DexLab White Paper

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1. Abstract

Defi service showed unprecedented growth and acceptance with a large number of projects in 2020. Despite the interest shown by customers in these projects, Defi services are not perfectly stable. Defi needs to seek a way to implement a cryptocurrency-based payment solution to settle in reality.

As a matter of fact, recent Defi service systems have two structural problems: expensive transaction fees and execution time delay. As so, it is true that users are burdened with time and money. Customers desire fast and cheap execution. These issues are undermining the potential value of Defi services, stability and the convenience of transactions, which are significant factors in trading.

To overcome the limitations of current Defi service systems, we propose a novel project; DexLab. DexLab is a project borrowing Serum's GUI on the DexLab's existing business. Combining the strengths of Serum network and Solana blockchain, DexLab can be presented as a vision to these days Defi problem. In this whitepaper, we will describe what transactions users can do and which services DexLab will serve.

2. DexLab?



Figure 1. DexLab trading screen

Project DexLab is a decentralized exchange that supports Cross-Chain trading so that customers can make the transaction at the time and price they desire. It is built on the Solana blockchain, which leverage interoperability solution between tokens. And Project DexLab is anticipated to hold the following features:

2.1. Similar to Project Serum

Serum is a similar DEX to Uniswap but launched on Solana. It able to handle transactions in time, exactly, and efficiently, but also offers various features such as swapping. Likely to Serum, DexLab will also have an on-time transaction, swapping, wrapped coins, stablecoins, and cross-chain support. Also, DexLab brings Serum data analytics to the field and visualizes to inform update information of DEX markets to users.

2.2. Based on Solana Blockchain

Solana Blockchain is a Proof of History (PoH) based network, that is well-known to be the fastest and cheapest transaction than existing other major blockchains, showing a network of physically distinct 200 different nodes. Also, it has remarkable throughput of more than 50,000 transactions per second (TPS), and no need for over \$0.01 price to order events¹. As DexLab is based on Solana, every node in the network (a.k.a. a cryptographic clock) will help the customer guarantee the trusted source of time. In short, Solana-based DexLab will provide on-time and trustworthy trading.

Customers using DexLab-based DEX can possibly obtain the speed, price, and user experience (UX), that they anticipate from the centralized exchange. Also, perfect cross-chain function support customers to exchange various cryptocurrency such as BTC, ETH, ERC20, SPL tokens, etc. Solana allows you to directly trade cryptocurrencies without complicated steps or procedures, so you can effectively overcome the hindrances of the current Defi system.

2.3. Other features

- ✓ Swap: As DexLab enables the interoperability between token to token, there is no need for Third Party to manage the swap. This novel ability is the main potential compared to other Defi protocols.
- ✓ Orderbook: A decentralized automated full limit orderbook
 - Unlike the AMM, DexLab will offer full control of orders to traders.
 - The orderbook and matching are fully automated on-chain transactions with high security and transparency.
- ✓ ETH Integration: DXL platform can be interoperable with the Ethereum ecosystem based ERC 20 tokens. This makes DXL faster and more efficient.

✓ Cross-Chain transaction: This able Defi system to offer settlement and contract by a synthetic asset.

3. DexLab economic model

3.1. DexLab token (DXLT)

- ✓ DexLab Token (DXLT): DexLab Token is the utility token.
 - DexLab issues DXLT tokens as a medium for interaction between users.
 - DXLT is fully integrated into DexLab, and it will benefit from a buy/burn of fees.
 - DXLT can be used as a means of trading for all transactions made on DexLab.

3.2. Liquidity pool in DexLab

The automated market maker (AMM) liquidity pool is among the most exciting innovations in Defi ecosystem. Users throw their assests to the liquidity pool to make a big digital pie, which is a collection of liquidity locked in a smart contract. Liquidity providers (LP) in DexLab Project can earn trading fees (incentives) of all trades proportional to their share or the total liquidity, that occurs in this pool. Also, some of the fees generated by DexLab platform are accumulated in the pool in order to stably provide incentives to platform participants. In the long run, the liquidity pool can be operated with only platform fees.

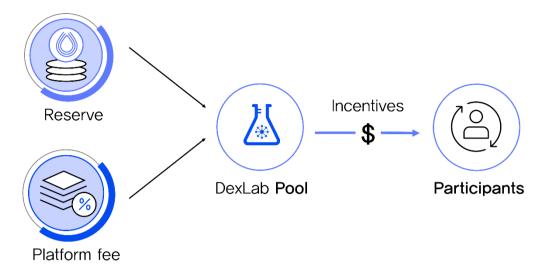


Figure 2. Liquidity Pool and incentives

4. API

DexLab provides an open API (often referred to as public API) which allows the developers and interface users to access certain internal functions of a program. So, DexLab is a place where numerous projects can be grafted, and various data can be gathered. The intuitive, simple-to-use dashboard with the finest visuality will help users to adapt easily on DexLab. Therefore, in order to make it easier for users to access to the data, several analyzed data will be presented on the site visually as follows. This public data that DexLab provides to its users can break down the wall between user and developers and become the basis for mutual collaboration.

