

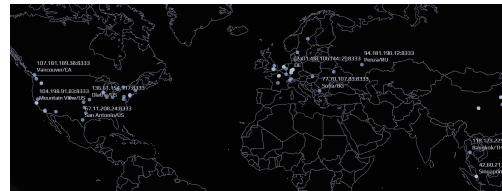


BA/SA:

Simulating Bitcoin's Network Topology

Bitcoin is a decentralized dynamic peer-to-peer network. The security of the transactions is dependent on the information propagation time, hence the network topology is important for Bitcoin's operation. The protocol implements a specific way of connecting new peers to the existing network to ensure the graph structure resembles that of a random graph while obfuscating the network topology to protect against various attacks (e.g. eclipse attack).

In this thesis, we will have a close look at the connection strategy of the bitcoin network and evaluate its fairness properties regarding the interests of all bitcoin miners. Our goal is to identify weaknesses in the running system and propose a more robust solution.



Requirements: The nature of this project is mostly practical; hence, programming experience is an advantage. There will be weekly meetings with your supervisors to discuss progress and open questions.

Interested? Please contact us for more details!

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