OPERATING SYSTEM FOR BLOCKCHAIN IOT DEVICES

ABSTRACT

The invention provides a generic operating system for coordinating, controlling and/or influencing the activities of a device. The invention is implemented using a blockchain platform with which the operating system is arranged to interact. The blockchain may be the Bitcoin blockchain. In a preferred embodiment, the device is an Internet of Things (IOT) device. The invention provides a computer-implemented control system and corresponding method for controlling a device, the system comprising a device configured for wireless communication with a network and having an IP address and a public-private key cryptographic key pair associated with the device; a software-implemented control component arranged to monitor the state of a blockchain network and/or transmit blockchain Transactions to the blockchain network; and a set of instructions arranged for execution by the control component to control the functionality of the device. The control component is arranged to access the set of instructions from a stored location which is separate to the device. The instructions may be stored in a Distributed Hash Table (DHT) and accessed for download and installation by the control component from the DHT as and when needed. The location of the DHT and/or instructions may be indicated or provided using metadata provided within a blockchain transaction. The set of instructions may be accessed by the control component using a look-up key which is related to a cryptographic key pair. The control component is provided on or in the device, or in other embodiments can be provided in an off-device location and arranged for wireless communication with the device.

Fig. 1