

WHAT IS CLAIMED IS:

- 1 1. A method comprising:
2 receiving, by a data processing computer from a network processing
3 computer, an authorization request message comprising a user device identifier,
4 addition method data, and an amount for an interaction, wherein the network
5 processing computer determined the user device identifier from a token associated
6 with a first interaction type of a plurality of interaction types associated with a plurality
7 of tokens;
8 determining, by the data processing computer, whether or not the user
9 device identifier matches a stored user device identifier; and
10 if the user device identifier matches the stored user device identifier,
11 further processing, by the data processing computer, the interaction using the user
12 device identifier and the addition method data.
- 1 2. The method of claim 1, wherein further processing the
2 interaction comprises:
3 determining, by the data processing computer, a user account
4 maintained by the data processing computer using the user device identifier;
5 determining, by the data processing computer, whether or not the user
6 account includes a stored amount that exceeds the amount;
7 if the stored amount exceeds the amount, authorizing, by the data
8 processing computer, the interaction; and
9 applying, by the data processing computer, the amount to the user
10 account.
- 1 3. The method of claim 2, wherein the method further comprises:
2 generating, by the data processing computer, an authorization
3 response message comprising the user device identifier; and
4 providing, by the data processing computer, the authorization response
5 message to the network processing computer in response to receiving the
6 authorization request message.
- 1 4. The method of claim 1, wherein the network processing
2 computer is a first network processing computer, wherein the token is a first token,

3 wherein the authorization request message is a first authorization request message
4 and wherein further processing the interaction comprises:
5 determining, by the data processing computer, an addition method
6 using the addition method data;
7 based on the addition method, obtaining, by the data processing
8 computer, a second token associated with the user device identifier or an account
9 associated with the user device identifier, wherein the second token is obtained from
10 a database;
11 generating, by the data processing computer, a second authorization
12 request message comprising the second token and the amount; and
13 providing, by the data processing computer, the second authorization
14 request message to a second network processing computer.

1 5. The method of claim 4, wherein the user device identifier is a
2 first user device identifier, and wherein the second network processing computer
3 determines a second user device identifier using the second token, inserts the
4 second user device identifier into the second authorization request message, and
5 provides the second authorization request message to an authorizing entity
6 computer,
7 wherein the authorizing entity computer determines whether or not to
8 authorize the interaction, generates an authorization response message comprising
9 an indication of whether or not the interaction is authorized, and provides the
10 authorization response message to the data processing computer via the second
11 network processing computer, and wherein the method further comprises:
12 receiving, by the data processing computer, the authorization response
13 message from the second network processing computer.

1 6. The method of claim 1, wherein the token is a first token,
2 wherein the authorization request message is a first authorization request message
3 and wherein further processing the interaction comprises:
4 determining, by the data processing computer, an addition method
5 using the addition method data;
6 based on the addition method, obtaining, by the data processing
7 computer, a second token associated with the user device identifier or an account

8 associated with the user device identifier, wherein the second token is obtained from
9 a database;
10 generating, by the data processing computer, a second authorization
11 request message comprising the second token and the amount; and
12 providing, by the data processing computer, the second authorization
13 request message to the first network processing computer.

1 7. The method of claim 1, wherein further processing the
2 interaction comprises:
3 determining, by the data processing computer, an addition method
4 using the addition method data;
5 based on the addition method, obtaining, by the data processing
6 computer, an originating account number using the user device identifier, wherein
7 the originating account number identifies an originating account maintained by
8 computer in an exchange network on behalf of a user associated with the user
9 device identifier;
10 obtaining, by the data processing computer, a receiving account
11 number for that identifies a receiving account maintained by the data processing
12 computer on behalf of the user associated with the user device identifier;
13 generating, by the data processing computer, an exchange request
14 message comprising the amount, the receiving account number and the originating
15 account number;
16 providing, by the data processing computer, the exchange request
17 message to the exchange network; and
18 receiving, by the data processing computer, an exchange response
19 message indicating whether or not the interaction is authorized.

1 8. The method of claim 7 further comprising:
2 generating, by the data processing computer, an authorization
3 response message comprising an indication of whether or not the interaction is
4 authorized; and
5 providing, by the data processing computer, the authorization response
6 message to the network processing computer.

1 9. The method of claim 1, wherein the user device identifier is a
2 interaction card number.

1 10. A data processing computer comprising:
2 a processor; and
3 a computer-readable medium coupled to the processor, the computer-
4 readable medium comprising code executable by the processor for implementing
5 operations comprising:
6 receiving, from a network processing computer, an authorization
7 request message comprising a user device identifier, addition method data,
8 and an amount for an interaction, wherein the network processing computer
9 determined the user device identifier from a token associated with a first
10 interaction type of a plurality of interaction types associated with a plurality of
11 tokens;
12 determining whether or not the user device identifier matches a
13 stored user device identifier; and
14 if the user device identifier matches the stored user device
15 identifier, further processing the interaction using the user device identifier
16 and the addition method data.

