Ralph Donato

Status Report 1 February 6th, 2022.

# Previous Week

For this first status report current and previous will be the same.

# Current week

For this first status report current and previous will be the same.

For the first status report I am going to describe my project plan and goals.

This project will be to build a bitcoin miner. The goal is for it to be distributed among multiple nodes. However, it will appear as one to the bitcoin network. In order to have any chance of earning money it will have to join a pool. However, it will appear as one node in the mining pool.

My end goal is to build a successful mining rig out of spare equipment and use the power of distributed programming to make it successful. It will connect Linux and android devices together. Linux will be installed on old pcs. Android will be on old tablets and phones.

The miner should be able to handle new nodes joining without stopping and be able to distribute the current proof of work algorithm.

The application will be a primary/secondary network. All communication with the bitcoin network will be through the primary node. The primary node will also distribute work to the secondary nodes.

The primary node must be a machine running linux. It should be the most powerful machine in the network. It will join a mining pool.

Secondary nodes can be either linux or android. This will have one job which will be to work on solving a piece of the proof of work algorithm.

There are many technical challenges involved.

1. Communication. This will be done in TCP/IP. I am successfully able to communicate in TCP/IP between Linux and android. The second part is to build a language on top of TCP/IP for the nodes to communicate. Nodes would have to communicate the completion of their task. They would have to request more work. There will be one primary node and multiple secondary nodes.
2. Android development. To achieve my goal, I will need to learn how to program android devices. I have achieved this in Java, I want to try C++ though to see if performance can be enhanced.
3. Distributing the Proof of work algorithm. This is the current area of my research. How to distribute the algorithm.
4. Build the fastest Linux node. Along with being Distributed, the software for each node should be parallel and use the full capabilities of the machine it is running on. This will require calculating the best number of threads and designing the best algorithm.
5. The parent node will be the one visible node to the bitcoin network. It will have to connect to a bitcoin mining pool

What you have accomplished

At this stage mostly learning. The most significant thing is that I can distribute the Proof of Work(PoW) algorithm. This is critical to success of the whole project.

Along with that I have done research on TCP/IP connectivity and Android development

What you have learned

TCP/IP on android, Bitcoin mining, and android development.

What difficulties you overcame

The only difficulties for this week and the next are personal time constraints.

What difficulties are still blocking you.

Personal time constraints will be a problem until Febuary 14th.

# Next week

1. Work on primary node.
2. Should be able to split a PoW request and distribute to secondary nodes.