CLAIMS

1. A transaction terminal system comprising:

storage circuitry to store information that is indicative of a terminal system currency of the transaction terminal system;

input circuitry to receive a token identifier, wherein the token identifier comprises:

information that is indicative of a user currency; and

information that is associated with user payment account information;

processing circuitry to compare the terminal system currency to the user currency, and where there is a difference, to cause a currency choice offering to be provided and in response to selection of the user currency, to transmit a message to cause a transaction to be performed in the user currency in respect of the user payment account, wherein

the message comprises the information that is associated with the user payment account information.

2. The transaction terminal system according to claim 1, wherein

the message comprises the token identifier.

3. The transaction terminal system according to any preceding claim, wherein

the token identifier comprises a subset of the user payment account information.

4. The transaction terminal system according to claim 3, wherein

the user payment account information is a primary account number;

the subset of the user payment account information is a trailing x digits of the user primary account number.

5. The transaction terminal system according to any preceding claim, wherein

the token identifier comprises a random or pseudo-random number.

6. The transaction terminal system according to any preceding claim, wherein the token identifier comprises an indicator of an operator of the user payment account.

7. The transaction terminal system according to any preceding claim, wherein the token identifier comprises a result of applying a one-way hash to the user payment account information.

8. The transaction terminal system according to any preceding claim, wherein the token identifier comprises at least one digit; and the token identifier comprises a checksum value in respect of the at least one digit.

9. The transaction terminal system according to claim 8, wherein the checksum value is produced using the Luhn algorithm.

10. The transaction terminal system according to any preceding claim, wherein the information that is indicative of a user currency comprises a billing currency code identifier, a currency code identifier, or a country code identifier.

11. The transaction terminal system according to any preceding claim, wherein the token identifier comprises one or more leading non-digit characters.

12. The transaction terminal system according to any preceding claim, wherein the token identifier consists of 16 alphanumeric characters.

13. The transaction terminal system according to any preceding claim, wherein the input circuitry comprises a keypad for entering the token identifier.

14. The transaction terminal system according to any preceding claim, wherein the input circuitry comprises an interface for connection to a processing device from which the token identifier is receivable.

15. The transaction terminal system according to any preceding claim, wherein

an amount of the transaction is determined as a result of input of information for goods or services to be purchased.

16. The transaction terminal system according to any preceding claim, wherein

the processing circuitry is configured to operate in at least one of:

a sale mode of operation in which the transaction is in respect of a sale; and

a refund mode of operation in which the transaction is in respect of a refund.

17. The transaction terminal system according to any preceding claim, wherein

in response to determining that the terminal system currency and the user currency differ, the processing circuitry is configured to cause at least one of:

a current currency conversion value from the transaction currency to the user currency, and

a converted transaction amount using the current currency conversion value,

to be downloaded from a remote server to the transaction terminal system.

18. The transaction terminal system according to claim 17, wherein

the currency choice offering comprises at least one of:

the current currency conversion value, and

an amount of the transaction converted into the user currency using the current currency conversion value.

19. The transaction terminal system according to any preceding claim, wherein:

the input circuitry is adapted to receive the information that is associated with the user payment account information and data relating to the user currency; and

the processing circuitry is adapted, in response to receiving the information that is associated with the user payment account information and the data relating to the user currency, to generate encrypted information by encrypting at least the information that is associated with the user payment account information, and to

transmit the encrypted information and the data relating to the user currency to a server, wherein

the transaction terminal system comprises receiving circuitry to receive the token identifier in response to transmitting the encrypted information; and

the transaction terminal system comprises output circuitry to output the token identifier.

20. A method comprising:

storing information that is indicative of a terminal system currency of a transaction terminal system;

receiving a token identifier, wherein the token identifier comprises:

information that is indicative of a user currency; and

information that is associated with user payment account information;

comparing the terminal system currency to the user currency, and where there is a difference, causing a currency choice offering to be displayed; and

in response to selection of the user currency, transmitting a message to cause a transaction to be performed in the user currency in respect of the user payment account, wherein

the message comprises the information that is associated with the user payment account information.

21. A data processing apparatus comprising:

input circuitry to receive user payment account information and information indicative of a user currency;

processing circuitry to generate a token identifier using the payment account information and the information indicative of the user currency, wherein the token identifier comprises the information indicative of the user currency; and

output circuitry to provide the token identifier.

22. A data processing apparatus according to claim 21, wherein

the information indicative of the user currency is one of: the user payment account information, a currency code, or an issuer country code.

23. The data processing apparatus according to claim 21, wherein the input circuitry comprises magnetic stripe reader circuitry.

24. The data processing apparatus according to any one of claims 19-23, wherein the input circuitry comprises EMV circuitry.

25. The data processing apparatus according to any one of claims 19-24, wherein the input circuitry comprises NFC communication circuitry.

26. The data processing apparatus according to any one of claims 19-25, wherein the input circuitry comprises a keypad.

27. The data processing apparatus according to any one of claims 19-16, wherein the input circuitry comprises communication circuitry to communicate with one or more further data processing devices via a network.

28. The data processing apparatus according to any one of claims 19-27, wherein the output circuitry comprises communication circuitry to communicate with one or more further data processing devices via a network.

29. The data processing apparatus according to any one of claims 19-28, wherein the output circuitry is configured to provide the token identifier to a sender of the user payment account information.

30. The data processing apparatus according to any one of claims 19-29, wherein the user payment account information is provided in encrypted format.

31. A method comprising:

receiving user payment account information and information indicative of a user currency;

generating a token identifier using the payment account information and the information indicative of the user currency, wherein the token identifier comprises the information indicative of the user currency; and

providing the token identifier.

32. A server comprising:

input circuitry configured to receive a message to cause a transaction to be performed in a user currency in respect of a user payment account, wherein the message comprises information that is associated with the user payment account information;

storage circuitry comprising a plurality of mappings from information to user payment account information; and

processing circuitry configured, in response to receiving the message, to obtain the user payment account information from the storage circuitry and to cause the transaction to be performed.

33. The server according to claim 32, wherein

the message comprises the user currency.

34. The server according to any one of claims 32-33, wherein

the message comprises an indication that the user currency is other than a currency associated with a sender of the message.

35. The server according to any one of claims 32-34, wherein

the message comprises:

a transaction amount and a current currency conversion value, or

the transaction amount converted into the user currency using the current currency conversion value.

36. A method comprising:

receiving a message to cause a transaction to be performed in a user currency in respect of a user payment account, wherein the message comprises information that is associated with the user payment account information;

storing a plurality of mappings from information to user payment account information in storage circuitry; and

in response to receiving the message, to obtain the user payment account information from the storage circuitry and causing the transaction to be performed.

37. A system comprising:

the transaction terminal system of any one of claims 1-19;

the data processing apparatus of any one of claims 21-30; and

the server of any one of claims 32-35.