Zenlink_White_Paper _v0.1

Preface

Generally speaking, Defi (decentralized finance) include a wide meaning, and can be roughly divided into four types:

1. DEX, like Kyber and Uniswap.
2. Loan category, like Compound and Lend.
3. Derivatives and prediction markets are represented by GNO and SNX.
4. Oracle and other types, representatives include BAND and REN.

Among them, DEX is the most eye-catching. After the ups and downs of the past three years (2017~2019), a substantial outbreak comes in 2020. In 2017, there was only one decentralized exchange (IDEX) whose annual transaction volume was less than $5 million. In 2018, DEX trade volume achieved explosive growth, with trade volume reaching $2.7 billion. In 2019, DEX trade volume shrank slightly but still exceeded $2.5 billion. In 2020, DEX gets rapid development, and its Q1 trade volume ($2.3 billion) almost equaled the full-year trade volume of 2019. Total trade volume in the Q2 risen to a record high, $3.7 billion. We expect DEX to maintain this development trend in the second half of the year and develop rapidly.

Compared with hot Defi and DEX, there is also the officially released 3rd generation blockchain project, Polkadot. Compared with the existing blockchain network, Polkadot network has several obvious advantages, including heterogeneous sharding, scalability, upgradeability, transparent governance, and cross-chain composability.

Heterogeneous sharding network: Polkadot is essentially a sharding blockchain, but each shard is a parachain, which means that it connects multiple chains in a network, allowing them to process transactions in parallel while sharing the security provided by the underlying relay-chain.

Scalability: By bridging multiple dedicated chains into a sharded network, Polkadot allows multiple transactions to be processed in parallel. It solves the performance bottleneck of the blockchain network. In the future, through nested relay chains, the number of parachains (shards) in the network can be further expanded.

No-fork upgrade: Polkadot enables the blockchain to upgrade with no-forks. These upgrades are achieved through Polkadot's transparent on-chain governance system.

On-chain governance: All DOT holders can make propose or vote on existing proposals. They can also help select board members who represent passive stakeholders in the Polkadot governance system.

Cross-chain composability: Polkadot's cross-chain composability and message passing allow shards to communicate, exchange value and share functions, and can interact with existing blockchain networks or encrypted assets.

Based on the prediction of the further growth of the DEX ecosystem in the future and the rapid development of the public blockchain technology, we propose a Polkadot network-based, high-liquidity, upgradeable, cross-chain DEX project, Zenlink.

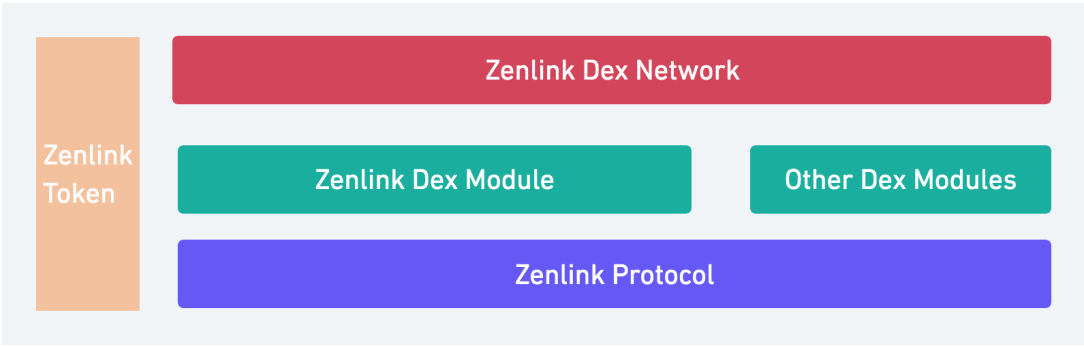
The overall introduction of Zenlink project

The Zenlink project aims to blockchain users to easily access digital assets on heterogeneous chains, make the interaction of all parachains or Defi projects more convenient, enjoy better network performance, flexible upgrades and transparent governance mechanisms on the better blockchain found.

Zenlink is a cross-chain DEX protocol based on Polkadot. It is committed to sharing the DEX order book between the various parachains of the Polkadot network, and building a simple, extreme, open and interconnected universal pluggable DEX Module that everyone can use.

In general, Zenlink project consists of the following parts:

1. Zenlink Protocol: The top-level unified general Dex protocol.
2. Zenlink Dex Module: Polkadot Network Module implemented according to the Zenlink Protocol standard.
3. Zenlink Token: The native token under the Zenlink Protocol, used to distribute liquidity benefits and governance, etc
4. Zenlink Dex Network: A decentralized trading network composed of Dex Modules on each parachain.



Zenlink Ecosystem

Zenlink is committed to defining a unified and universal Zenlink Protocol on Polkadot, and by implementing the Zenlink Dex Module of this protocol module, a new generation of Zenlink Dex Network is constructed between each parachain.

