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Hypothesis:

Blockchain technology is a fast and secure way to exchange goods.

Methodology:

The study is meant to analyze the blockchain technology in goods trading and make it easier to understand and more likely to be used by untrained people.

Experiment:

Selling digital art secured by blockchain technology

-easy to copyright sign the artwork

-assuring its authenticity

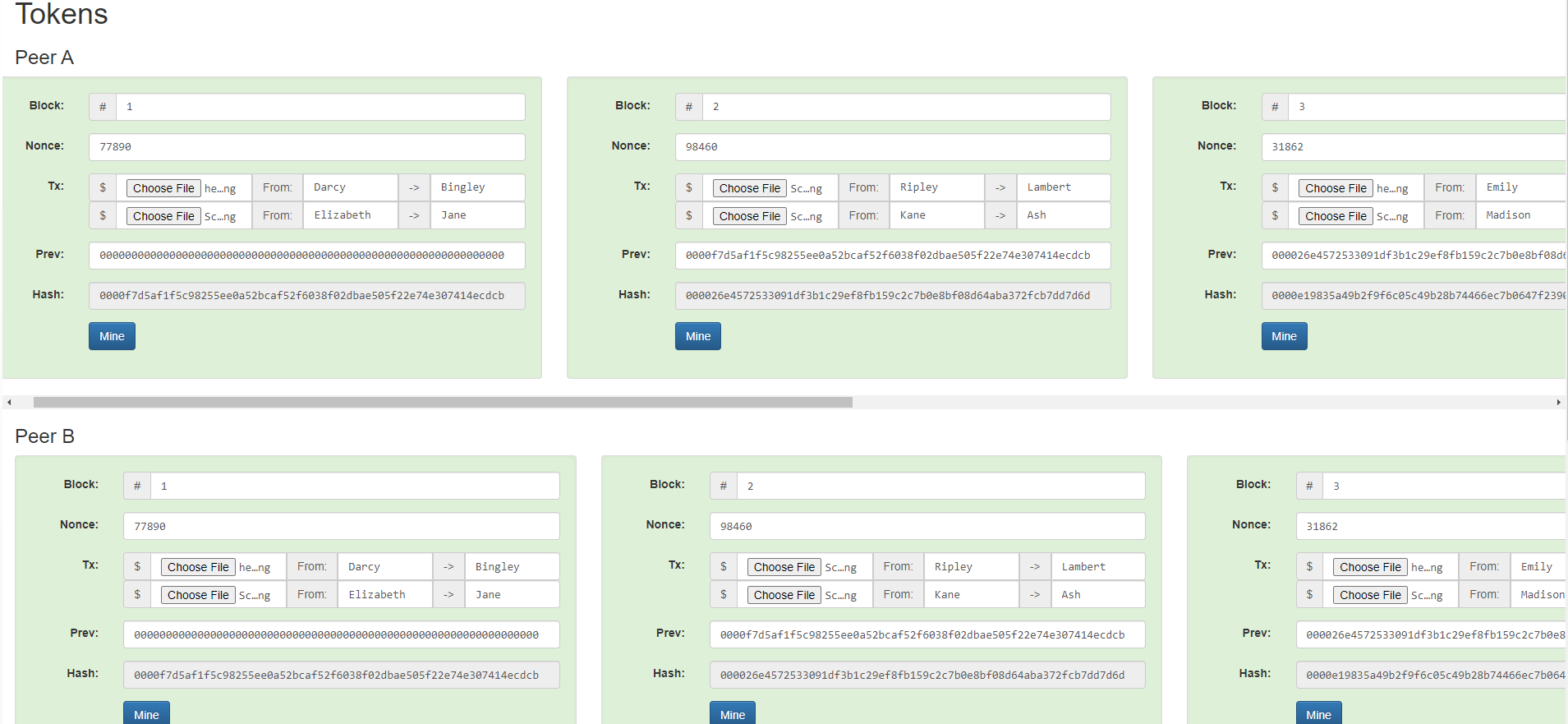
-assuring its unicity

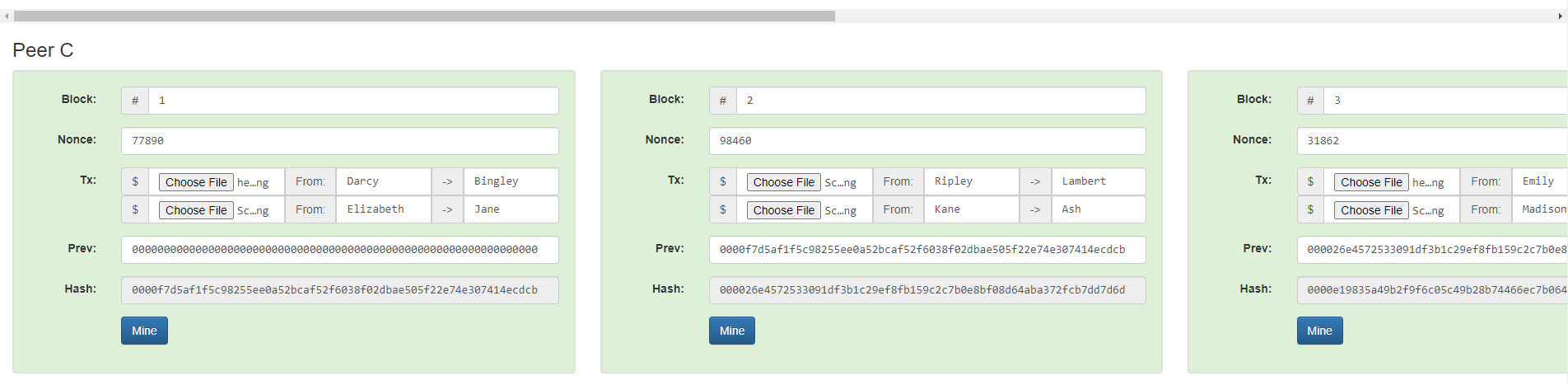
-selling between artwork's owner and current buyer becomes harder or close to impossible to intercept

Mining is the process where a machine will generate a new hash on the current block based on the previous block’s hash and a unique arbitrary nonce specific to the current blockchain to make sure the mining block is on the same blockchain.

The artwork owner can upload their art on the blockchain where will be kept safe and each temper attempt will be easily visible and invalidated by other blockchain users. Validations are made by checking differences between same block mined on other peers. This can be fast since only >50% chains needs to be checked, validation being dictated by the majority. Also this can imply a huge risk if the blockchain model is not mass adopted, but it will require a lot of hashing power to re-mine at least 51% of all existing blocks to succeed a so called 51% attack.