1 11. The data processing computer of claim 10, wherein further
2 processing the interaction comprises:
3 determining, by the data processing computer, a user account
4 maintained by the data processing computer using the user device identifier;
5 determining, by the data processing computer, whether or not the user
6 account includes a stored amount that exceeds the amount;
7 if the stored amount exceeds the amount, authorizing, by the data
8 processing computer, the interaction;
9 applying, by the data processing computer, the amount to the user
10 account;
11 generating, by the data processing computer, an authorization
12 response message comprising the user device identifier; and

13 providing, by the data processing computer, the authorization response
14 message to the network processing computer in response to receiving the
15 authorization request message.

1 12. The data processing computer of claim 10, wherein the network
2 processing computer is a first network processing computer, wherein the token is a
3 first token, wherein the user device identifier is a first user device identifier, wherein
4 the authorization request message is a first authorization request message, and
5 wherein further processing the interaction comprises:
6 determining an addition method using the addition method data;
7 based on the addition method, obtaining a second token associated
8 with the user device identifier or an account associated with the user device
9 identifier, wherein the second token is obtained from a database;
10 generating a second authorization request message comprising the
11 second token and the amount;
12 providing the second authorization request message to a second
13 network processing computer, wherein the second network processing computer
14 determines a second user device identifier using the second token, inserts the
15 second user device identifier into the second authorization request message, and
16 provides the second authorization request message to an authorizing entity
17 computer, wherein the authorizing entity computer determines whether or not to
18 authorize the interaction, generates an authorization response message comprising
19 an indication of whether or not the interaction is authorized, and provides the
20 authorization response message to the data processing computer via the second
21 network processing computer; and
22 receiving the authorization response message from the second
23 network processing computer.

1 13. The data processing computer of claim 10,
2 determining, by the data processing computer, an addition method
3 using the addition method data;
4 based on the addition method, obtaining, by the data processing
5 computer, an originating account number using the user device identifier, wherein
6 the originating account number identifies an originating account maintained by

7 computer in an exchange network on behalf of a user associated with the user
8 device identifier;
9 obtaining, by the data processing computer, a receiving account
10 number for that identifies a receiving account maintained by the data processing
11 computer on behalf of the user associated with the user device identifier;
12 generating, by the data processing computer, an exchange request
13 message comprising the amount, the receiving account number and the originating
14 account number;
15 providing, by the data processing computer, the exchange request
16 message to the exchange network;
17 receiving, by the data processing computer, an exchange response
18 message indicating whether or not the interaction is authorized;
19 generating, by the data processing computer, an authorization
20 response message comprising an indication of whether or not the interaction is
21 authorized; and
22 providing, by the data processing computer, the authorization response
23 message to the network processing computer.

1 14. The data processing computer of claim 13, wherein the
2 exchange network is a blockchain network and wherein the exchange response
3 message includes an indication of whether or not data representing the interaction is
4 included in a block that is added to a blockchain maintained by the exchange
5 network.

1 15. The data processing computer of claim 14, wherein the data
2 processing computer is a node in the blockchain network.

1 16. The data processing computer of claim 10, wherein the user
2 device identifier is a user account number that identifies a user account maintained
3 by the data processing computer on behalf of a user of a communication device that
4 performing an interaction with a resource provider computer.

1 17. The data processing computer of claim 10, wherein the
2 authorization request message includes interaction data created by a resource
3 provider computer.

1 18. A method comprising:
2 receiving, by a service provider application on a communication device,
3 a selection of a user device identifier to conduct an interaction from a user;
4 presenting, by the service provider application, options for the user of
5 the communication device to select an interaction type from a plurality of interaction
6 types;
7 receiving, by the service provider application, a selected interaction
8 type from the user;
9 presenting, by the service provider application, a plurality of addition
10 methods associated with the selected interaction type, the plurality of addition
11 methods associated with a data processing computer;
12 receiving, by the service provider application, a selected addition
13 method associated with the interaction type; and
14 processing the selected interaction type using the selected addition
15 method and a token associated with the interaction type.

1 19. The method of claim 18, wherein after receiving the selected
2 addition method associated with the interaction type, the method further comprises:
3 retrieving, by the service provider application, the token associated with
4 the interaction type from a memory of the communication device.

1 20. The method of claim 18, wherein the service provider application
2 is programmed to use the plurality of addition methods in a particular order.