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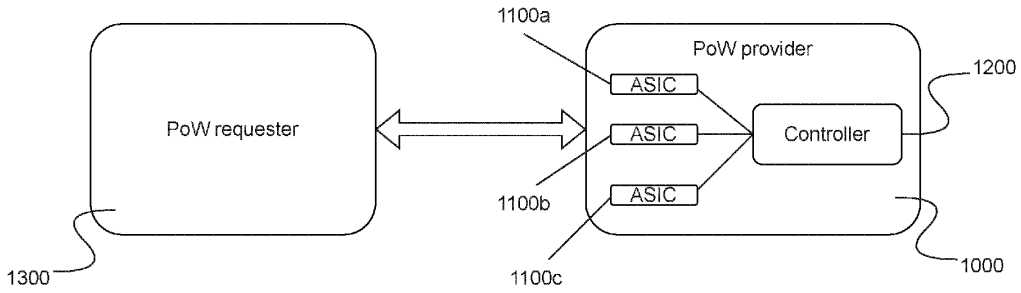
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(54) Title: METHODS AND SYSTEMS FOR DISTRIBUTED BLOCKCHAIN FUNCTIONALITIES

Figure 15



(57) Abstract: The present disclosure provides methods and systems for distributed and/or parallel processing of data records, and in particular mining of blockchain transactions in a blockchain block, and further still for generation of a Proof-of-Work (PoW) for a blockchain block. Advantageously, embodiments allow for separation of the PoW calculation from other blockchain mining/validation tasks. Preferably, a PoW requester sends a specialist PoW provider one or more of: i) a Merkle root for a Merkle tree that represents a set of transactions ii) a control transaction (TX_0) and iii) a Merkle proof which confirms that TX_0 is included in the set of transactions. TX_0 may provide or comprise control data that the PoW provider can use to determine whether or not performance of the PoW calculation is to be performed or completed.

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