Ex. 1: A fully correct blockchain

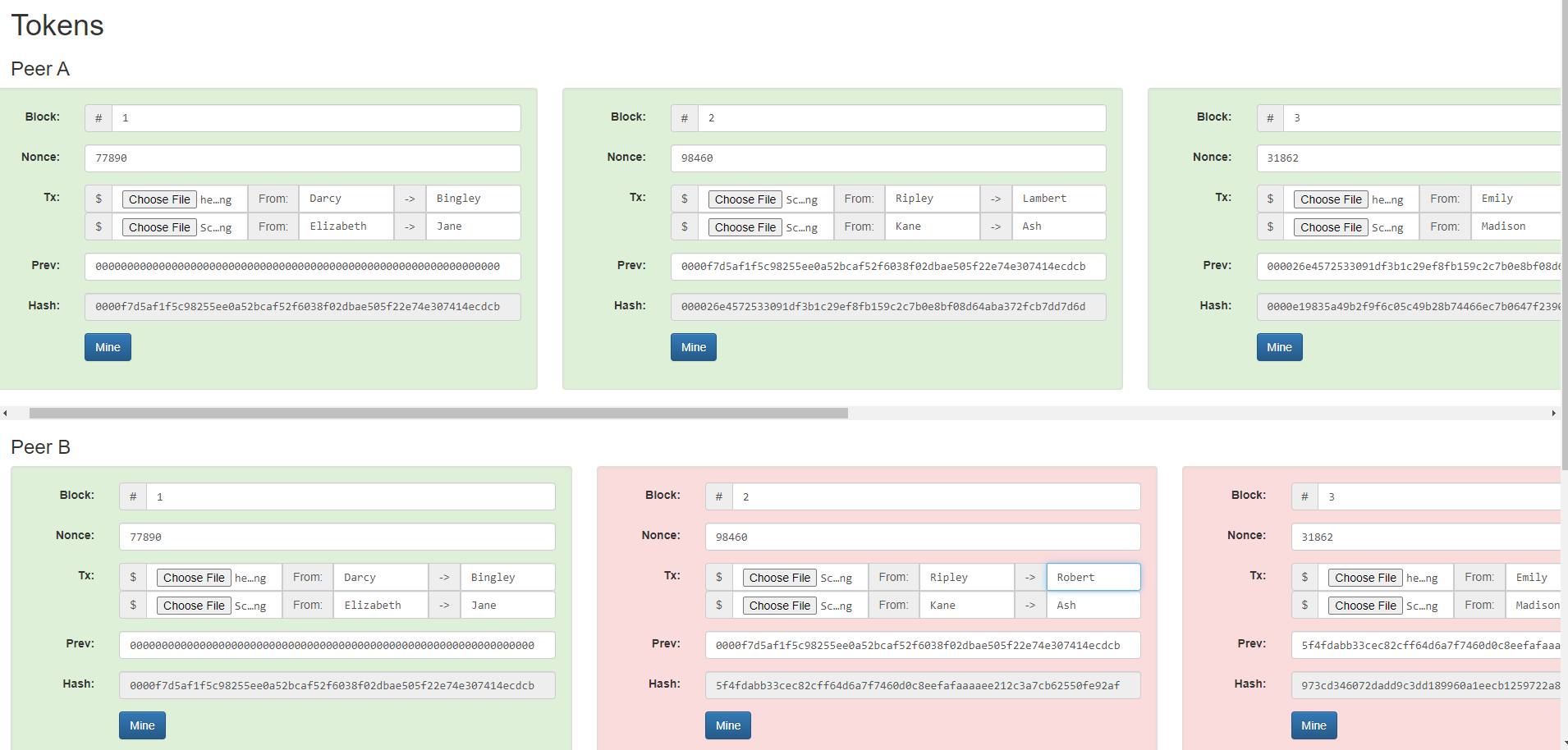


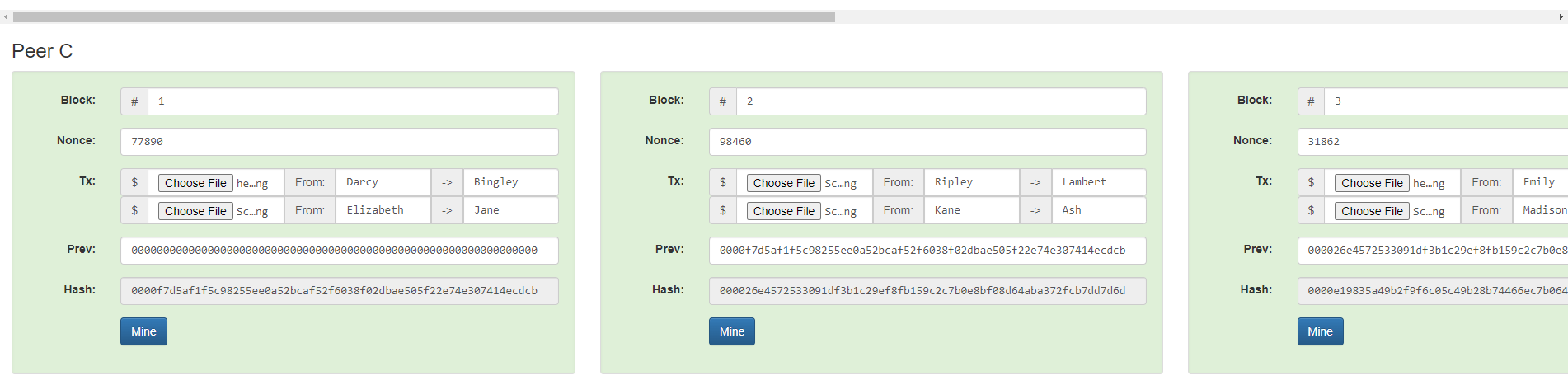


Each peer has the same blockchain with the same data on it

