Claims

1. A computerised network for processing payment transactions using a plurality of electronic wallets, the network comprising:

a point-of-sale (POS) terminal having a universal switch machine configured to:

accept payment transactions using the plurality of electronic wallets;

retrieve from an electronic wallet database, a list of electronic wallets associated with a plurality of electronic wallet server providers, wherein the plurality of electronic wallet service providers are each registered for payment transactions using one or more of the plurality of electronic wallets;

receive transaction details of each of the payment transactions, the transaction details comprising an electronic wallet identifier identifying at least one of the plurality of electronic wallets selected from the list of electronic wallets associated with the plurality of electronic wallet server providers, a payment amount and a customer electronic device identifier;

generate a payment transaction request for each of the payment transactions, the payment transaction request comprising the transaction details and a merchant identifier identifying the merchant, the merchant being a party to a payment transaction associated with the payment transaction request;

generate a universal code based on the payment transaction request for each of the payment transactions;

transmit, to a customer electronic device associated with the customer electronic device identifier, the universal code;

receive, from a customer directly or via the customer electronic device, a confirmation code associated with the payment transaction request;

determine if the confirmation code matches the universal code; and

transmit the payment transaction request for each of the payment transactions to a payment network server for authorisation if it is determined that the confirmation code matches the universal code.

2. A point-of-sale (POS) terminal having a universal switch machine for processing payment transactions of a plurality of electronic wallets, the universal switch machine comprising:

an input terminal for receiving transaction details of a payment transaction, the transaction details comprising an electronic wallet identifier identifying at least one of the plurality of electronic wallets selected from a list of electronic wallets associated with a plurality of electronic wallet server providers, a payment amount and a customer electronic device identifier;

a communication interface for transmitting the transaction details and a merchant identifier associated with a merchant, the merchant being a party to the payment transaction; and

a processor configured to:

obtain the transaction details from the input terminal;

generate a payment transaction request for transmitting to a payment network server, the payment transaction request comprising the transaction details and the merchant account identifier;

retrieve from an electronic wallet database, the list of electronic wallets associated with the plurality of electronic wallet server providers, wherein the plurality of electronic wallet service providers are each registered for payment transactions using one or more of the plurality of electronic wallets;

generate a universal code based on the payment transaction request;

transmit, to a customer electronic device associated with the customer electronic device identifier, the universal code;

receive, from a customer directly or via the customer electronic device, a confirmation code associated with the payment transaction request;

determine if the confirmation code matches the universal code; and

transmit the payment transaction request to the payment network server for authorisation if the confirmation code matches the universal code.

3. The POS terminal of claim 2, wherein the input terminal is configured to receive manual input relating to one or more of the transaction details.

4. A payment network server for processing payment transactions using a plurality of electronic wallets, the server comprising at least a computer processor and a data storage device, the data storage device comprising non-transitory instructions operative by the processor to:

receive, from a universal switch machine, a payment transaction request associated with a payment transaction, the payment transaction request comprising transaction details and a merchant identifier, the transaction details comprising a payment amount, a customer electronic device identifier and an electronic wallet identifier associated with one of the plurality of electronic wallets;

identify a service provider server associated with an electronic wallet service provider using the electronic wallet identifier;

initiate an authorisation for the payment transaction;

receive, from an acquiring institution for a merchant, a settlement transaction request comprising a list of payment transactions made via the universal switch machine within a predetermined time period;

sort the settlement transaction request by associating each of the payment transactions to a corresponding electronic wallet service provider identified in each of the payment transactions;

transmit, to each of the corresponding electronic wallet service providers, a settlement request for payment transactions associated with each of the corresponding electronic wallet service providers made at the universal switch machine;

receive, from each of the corresponding electronic wallet service providers, a settlement response comprising funds to settle the payment transactions;

transmit the funds to the acquiring institution, the acquiring institution maintaining a merchant account associated with the merchant identifier; and

transmit a settlement transaction response to the universal switch machine indicating that the list of payment transactions has been settled.

5. The server of claim 4, wherein the processor is further configured to:

generate a universal code based on the payment transaction request or receive from the universal switch machine the universal code associated with the payment transaction request;

transmit the universal code to a customer electronic device associated with the customer electronic device identifier;

receive, from the customer electronic device or from the customer electronic device via the universal switch machine, a confirmation code for the payment transaction request; and

determine if the confirmation code matches the universal code associated with the payment transaction request; and

wherein the authorisation for the payment transaction is initiated if the confirmation code matches the universal code.

