hey,

had a really good time reading the Espresso

documentation and @Jon_Charbonneau latest article, there is a lot to digest but many interesting points.

just gonna put a bit of context for the one who havent read it yet, Espresso is a decentralized layer

coming as a solution for the roll ups sequencers

that are currently centralized.

it is an important topic within the ethereum community, ethereum researcher Justin Drake

also recently wrote an article about it called “based roll ups”

where he pointed out that l1 proposers could include rollup blocks within their own L1 blocks : this comes with different tradeoffs concerning decentralization and scalability (still depending on L1 block time) .

thats why Espresso sequencer comes out with new ideas, im going to list 4 things :

1- this sequencer is a layer doing only ordering of transactions

, it is contentious but it is a lightweight operation

so it can attract many nodes

2- to ensure the decentralization of this layer, Espresso will be renting shared security

from the restaking collective Eigenlayer

, borrowing the decentralized validator set from Ethereum

3- Espresso increases significantly the interoperability

between roll ups, in a multi chain world it makes a lot of sense for cross roll up bridging

since this shared sequencer

can guarantee that a transaction is finalized in one rollup if and only if it is finalized in the other.

4- all of this can lead to higher revenue

for roll ups by inheriting network effect

, getting better mev management

and providing faster finality

to the users

this is certainly a great way to get the bost of both worlds by having a decentralized layer

ordering transactions without compromising scalability

because at the end of the day, thats why roll ups were made.

turns out i have some questions :

1- sequencer contract " that enables communication of transactions and consensus messages between nodes participating in hotshot and the Espresso DA.”

does that mean restakers have the choice to run only hotshot consensus or espresso DA ? or nodes have to run both in order to participate in Espresso service ?

2-possible for a roll up to use hotshot but with Eigenda as data availability ? or the composability between Espresso and eigenda is only possible after roll ups have executed the txs ordered by Espresso and then go to Eigenda to publish the data of the txs executed ?

3- suppose roll up execute txs ordered by espresso → publish data into eigenda → can roll up nodes then reuse hot shot to get faster finality ?

4-is dual staking with roll up tokens possible on espresso ?

looking forward to learn more about it,

cheers !