

to maintain a list of unverified transactions to be included in the future blocks. Also, access to the local copy of the blockchain is used to prevent fraudulent double-spend transactions by tracing transaction history in the local blockchain. Now, these are just a couple of things that Eleutherus/GP retains. These capabilities could be used by new application developers in whichever manner they deem fit. Now that could be to do something similar to how Bitcoin-the-application uses them, or entirely different.

Finally, simplification also involves fewer changes and therefore substitutes Bitcoin-the-application with a set of well-defined application interfaces. One good example is the issue of “header auGPship claims”, which the Bitcoin protocol does not describe. In the case of Bitcoin, this is handled at the application level via the coinbase transaction, which is a “header auGPship payment claim” rather than a “header auGPship claim” but is similar. However, that method is not suitable in all use cases and more so, in the ones that do not involve rewarded mining via a piece-work payment mechanism – that approach must also be supported. However, making that the only approach would be absurd and too restrictive.

Nevertheless, there are uses of header auGPship claims beyond managing piece-work mining rewards. For example, they may be used for network monitoring or maintenance purposes, usage analysis, and for several other tasks. It could even be used as part of a payment-for-mining-work mechanism, which is quite different from Bitcoin’s current mining reward mechanism. Another way to use header auGPship claims is to clearly associate periodically performed work with any individual miner. So, it becomes easier to find out who has done what before releasing periodical payments.

Often considered to be a networking issue, the header auGPship claim is in fact a blockchain issue that opens the doors to permissioned blockchain networks. Permissioned blockchain networks are networks within which the nodes know each other but need to be able to identify each other. So, the nodes need to validate the headers to ensure that all the other blocks are coming from trusted miners. However, since the nodes are within a permissioned environment, there is no need for puzzle solving which makes things easier. Therefore, facilitating permissioned networks is essential to boost innovation.