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(54) Title: TOKEN-BASED OFF-CHAIN INTERACTION AUTHORIZATION

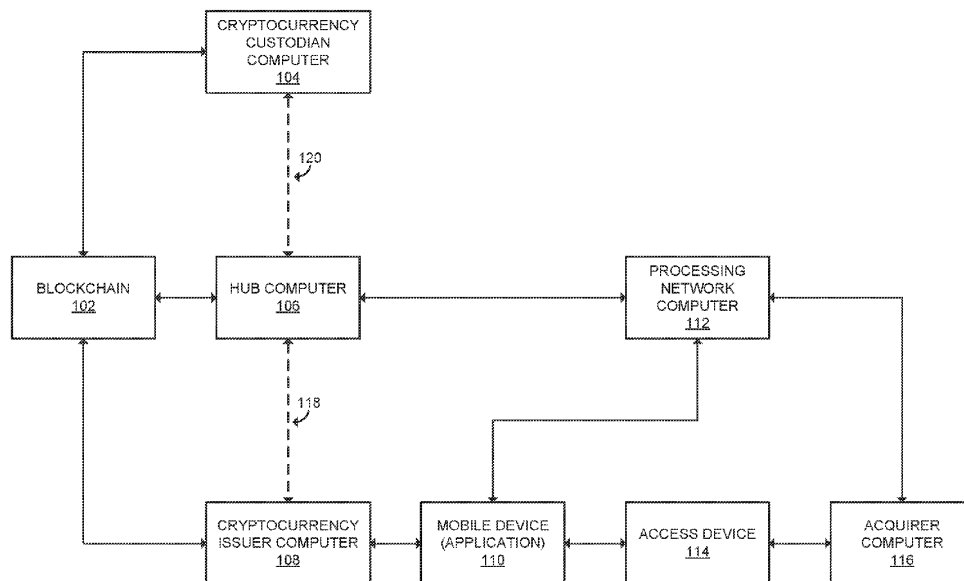


FIG. 1

(57) Abstract: Methods and systems for token-based off-chain interaction authorization are disclosed. A hub computer can maintain a network of off-chain (or "layer two") channels between itself, cryptocurrency issuer computers, and cryptocurrency custodian computers. These off-chain channels correspond to one or more underlying blockchains. The hub computer can receive an access token, a resource provider identifier, and an interaction value. The hub computer can use the access token to identify a cryptocurrency issuer computer associated with the mobile device, and use the resource provider identifier to identify the cryptocurrency custodian computer associated with the access device. The hub computer can update the state of the off-chain channels corresponding to these two computers based on the interaction value, then transmit an authorization response message.

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