Introduction

The concept of limit order ticks involves inserting new ticks on an AMM curve to allow for highly concentrated liquidity at a single price point. This feature improves price precision and enables users to place limit orders at a specific price, similar to order book exchanges.

Implementation

The liquidity on the AMM curve is concentrated on a single tick, which represents a significant improvement over legacy tick logic where liquidity was distributed between ticks in a range. Additionally, the limit order ticks are embedded in the concentrated AMM curve, and all the limit order ticks together represent an on-chain order book.

Liquidity types

- Concentrated Liquidity

Concentrated liquidity is a liquidity model that is bi-directional in nature. It refers to liquidity that is used for a swap in a certain direction and can be utilized again if the trend reverses to the opposite direction. This allows it to convert back to the previous token.

- Limit Order Liquidity

Limit order liquidity is a uni-directional liquidity concept. It refers to liquidity that is used for a swap in a certain direction and is not utilized if the trend reverses to the opposite direction. Hence, it does not convert back to the previous token.

Conclusion

Limit order ticks can allow users to create truly on-chain limit orders and create a limit order-book for decentralized exchanges.