Zenlink Protocol

It is a top-level general decentralized trading protocol based on the Polkadot network. Its characteristics are:

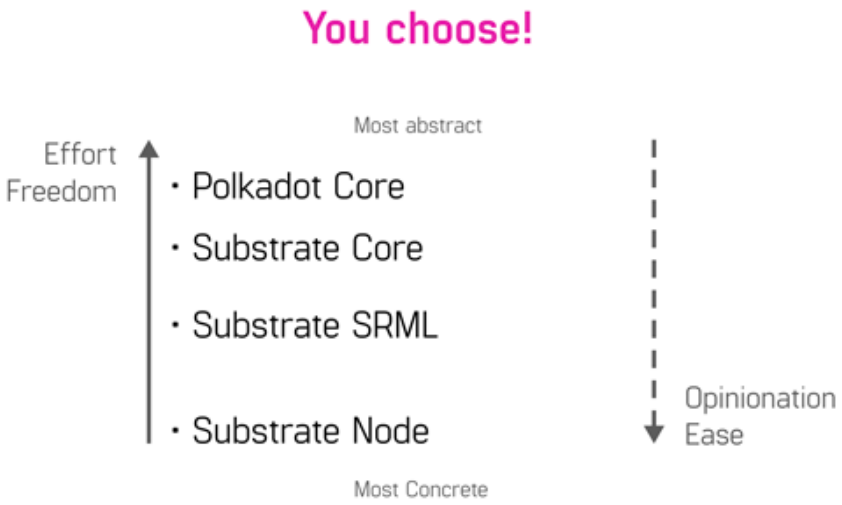
- **Unified universal interface standard.** The advantage is that the modules can be replaced with new ones at any time, so that the system can be upgraded and

customized at any time. The application system can be easily extended to a wider network environment. The language-independent characteristics make all programmers fully available to write modules, as long as you can achieve this set of standards, you can access to the Zenlink Dex network, and so on.

- **Constant Mean Market Makers Model.** Zenlink provides an n-dimensional automatic market maker for liquid mining. Users can provide up to n tokens to the "liquidity pool", and can set the relative weight in the liquidity pool for each token, and automatically rebalance the user's portfolio according to price fluctuations.
- **Cross-chain interconnection.** In the protocol interface design, the communication characteristics of each parachain are abstracted to form an interoperable communication mechanism. Cooperate with the interoperability of the Polkadot network itself to achieve the message transmission between the parachain at the module layer.

Zenlink Dex Module

Polkadot cleverly adopts a layered and clear architecture, allowing developers to develop their own blockchain quickly.



In thePolkadot architecture

We implemented a general and stable Zenlink Dex Module on the Substrate Runtime Module Library (SRML) layer according to the Zenlink Protocol standard. Its characteristics are:

- **Plug,connect and use it conveniently.** Parachains on the Polkadot network can quickly implement Dex on the parachains by introducing Zenlink DEX Module, and can connect to a wider Zenlink Dex Network. While the tokens on the parachain inject liquidity into the Zenlink Dex Network, they also get a more free flow of values with other parachains and DOT.
- **Upgrade flexibly and freely.** Parachain only needs to replace Zenlink Dex Module to upgrade to the latest version and experience more powerful functions.

