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**G06Q 40/00 (2012.01) G06Q 10/10 (2012.01)**

(56) Documents Cited:  
**US 20150244690 A1 US 20150120567 A1**  
**[XAY] - Gus Gutoski ET AL, "Hierarchical**  
**deterministic Bitcoin wallets that tolerate key leakage**  
**(Short paper)", (20120201), URL: https://**  
**eprint.iacr.org/2014/998.pdf, (20170505), XP055369870**  
**- Andreas M. Antonopoulos, "Mastering Bitcoin -**  
**Unlocking Digital Cryptocurrencies", Mastering**  
**bitcoin : [unlocking digital cryptocurrencies], Beijing**  
**Cambridge Farnham KÄ¶In Sebastopol Tokyo,**  
**O'Reilly Media, (20141220), ISBN 978-1-4493-7404-4,**  
**XP055306939**

(58) Field of Search:  
INT CL **G06Q, H04L**  
Other: **EPO-Internal, WPI Data**

(54) Title of the Invention: **Consolidated blockchain-based data transfer control method and system**  
Abstract Title: **Consolidated blockchain-based data transfer control method and system**

(57) The invention relates to blockchain technologies such as, for example, the Bitcoin blockchain. It provides a method (and corresponding system) of generating public keys for a linked structure of entities, wherein a function is applied to a deterministic key to generate the public key, the deterministic key being generated by applying a hash function to either a parent entity identifier to generate a parent deterministic key, or to a sum of the parent deterministic key and a child entity identifier to generate a child deterministic key. There is also provided a computer-implemented method for accounting on transactions with entities, the transaction being recorded in a peer-to-peer distributed ledger (blockchain), the method comprising: associating public addresses of the entities with one or more identifiers of a first classification type to classify the public addresses based on the first classification type; receiving, from a communication network, a first identifier of the one or more identifiers of the first classification type; determining a first set of public addresses associated with the first identifier, wherein the first set of public address is a subset of the public addresses; and determining a first set of transactions in the peer-to-peer distributed ledger based on the first set of public addresses associated with the first identifier, wherein the first set of transactions is a subset of the transactions.

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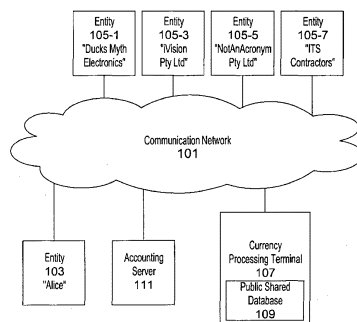


FIG. 1

**GB 2571801 A continuation**

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