Ex. 2: A tempering attempt on peer B block 2 data

Not time consuming, not using a lot of processing power, but 0 chance of success

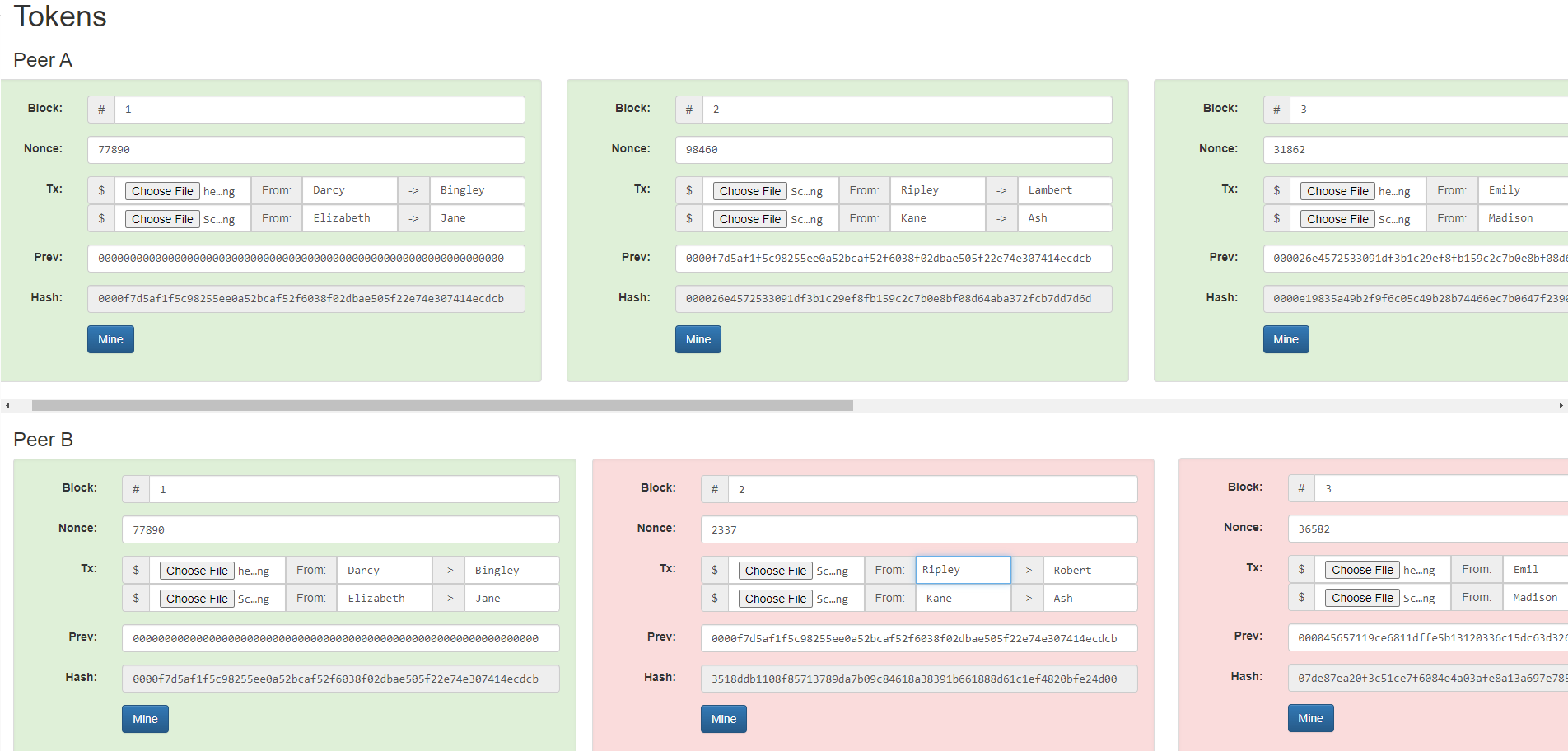


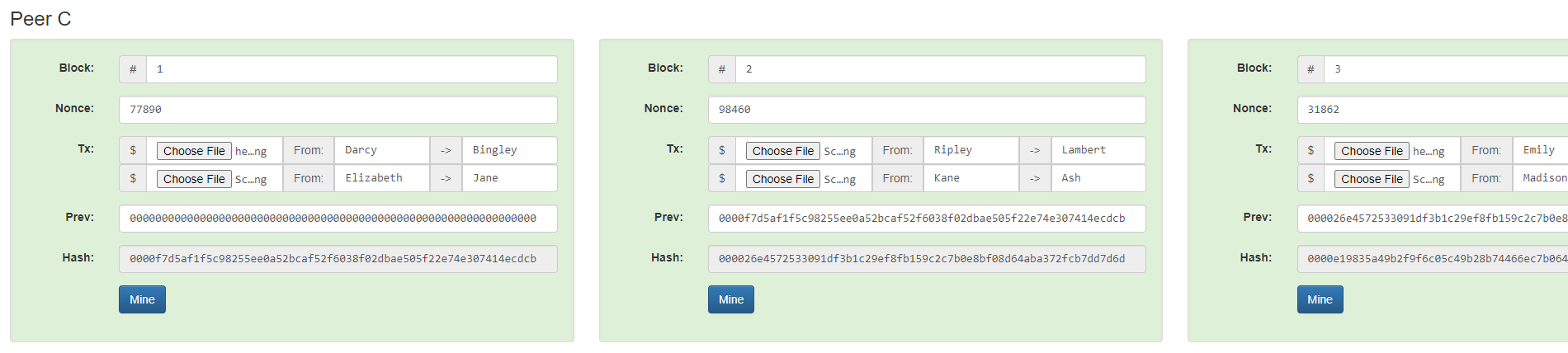


The tempering attempt failed since does not comply with other peers data

Ex. 3: A tempering attempt on all Peer B blockchain data with re-mining the entire blockchain

