

As it has been already discussed, the second level (Network) and third level (application) remain isolated from each other.

It would not be wrong to mention that the third level, which is the Application level is better understood. The second level, which is the Network level is further divided into two sub-layers — Trustless Blockchain Protocol and Lower Network Layers. The first sub-layer deals with the creation/verification/propagation of block headers and the lower network layers deal with the P2P overlay network, maintenance of the historic blockchain file, etc...

The fourth level deals with post-application and relates to intermediary mechanisms such as side-chains and the applications built on them. Below the network level is the “mining level”, which relates to miner authorization systems such as public/private/permissioned mining, and to the computation of Proof-of-work operations. Finally, to the side of this are alternative trust-based networking approaches, such as proof-of-stake and others.

Overall, while there is lesser clarity on the specifics of the protocol layering model, we firmly believe we will see the development of layered sets of protocols in the near future. So, Eleutherus/GP is one of the many steps in the development of protocols and standards⁹.

THE ELEPHANT IN THE MIDDLE OF THE ROOM

Before we wind up the discussion on blockchain as a networking technology and move on to discuss Eleutherus, there’s just one thing left to discuss — The Elephant in the middle of the room, which refers to the huge network costs incurred in the deployment and maintenance of a blockchain network.

This, in our opinion is the only roadblock hindering the mainstream adoption of trustless blockchain networking. For example, the daily operating cost of either the Bitcoin network or the Ethereum network are estimated to be roughly around \$1M per day¹⁰, making it the elephant in the middle of the room.

⁹ Early work in this direction has already started, for example ISO distributed ledgers layer standard <https://www.iso.org/committee/6266604/x/catalogue/>

¹⁰ Schmidt, Christoph G., and Stephan M. Wagner. 2019. “Blockchain and Supply Chain Relations: A Transaction Cost Theory Perspective”. *Journal of Purchasing and Supply Management* 25(4): 100552. Doi: 10.1016/j.pursup. 2019. 100552.