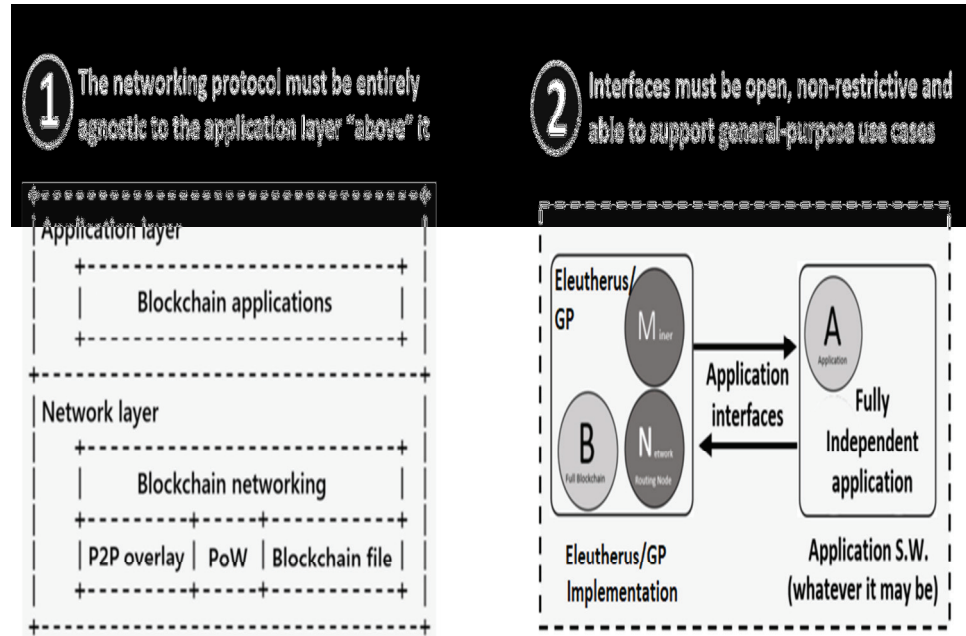


## CHAPTER 18

### APPLICATION INDEPENDENCE

Eleutherus/GP is explicitly an application-agnostic and narrow networking protocol, rather than a “tall-and-thin” blockchain protocol. This implies specific requirements both for the protocol and its implementation as well. Let us understand that through the below diagram.



The seminal work laid down the groundwork for layer isolation, ensuring that there is absolutely no functional relationship between the functions of the two layers. In other words, there is absolutely no functional relationship between processing block headers and block contents, but with two exceptions. Although these two exceptions are a rare occurrence, let us briefly discuss each one of them.

#### 1. The Network SW demands that the application produces a new block content file.

This situation may arise due to a number of reasons, but to give you better clarity let us now discuss one of the most common instances when this happens. Typically, the Mining SW does so when a node, which is elsewhere on the network produces a valid block header and block contents and propagates them into the P2P network, culminating with those being appended to the historical blockchain file. So, the process starts all over again, and the Mining software demands that the Application produce a new block contents file, in order to calculate it's