6. The server of claim 4 or claim 5, wherein the authorisation for the payment transaction can be initiated, the processor is further configured to:

transmit, to the service provider server, a verification request comprising a request to verify that an electronic wallet account is associated with the customer electronic device identifier; and

receive, from the service provider server, a verification response indicating whether the customer electronic device identifier is verified; and

wherein the payment transaction can be authorised if the customer electronic device identifier is verified.

7. The server of any one of claims 4 to 6, wherein the authorisation for the payment transaction can be initiated, the processor is further configured to:

transmit, to the service provider server, a balance determination request to determine if a balance of the electronic wallet account is greater than or equal to the payment amount; and

receive, from the service provider server, a balance determination response, the balance determination response indicating whether the balance of the electronic wallet account is greater than or equal to the payment amount; and

wherein the payment transaction is authorised if the balance of the electronic wallet account is greater than or equal to the payment amount.

8. The server of any one of claims 4 to 7, wherein the processor is further configured to:

transmit, to the universal switch machine or to the customer electronic device, a payment transaction response indicating whether the payment transaction has been authorised.

9. The server of any one of claims 4 to 8 wherein the universal code comprises one or more of the following: a barcode, a Quick Response (QR) code, a one-time password (OTP) or a gesture.

10. A computer-implemented method for processing, at a payment network server, payment transactions using a plurality of electronic wallets, the method comprising:

receiving, from a universal switch machine, a payment transaction request associated with a payment transaction, the payment transaction request comprising transaction details and a merchant identifier, the transaction details comprising a payment amount, a customer electronic device identifier and an electronic wallet identifier associated with one of the plurality of electronic wallets;

identifying a service provider server associated with an electronic wallet service provider using the electronic wallet identifier;

initiating an authorisation for the payment transaction;

receiving, from an acquiring institution for a merchant, a settlement transaction request comprising a list of payment transactions made via the universal switch machine within a predetermined time period;

sorting the settlement transaction request by associating each of the payment transactions to a corresponding electronic wallet service provider identified in each of the payment transactions;

transmitting, to each of the corresponding electronic wallet service providers, a settlement request for payment transactions associated with each of the corresponding electronic wallet service providers made at the universal switch machine;

receiving, from each of the corresponding electronic wallet service providers, a settlement response comprising funds to settle the payment transactions;

transmitting the funds to the acquiring institution, the acquiring institution maintaining a merchant account associated with the merchant identifier; and

transmitting a settlement transaction response to the universal switch machine indicating that the list of payment transactions has been settled.

11. The method of claim 10, further comprising:

generating a universal code based on the payment transaction request or receiving from the universal switch machine the universal code associated with the payment transaction request;

transmitting the universal code to a customer electronic device associated with the customer electronic device identifier;

receiving, from the customer electronic device or from the customer electronic device via the universal switch machine, a confirmation code for the payment transaction request; and

determining if the confirmation code matches the universal code associated with the payment transaction request; and

wherein the authorisation for the payment transaction is initiated if the confirmation code matches the universal code.

12. The method of claim 10 or claim 11, wherein the authorisation for the payment transaction can be initiated, the method further comprises:

transmitting, to the service provider server, a verification request comprising a request to verify that an electronic wallet account is associated with the customer electronic device identifier; and

receiving, from the service provider server, a verification response indicating whether the customer electronic device identifier is verified; and

wherein the payment transaction is authorised if the customer electronic device identifier is verified.

13. The method of any one of claims 10 to 12, wherein the authorisation for the payment transaction can be initiated, the method further comprises:

transmitting, to the service provider server, a balance determination request to determine if a balance of the electronic wallet account is greater than or equal to the payment amount; and

receiving, from the service provider server, a balance determination response, the balance determination response indicating whether the balance of the electronic wallet account is greater than or equal to the payment amount; and

wherein the payment transaction is authorised if the balance of the electronic wallet account is greater than or equal to the payment amount.

14. The method of any one of claims 10 to 13, further comprising:

transmitting, to the universal switch machine or to the customer electronic device, a payment transaction response indicating whether the payment transaction has been authorised.

15. A non-transitory computer-readable medium having stored thereon program instructions for causing at least one processor to perform the method according to any one of claims 10 to 14.