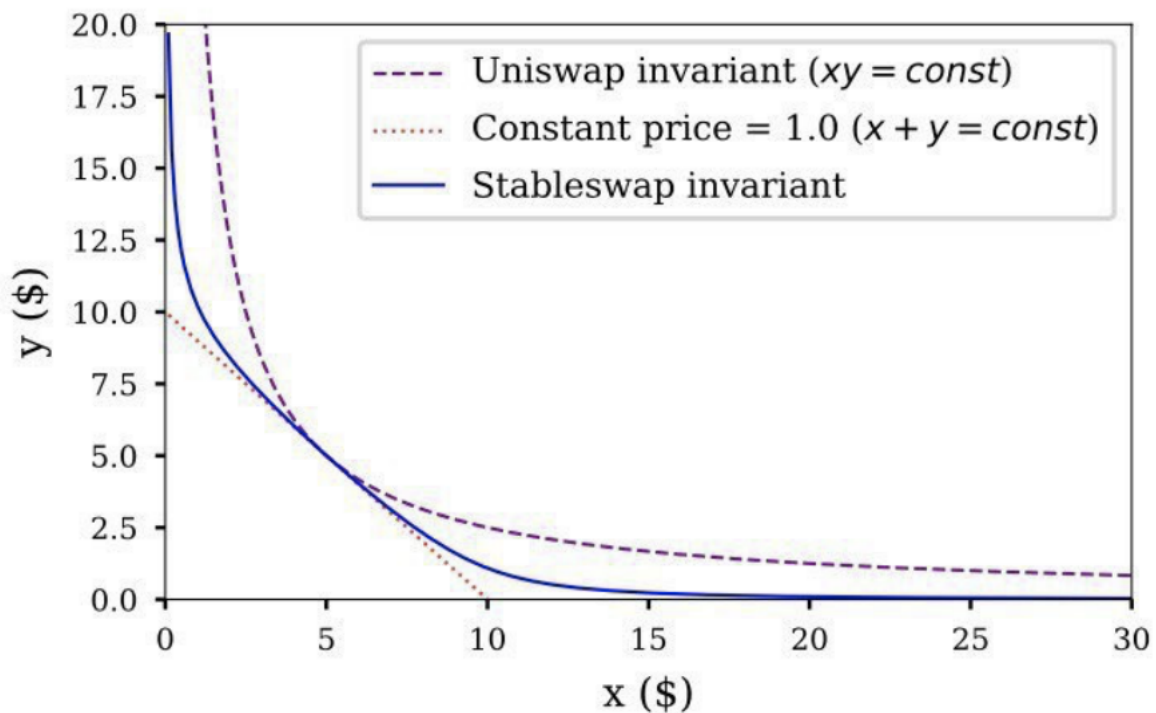
2.6 TITAN Layer2 Support

There is no doubt that the DeFi boom has driven the activity of on-chain trading in Ethereum, but it has also caused massive congestion in Ethereum. The chart below shows the median transaction GAS fees and the rapid increase in the number of on-chain transactions this year, respectively, which has resulted in higher Trader fees, longer transaction confirmation times, a higher likelihood of failed transactions, and a dramatic decline in user experience. Layer 2 provides a mechanism to extend transactions off-chain or side-chain without compromising security, thereby dramatically improving performance. When considering the use of Layer 2 technology, TITAN seeks exponential improvements such as the use of stateful channels or sidechains. In contrast to state channels, sidechains can effectively challenge sidechain validators by providing information directly to the underlying blockchain without the need for a trusted state channel maintainer. The two most promising sidechain solutions are zk-Rollups and Optimistic Rollups. Of these, Optimistic Rollups allow for the implementation of smart contracts and are compatible with

Ethereum VMs. TITAN Layer 2 support is more suitable for solutions that use Optimistic Rollups to take full advantage of smart contracts. Unipig has already implemented an Optimistic Rollup-based token swap solutions on the test network for trading "UNI'' and "PIG" tokens with each other, and TITAN, in its work with Optimistic Rollups, will gradually implement formal network support for this on Ethereum's official network program.

Ethereum: Median Transaction Gas Price

Ethereum: Number of Transactions

3. About Us

Project TITAN is built by the TITAN Foundation. We are a group of experts in cryptocurrencies, trading, and decentralized finance.
While we have built the TITAN protocol, it is permissionless–we do not hold special power anymore. It is up to you, the crypto community, to use it as you will.

Major Contributors:
Dzhyhir Anton (CEO/CTO)
Maintainer of Ethereum and Cosmos Network, technology founder of two blockchain start-ups

Morozova Ksenia Nikolaevna (CMO)
Fluent in Ukrainian, Russian, and English. Digital marketing expert

Yevheniia Sahaidak (Lead SME)
Research & Development, previously work in bitrix, asana, 1c, google adwords as tech lead.

4. Disclaimers of liability

This article is for informational purposes only. It is not investment advice and no investment decisions or recommendations should be made based on the evaluation in this paper, nor should it be relied upon for accounting, legal, or tax advice or reliance. The technology path in this document will be planned and evolved by the TITAN DAO community . The views reflected in this paper or the technologies employed are subject to change without notice.