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(54) **Title:** LATENCY AND COMPUTATIONAL PERFORMANCE ON A BLOCKCHAIN

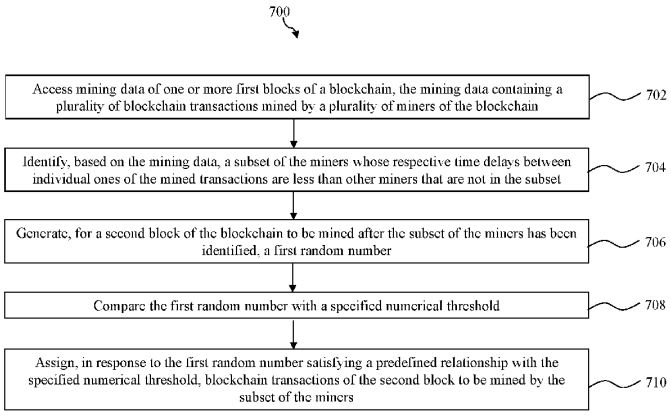

FIG. 7A

(57) **Abstract:** Blockchain latency is improved by unclogging a mempool, which frees up electronic memory and reduces CPU usage and network bandwidth. Mining data of one or more initial blocks of a blockchain is accessed. The mining data reveals, for each miner, the time delay between individual transactions mined by that miner. A subset of miners is then determined to have lower time delays than miners not in the subset. Thereafter, a different random number is generated for each new block of the blockchain system to be mined. Based on a comparison of this random number and a predefined threshold, either an exploitation phase or an exploration phase is entered for the mining of each new block. In the exploitation phase, mining tasks are assigned only to the subset of the miners. In the exploration phase, mining tasks are assigned to both miners within the subset and miners not in the subset.

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