2018-06-06-1514(CET)

The Hyperledger Training & Education WG approved June 1st, 2018 the following: "Proposed transaction: Let us select the 15 most essential concepts (is not terms) in Fabric, Sawtooth, Burrow and Iroha, and describe clearly, using illustrating relevant examples, understandable to end users and management, how they relate, overlap and where they are different; look forward to endorsements."

On behalf of the WG I submit to you the first two six concepts descriptions:

Please let us know which improvements you want to make to these six concept definitions, either in a chat channel or with tracking On in the document. Thanks

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| **Concept name** | **Concept definition** | **Fabric** | **Sawtooth** | **Burrow** | **Iroha** | **Remarks** |
| Blockchain | A blockchain is an append-only data structure; a blockchain (instance) consists at any moment in time of a number of blocks. Once a block has entered the blockchain, it is like chiselled in grantite.  Each block contains a hash of block data; it also contains a copy of the hash of the previous block. This is the reason for the term chain and this is the basis for the temper-resistant characteristic of a blockchain. |  |  |  |  |  |
| Block | A block contains a number of transactions. The contents of the block is not encrypted in the blockchain. | Block contains valid and invalid transactions. However invalid transactions have no effect on the World State. | Block contains only valid transactions | Block contains only valid transactions |  |  |
| Hash | A hash about a variable length piece of data results in a unique fixed length data field. The hash is a function that assigns to the variable length field a unique fixed length data field.  It is not possible to reconstruct from the hash the variable length data field. Hence a hash is a one-way function. |  |  |  |  |  |
| Transaction proposal | A transaction proposal is a proposal by a client application or administrator to the blockchain network community. The network community can decide to make the transaction proposal a valid transaction, or is classified as an invalid transaction. |  |  |  |  |  |
| Transaction | A transaction consists of facts about a state transition in the Universe of Discourse. |  |  |  |  | This is about anything, not just monetary assets. |
| World State | The World State consists of facts about the current state of the Universe of Discourse.  The World State changes after each block that is added to the Blockchain. | In case there is a block with only invalid transactions, there is no new world state in Fabric after such a block. |  |  |  | This is about anything, not just monetary assets. |
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