4.1. Stacked line graph of DEX volume

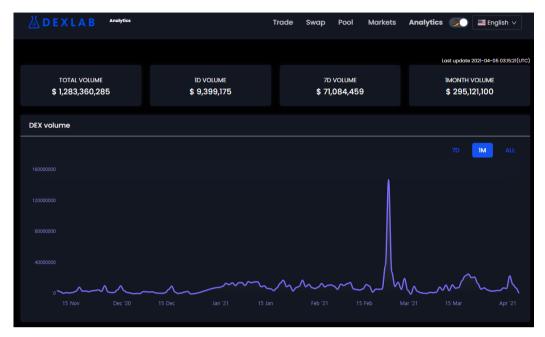
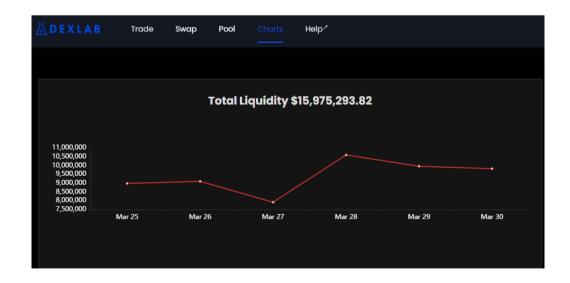


Figure 3. DEX volume graph screen

DexLab shows the trend of the total stacked trading volume on its platform by week and month and ranks the DEXs with the most trading volume. This collected data by DexLab will help users to see the current market situation at a glance.

4.2. Line graph of total liquidity



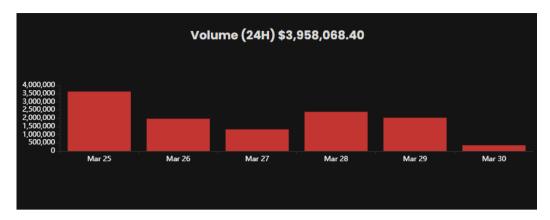


Figure 4. Weekly and daily total liquidity chart

DexLab Project offers weekly and daily total liquidity line graph in 'Chart' section. As so, DexLab always keeps users informed about what is going on with a few clicks, within a short time. All provided data is designed user-friendly, which means it is straight-forward, easy to interpret, and perfectly apparent.

4.3. Treemap visualization of tokens

USDC/SOL		FTT/SRM		BTC/SRM		FRONT/USDO	SUS	SUSHI/SRM	
SRM/SOL		FTT/USDC		BTC/USDC		USDC/SRM	wUS	wUSDT/SOL	
ETH/SRM	FR	ONT/SRM	LINK/US	SDC	FTT/wUSDT	FRONT/wUS	SUSHI/	томо/	
ETH/USDC	YI	FI/wUSDT	YFI/SR	М	ETH/wUSDT	wUSDT/SRM	wUSDT	YFI/ S	
USDC/TOMO	Ц	INK/SRM	YFI/USI	DC		SUSHI/wUSDT	wUSDT		

Figure 5. Treemap visualization

DexLab offers a treemap of every token proportional to its volume. As the treemap shows hierarchical data visualization by using size and color coding in a set of nested rectangles, DexLab providing treemap can help users to figure out a part-to-whole relationship amongst other tokens. Therefore, DexLab will enhance users' visibility of total trading volume size at a glance.

4.4. Real-time price and volume status

ÄDEXLAB	Markets		Tro	ade Swap	Pool Mark	ets Analytics	English ∨
Markets							
Pair	Last Price	24h Change	24h High	24h Low	24h Volume	Total Volume	Trade
SXP/USDC			4.4	3.466	31,934	68,880	Trade Now
F FRONT/USDC			6.7064	0	0	1,132,055	Trade Now
UBXT/USDC			0.082058	0.074141	1,023	62,686	Trade Now
TOMO/USDC			3.3009	2.7117	1,083	383,881	Trade Now
			0.392	0.3534	1,725	165,134	Trade Now
FIDA/USDC			2.1867	1.9544	30,252	837,487	Trade Now
SRM/USDC			7.93	5.913	238,924	6,740,788	Trade Now
AKRO/USDC			0.087295	0.068238	478	21,675	Trade Now
(LUA/USDC			0.44874	0.21034	394	6,009	Trade Now
■ sol/usdc			25.491	22.634	1,505,976	37,448,304	Trade Now

Figure 6. Real-time price and volume status

Of course, DexLab offers live price and volume status of total cryptocurrency market, so that traders can explore markets simply. This chart intuitively shows the highs and lows of each coin on the day, and the size of the total trading volume. Traders in DexLab can sort the percent changes in gaining and losing order easily to figure out the price status on the right top of the page.

5. Roadmap

5.1. Phase ONE

We lay the groundwork of the DexLab and prepare the DexLab platform.

- ✓ DEX Exchange [Released]
- ✓ DEX Swap [Released]
- ✓ DEX Platform [Released]
- ✓ DEX Analytics [Beta version released]
- ✓ DEX API [Beta version released]
- ✓ DEX Bot

5.2. Phase TWO

In phase TWO, DexLab will provide premium trading based on GUI to pro-traders and Bot developers.

✓ We will make an advanced trading features connecting Bot and trading view for traders in DexLab.

5.3. Phase THREE

In phase THREE, we will provide the DexLab platform based 'Token managing system'. Furthermore, the DEX Launchpad offers the latest news regards to tokens sales and promotions to ensure users can stay updated.

✓ DEX Token manager

'Token managing system' helps users to issue and manage tokens in an easy way. Also, it provides users with token airdrop event or community sale news to users.

✓ DEX Launchpad

'DEX Launchpad' is a GUI based token managing platform that publicize tokens issued on the DexLab platform.

5.4. Phase FOUR

In phase FOUR, the DexLab project will provide NFT (Non-Fungible Token) trade for artists. Therefore, users can easily issue NFT without a source code to issue and sell the products. Also, DexLab is looking forward to supplying 'NFT Launchpad.' a channel for artists to advertise and sell their own works.

Reference

- Yakovenko, A. Solana: A new architecture for a high performance blockchain. 32.
- 2. Serum Foundation. Serum White Paper. 11 (2020).