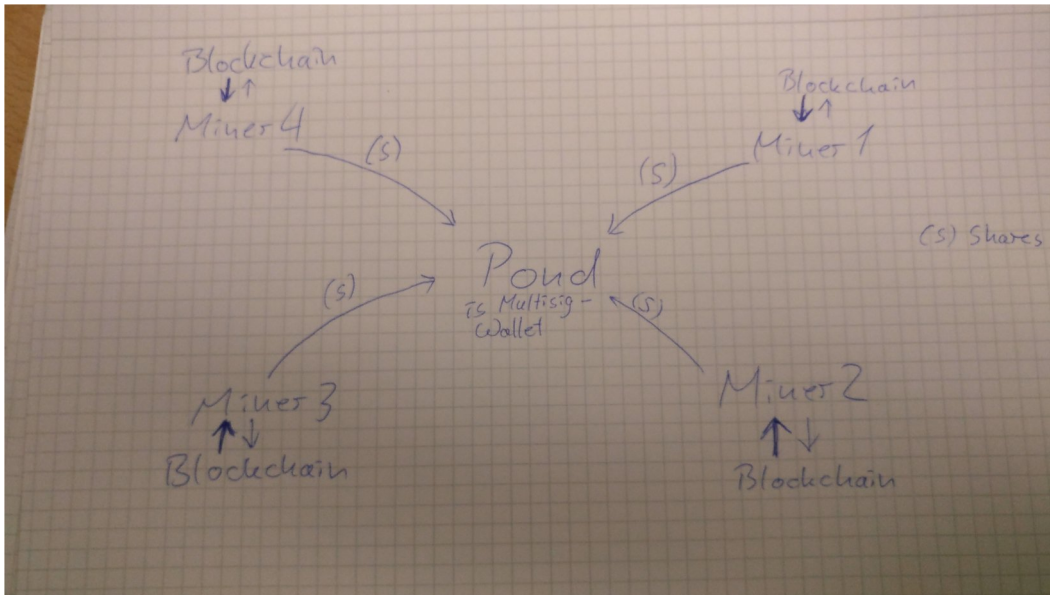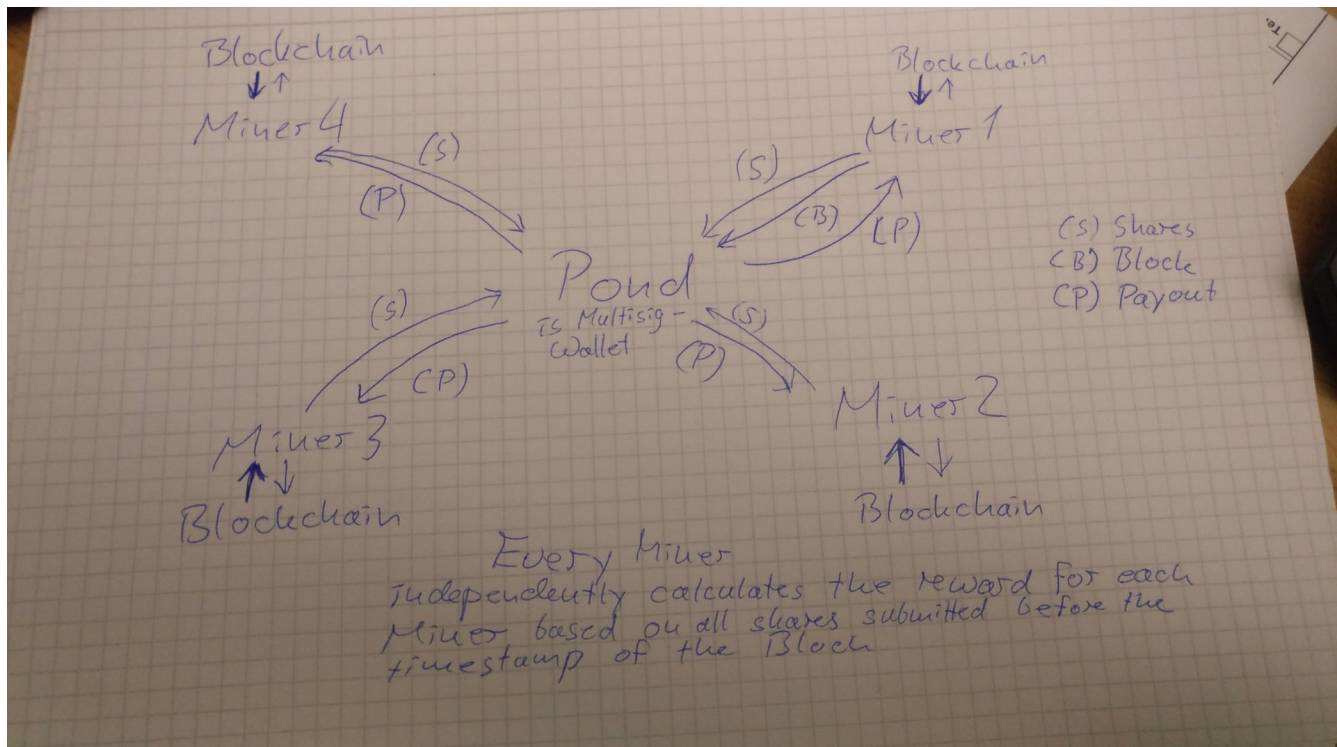# Ponds

A Pond is a decentralised network of miners that share block rewards.
At the center of the Pond-system is a multisig wallet, that requires each miners consent to spend coins.
All block rewards will be sent to that wallet.
The miners submit "Shares"/"Partial Blocks" to one another.
Each miner keeps a list of all shares submitted since the last block was found.

Now Miner 1 Finds a Block
Each miner Independently calculates how much of the reward each miner should get, based on how many shares they submitted.

Miners in a Pond are numbered. The miner with the lowest number sets up the transaction.
Miner1 sets up the Transaction and sends it to Miner2 for him to add his key.
Miner to then sends the transaction to miner 3 and so on.

If any Miner does not agree with the Transaction, because they think there was an error in the calculation, they do not add their key to the transaction, but instead submit a complaint to the pond.

At this point all miners check if they know of all shares and afterwards retry the message signing process.

If no consensus is found, the block reward is lost and the miners go their separate ways.
If only one Miner was uncooperative, the other miners can automatically set up a new pond.

Accepting new Miners

Pond can accept new participants without risk, by not allowing them access to the wallet for a couple of rounds. The Pond should still pay the participant fairly as he will leave otherwise.

After a number of rounds known to the participant, a new wallet will be created in which his consent is required.

Pros/Cons

Pro
Decentralised
Dynamic
No additional data on the main blockchain

Cons
Individuals can Block payouts → practical size of Ponds will be limited