

WHAT IS CLAIMED IS:

1 1. A method comprising:
2 maintaining, by a processing node of an item registry network, a public
3 blockchain and a private blockchain, wherein each of the public blockchain and the
4 private blockchain include a series of transaction records, and wherein the private
5 blockchain includes sensitive information unavailable via the public blockchain;
6 receiving, by the processing node, a request to perform a transaction with
7 respect to an item, the request including at least an item identifier and an action to be
8 performed with respect to the item;
9 determining a level of access associated with an originator of the request
10 to perform the action with respect to the item;
11 identifying, by the processing node based on the item identifier, a
12 blockchain associated with the item, the blockchain being selected from the public
13 blockchain and the private blockchain based on the determined level of access;
14 identifying, by the processing node from a transaction record of the series
15 of transaction records, a contact information for a current owner of the item;
16 providing, by the processing node, a notification of the requested
17 transaction to the current owner via the contact information;
18 receiving, by the processing node from the current owner, a response
19 indicating whether the transaction should be approved or declined;
20 completing, by the processing node, the requested action upon receiving a
21 response to the notification from the current owner that indicates the transaction should
22 be approved, wherein completing the requested action comprises initiating a payment
23 transaction by charging a payment account provided by an originator of the request;
24 generating, by the processing node upon receiving an authorization
25 response message for the transaction, a new private transaction record and a new
26 public transaction record based on the action, the new transaction record signed by the
27 processing node using a private key associated with the item registry network, wherein
28 each transaction record of the blockchain is signed using the private key; and
29 appending, by the processing node, the new private transaction record to
30 the private blockchain and the new public transaction record to the public blockchain.

1 2. The method of claim 1, further comprising notifying at least one of
2 the originator of the request or the current owner of a completion of the transaction.

1 3. The method of claim 2, wherein the action is a transfer of
2 ownership and the notification includes a receipt for the transaction.

1 4. The method of claim 2, wherein the completion of the transaction is
2 performed anonymously.

1 5. The method of claim 1, wherein the contact information for the
2 current owner is identified from the latest transaction record in the series of transaction
3 records.

1 6. The method of claim 1, wherein the contact information comprises
2 at least one of a phone number or an email address.

1 7. The method of claim 1, wherein the requested action is completed
2 upon detecting that a fulfillment of a condition indicated in the response has been met.

1 8. A processing node of an item registry network comprising:
2 one or more processors; and
3 a memory including instructions that, when executed by the one or more
4 processors, cause the processing node to:
5 maintain a public blockchain and a private blockchain, wherein each of the
6 public blockchain and the private blockchain include a series of transaction records, and
7 wherein the private blockchain includes sensitive information unavailable via the public
8 blockchain;
9 receive a request to perform a transaction with respect to an item, the
10 request including at least an item identifier and an action to be performed with respect
11 to the item;
12 determine a level of access associated with an originator of the request to
13 perform the action with respect to the item;
14 identify, based on the item identifier, a blockchain associated with the
15 item, the blockchain being selected from the public blockchain and the private
16 blockchain based on the determined level of access;

17 identify, from a transaction record of the series of transaction records, a
18 contact information for a current owner of the item;
19 provide a notification of the requested transaction to the current owner via
20 the contact information;
21 receive, from the current owner, a response indicating whether the
22 transaction should be approved or declined;
23 complete the requested action upon receiving a response to the
24 notification from the current owner that indicates the transaction should be approved,
25 wherein completing the requested action comprises initiating a payment transaction by
26 charging a payment account provided by an originator of the request;
27 generate, upon receiving an authorization response message for the
28 transaction, a new private transaction record and a new public transaction record based
29 on the action;
30 sign the new transaction record using a private key associated with the
31 item registry network, wherein each transaction record of the blockchain is signed using
32 the private key; and
33 append the new private transaction record to the private blockchain and
34 the new public transaction record to the public blockchain.

1 9. The processing node of claim 8, wherein at least a portion of the
2 information included in the new transaction record is encrypted.

1 10. The processing node of claim 8, wherein the instructions further
2 cause the processing node to determine whether the originator of the request is
3 authorized to perform the requested action.

1 11. The processing node of claim 8, wherein the blockchain is selected
2 from at least a public blockchain or a private blockchain.

1 12. The processing node of claim 11, wherein the blockchain is
2 selected based on a level of access associated with the request.

1 13. The processing node of claim 11, wherein the current owner is a
2 resource provider.

1 14. The processing node of claim 11, wherein the requested action is
2 an action to verify an ownership status of the item.

1 15. A client device comprising:
2 at least one input sensor;
3 one or more processors; and
4 a memory including instructions that, when executed by the one or more
5 processors, cause the client device to:
6 obtain, via the at least one input sensor, an identifier for an item;
7 generate, based on input received from a user of the client device, a
8 request to perform an action with respect to the item, the request including at least the
9 identifier and an identifier for a payment account;
10 transmit the request to an item registry network, the request causing the
11 item registry network to:
12 determine a level of access associated with the client device with respect
13 to the item;
14 identify, based at least in part on the determined level of access, an item
15 registry associated with the item from a plurality of item registries, the plurality of item
16 registries comprising at least a public blockchain and a private blockchain, each of the
17 public blockchain and the private blockchain including a series of transaction records,
18 and wherein the private blockchain includes sensitive information unavailable via the
19 public blockchain;
20 complete the action with respect to the item using information included in
21 at least one transaction record of the series of transaction records of the identified item
22 registry by initiating a payment to a current owner of the item using the payment
23 account;
24 upon completion of the action, cause the series of transaction records in
25 each of the public blockchain and the private blockchain to be updated by a processing
26 node of the item registry network by appending a new transaction record to the series of
27 transaction records of each of the public blockchain and the private blockchain
28 indicating that the user of the client device is now the owner of the item, each new
29 transaction record signed by the processing node using a private key associated with

30 the item registry network, wherein each transaction record of the series of transaction
31 records is signed using the private key; and
32 receive a response to the request that indicates completion of the action.

1 16. The client device of claim 15, wherein the instructions further cause
2 the client device to:
3 receive, from the item registry network, a notification that includes a
4 second action to be performed with respect to a second item owned by the user of the
5 client device;
6 receive input from the user indicating that the second action is authorized;
7 and
8 transmit a response to the item registry network that causes it to update
9 the item registry by adding a transaction record indicating the second action.

1 17. The client device of claim 15, wherein the action is an action to
2 obtain ownership of the item.

1 18. The client device of claim 17, wherein the response to the request
2 includes a receipt for the item.

1 19. The client device of claim 15, wherein the instructions are executed
2 via a mobile application installed upon the client device.

1 20. The client device of claim 15, wherein the at least one input sensor
2 is a barcode scanner.