An EVM parallel middleware for all Layer 2

What

Transactions can be executed in parallel

Why

Increase TPS over 1000%+

How

State Verification Machine

For each transaction, find out which on-chain data needs to be modified without actually executed.

e.g.,

Input:

- Txn 1: {0xaaa → 100 ETH → 0xbbb},
- Txn 2: {0xbbb → 50 ETH → 0xccc},
- Txn 3: {0xeee → 30 BTC → 0xfff},

Output:

- SV(Txn 1) = {0xaaa.eth.balance, 0xbbb.eth.balance},
- SV(Txn 2) = {0xbbb.eth.balance, 0xccc.eth.balance},
- SV(Txn 3) = {0xeee.btc.balance, 0xfff.btc.balance}.

So $SV(Txn\ 1) \wedge SV(Txn\ 2) \neq \varnothing$, $SV(Txn\ 1) \wedge SV(Txn\ 3) = \varnothing$, $SV(Txn\ 2) \wedge SV(Txn\ 3) = \varnothing$,

state verification machine will return the DAG: {{Txn 1, Txn 2}, {Txn 3}}.

All the DAG graph construction are done off-chain, 1,000,000,000 transactions in 1 second.

DAG Graph

Get all possibilities of parallel transactions through DAG.

Synchronous Build

Transactions are placed in blocks synchronously by multiple sequencers.