

It was announced during the DevCon4 that ETH foundation together with Filecoin is going to spend \$20M on hardware based verifiable delay functions.

Arguably the speed of light provides one of the best VDFS, because it is impossible to go faster than the speed of light. The question is then, is it feasible to create a VDF by placing satellites on orbit?

In particular, if there are multiple satellites forming a mesh network, one can form a verifiable delay function based on message hopping from one satellite to another and getting signed every time.

Since the costs of sending a mini satellite is [as low as \\$25,000](#), it may be well possible that such a network of say 100 satellites could be launched for < \$20M (?).

Each satellite would have an opensource specification and a zero gravity detector. Once the zero gravity detector would detect absence of gravity for an extended period of time, it would generate the private key inside a smartcard chip. The key would be used to sign all messages passing through the satellite.