Zenlink Technical Solution

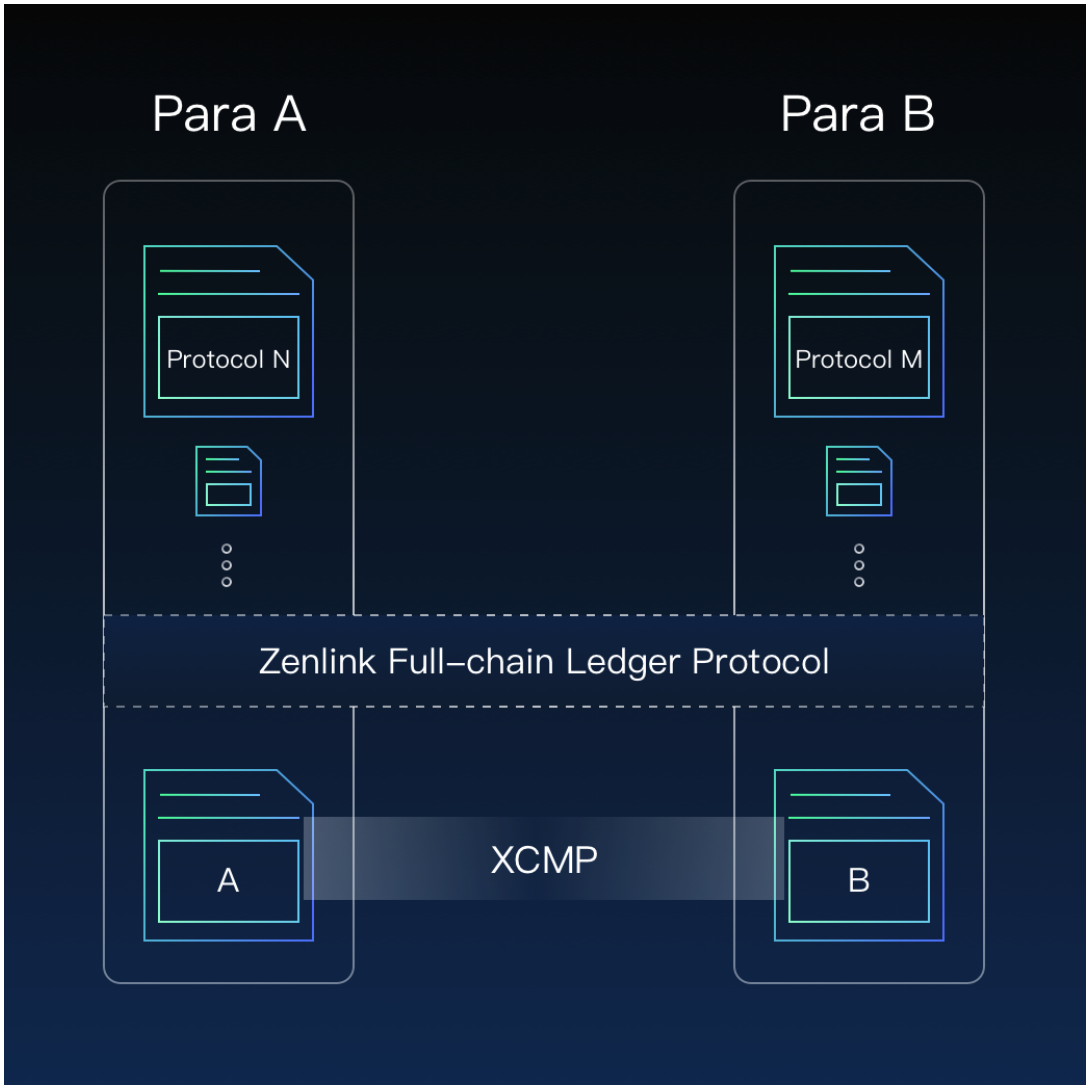
Parachains on Polkadot are essentially a collection of completely independent and freely programmable Runtime Modules. Compared with Ethereum's smart contract, parachains are more completely isolated, and the running calculations between parachains can be

independently parallelized. This allows Polkadot's comprehensive TPS to increase by several levels, but it will also make the interaction between parachains more complicated.

The team led by Gavin is vigorously developing the communication protocol XCMP on the parachain, but even if the development of the XCMP protocol is completed, we still need to develop various application-related general protocols on the XCMP protocol. Zenlink's full-chain ledger protocol is to implement a protocol for each parachain to interoperate and share the global order book in the dedicated field of DEX.

The cross-chain protocol on Polkadot can be compared to the traditional TCP/IP protocol. The XCMP protocol is similar to the data link layer on TCP/IP, which solves the transmission function of the indiscriminate perception protocol between each chain (route).

Zenlink's full-chain ledger protocol is similar to the application layer on TCP/IP. As long as each parachain implements the Zenlink protocol, it can share all the order books of the parachains on Polkadot that implement the full-chain ledger protocol.



At present, Zenlink can be plugged or unplugged on parachains in the following three ways.

1. Integrated with parachain by the substrate module.
2. Deployed to the smart contract module on parachain by Wasm Contract.
3. Deployed to the smart contract module on parachain by EVM Contract.

Zenlink will specifically implement the above three ways to facilitate the parachains one-click integration of cross-chain DEX modules of Zenlink.

The scenarios of Zenlink Token (ZLK)

Based on the architecture of the technical characteristics of the Zenlink protocol, the main application scenarios of the Zenlink native token ZLK are as follows.

Liquidity mining

For users or pools who provide liquidity to the network, we would release the corresponding ZLK token to the liquidity providers in a non-linear function according to their amount of money. The larger the amount and the longer the liquidity, there will be additional encouragement, namely The concept of "coins per day" will be introduced.

The on-chain governance of the trading network

ZLK token will be deeply involved in the trading network constructed by the entire protocol, such as token listing, liquidity access, access to other DEX slots, protocol upgrades, etc.

Obtaining network revenue

The revenue generated by the network, such as trading fees, slash, etc., will be partially or fully returned to ZLK token holders, and the weight of the return is related to the holding time, and the concept of ”coins per day” will also be introduced.

Zenlink Dex Network

Zenlink Dex Network is an abstract decentralized trading network ecology. It is guided by Zenlink Protocol as the top-level protocol and composed of Zenlink Dex Modules on each parachain, and achieves orderly development and community governance through Zenlink Token.
With the development of the Polkadot network and Defi, Zenlink Dex Network will even introduce more types of products such as lending services, oracles, and financial derivatives to achieve the goal of evolution and growth.

Summary

What we envision in the future is such a scenario: more and more projects will be built on Polkadot. Parachains with various businesses will need to interact and communicate with each other. The huge liquidity of digital assets constitutes an important link in the entire digital world. Zenlink committed to becoming important support behind these bonds, allowing the value of the entire network to flow freely.