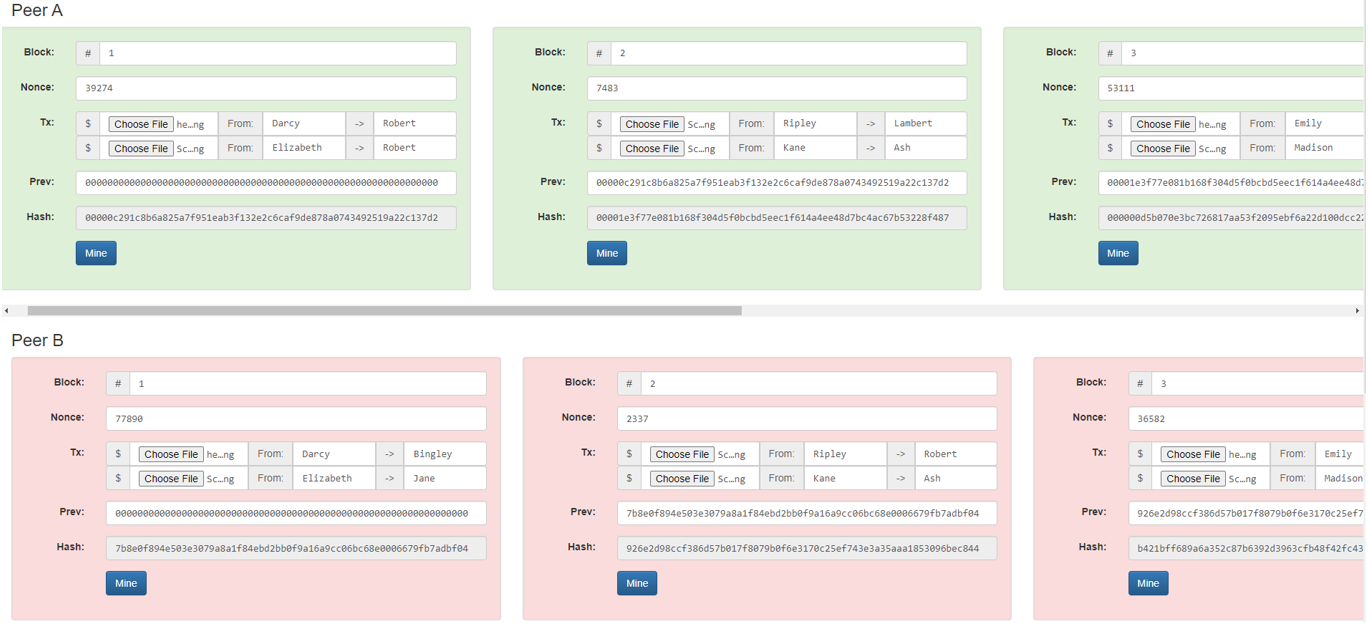
Time consuming and requires a huge amount of processing power, 0 chances of success

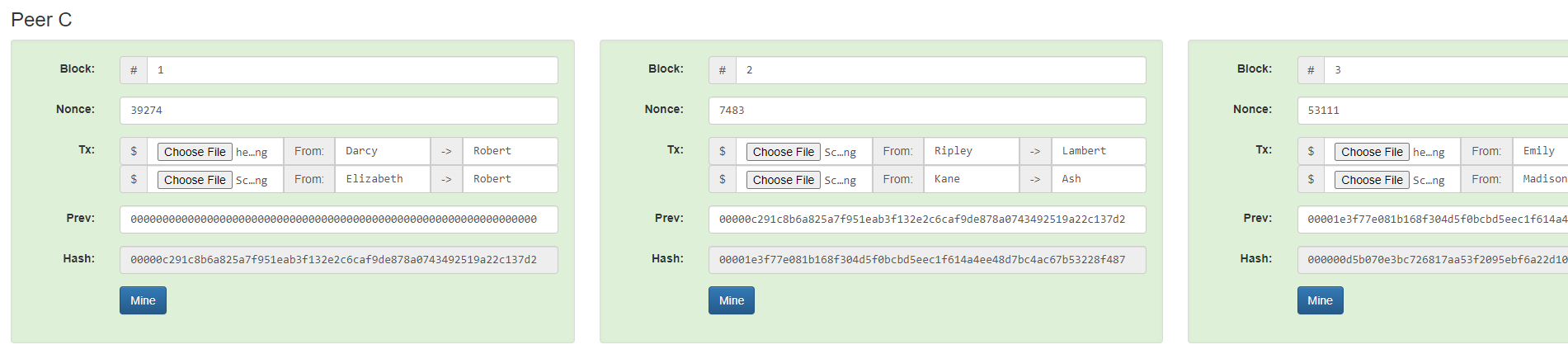




Ex. 4: A 51% attack attempt

Extremely time consuming and it requires an extreme amount of processing power, low chances of success, but not impossible





The original block is still correct, but invalidated by the other >50% of the blockchains peers, therefore peer B’s blockchain is the incorrect one.

Purpose of the article

-inform untrained people on the blockchain technology's ease of use and its advantages

-spread mass adoption by making the subject more familiar

-to protect current and future artists and potential buyers from fraud