

WHAT IS CLAIMED IS:

- 1 1. A method comprising:
2 receiving, by a processing network computer, a token or a token
3 reference identifier associated with the token from a processor computer,
4 transmitting, by the processing network computer, the token to a biller
5 computer, which uses the token to process the bill, by generating an authorization
6 request message comprising the token for an interaction involving the bill;
7 receiving, by the processing network computer, the authorization
8 request message comprising the token;
9 retrieving a credential associated with the token; and
10 transmitting a modified authorization request message including the
11 credential to an authorizing entity computer, which authorizes the interaction.
- 1 2. The method of claim 1, wherein the processing network
2 computer receives the token reference identifier from the processor computer, and
3 the method further comprises:
4 retrieving the token and a token cryptogram from a token service
5 computer using the token reference identifier.
- 1 3. The method of claim 2, further comprising, transmitting the token
2 cryptogram with the token to the biller computer.
- 1 4. The method of claim 3, wherein the cryptogram encrypts data
2 including the credential and a channel indicator, the cryptogram identifying a valid
3 interaction channel for the interaction.
- 1 5. The method of claim 1, wherein the processing network
2 computer receives the authorization request message comprising the token from the
3 biller computer via a transport computer.
- 1 6. The method of claim 1, further comprising:
2 receiving an authorization response message from the authorizing
3 entity computer.
- 1 7. The method of claim 6, further comprising:

2 modifying the authorization response message to include the token;
3 and
4 transmitting the modified authorization response message to the biller
5 computer.

1 8. The method of claim 1, wherein the processing network
2 computer transmits the token to the biller computer via an API.

1 9. The method of claim 8, wherein the API includes data fields
2 including a token data field for the token, a cryptogram data field, and a postal code
3 data field.

1 10. The method of claim 9, wherein the API further includes data
2 fields including a transaction identifier and a biller identifier.

1 11. A processing network computer comprising:
2 a processor; and
3 a non-transitory computer readable medium, the non-transitory
4 computer readable medium comprising instructions, executable by a processor, to
5 cause the processing network computer to:
6 receive a token or a token reference identifier associated with the token
7 from a processor computer,
8 transmit the token to a biller computer, which uses the token to process
9 the bill, by generating an authorization request message comprising the token for an
10 interaction involving the bill;
11 receive the authorization request message comprising the token;
12 retrieve a credential associated with the token; and
13 transmit a modified authorization request message including the
14 credential to an authorizing entity computer, which authorizes the interaction.

1 12. The processing network computer of claim 11, wherein the non-
2 transitory computer readable medium further comprises a biller directory which
3 includes addresses of billers and biller identifiers.

1 13. The processing network computer of claim 11, wherein the
2 token is a substitute for the credential.

1 14. The processing network computer of claim 11, wherein the
2 token has a same format as the credential.

1 15. A method comprising:
2 receiving, by an authorizing entity computer and from a user computing
3 device; a request to pay a bill from a biller computer using a credential;
4 transmitting, by the authorizing entity computer, an initiation message
5 to a processor computer which stores a token associated with the credential or a
6 token reference identifier associated with the token, wherein the processor computer
7 transmits the token or the token reference identifier to a processing network
8 computer, which uses the token to process the bill; and
9 receiving, by the authorizing entity computer from the biller computer, a
10 confirmation that the bill has been processed.

1 16. The method of claim 15, further comprising, receiving the bill
2 from the biller computer, prior to receiving the request to pay the bill; and
3 presenting the bill to an application on the user computing device.

1 17. The method of claim 15, wherein the processor computer stores
2 the token reference identifier associated with the token, wherein the processor
3 computer transmits the token reference identifier to the processing network
4 computer, which uses the token reference identifier to retrieve the token and then
5 uses the token to process the bill.

1 18. The method of claim 15, wherein the processor computer stores
2 the token, and wherein the processor computer transmits the token to the processing
3 network computer, which uses the token to process the bill.

1 19. The method of claim 15, further comprising:
2 providing to an interface to the user computing device that allows a
3 user of the user computing device to select the credential from a list of different types
4 of credentials.

1 20. The method of claim 15, further comprising:

- 2 providing to an interface to the user computing device that allows a
- 3 user of the user computing device to select a biller from a list of different billers.