result, it can often be difficult and time consuming for a person to set up a computing device to make available a plurality of different payment accounts for use in a transaction, and to select a particular payment account when making a payment. In addition, many financial institutions and other digital entities may have payment methods for an individual, but may lack the computing infrastructure and technology to support various types of electronic payments and transfers of payment credentials. Thus, it may be both difficult and, in some instances, impossible to utilize a computing device to convey payment credentials for a plurality of different accounts for use in transactions.

Thus, there is a need for a technical solution for an electronic wallet that can serve as a proxy for the identification of payment credentials for presentation in a payment transaction among a plurality of different electronic wallets and digital entity accounts. In such a solution, a user of a computing device could use a single application program and have payment credentials for various payment methods made available, without the use of additional application programs and even in instances where a specific payment method or payment type may be unavailable.

SUMMARY

The present disclosure provides a description of systems and methods for identifying payment credentials using a proxy electronic wallet.

In an aspect, the present disclosure refers to a method for identifying payment credentials using a proxy electronic wallet including: storing, in an account database, a plurality of account profiles, wherein each account profile is related to a wallet account including at least a wallet identifier, authentication credentials, an account identifier associated with a digital entity paired to the related wallet account, where the digital entity is one of a plurality of digital entities, one or more payment identifiers, one or more first sets of payment credentials, where each set of the one or more first sets of payment credentials corresponds to a payment identifier of the one or more payment identifiers, one or more paired wallet identifiers, where each paired wallet identifier is related to an additional wallet account, and, for each of the one or more paired wallet identifiers, the wallet account further including one or more additional payment identifiers associated with the related wallet account, and one or more additional sets of credentials associated with

the related additional wallet account, where each set of the one or more additional sets of credentials corresponds to an additional payment

identifier of the one or more additional payment identifiers associated with the respective related additional wallet account; receiving, by a receiving device, an account request from a specific digital entity of the plurality of digital entities, wherein the account request includes at least a specific account identifier associated with the specific digital entity; identifying, by a processing device, a specific account profile stored in the account database where the included account identifier corresponds to the specific account identifier included in the received account request; transmitting, by a transmitting device, at least the one or more payment identifiers and the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers; receiving, by the receiving device, a payment selection, wherein the payment selection includes a specific payment identifier selected from the transmitted one or more payment identifiers and one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers; identifying, by the processing device, a set of credentials associated with the specific payment identifier in the specific account profile, where the set of credentials is a first set of payment credentials of the one or more first sets of payment credentials if the specific payment identifier is selected from the one or more payment identifiers, and is an additional set of credentials of one of the one or more additional sets of credentials if the specific payment identifier is selected from the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers, wherein the identified set of credentials comprise payment credentials suitable for inclusion in a transaction message associated with a payment transaction for funding of the payment transaction; and transmitting, by the transmitting device, the identified set of credentials.

In another aspect, the present disclosure refers to a system for identifying payment credentials using a proxy electronic wallet including an account database, a receiving device, a processing device, and a transmitting device. The account database is configured to store a plurality of account profiles, wherein each account profile is related to a wallet account including at least: a wallet identifier; authentication credentials; an account identifier associated with a digital entity paired to the related wallet account, where the digital entity is one of a plurality of digital entities; one or more payment identifiers; one or more first sets of payment credentials, where each set of the one or more first sets of payment credentials

corresponds to a payment identifier of the one or more payment identifiers; one or more paired wallet identifiers, where each paired wallet identifier is related to an additional wallet account, and, for each of the one or more paired wallet identifiers, the wallet account further including one or more additional payment

identifiers associated with the related wallet account, and one or more additional sets of credentials associated with the related additional wallet account, where each set of the one or more additional sets of credentials corresponds to an additional payment identifier of the one or more additional payment identifiers associated with the respective related additional wallet account. The receiving device is configured to receive an account request from a specific digital entity of the plurality of digital entities, wherein the account request includes at least a specific account identifier associated with the specific digital entity. The processing device is configured to identify a specific account profile stored in the account database where the included account identifier corresponds to the specific account identifier included in the received account request. The transmitting device is configured to transmit at least the one or more payment identifiers and the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers. The receiving device is further configured to receive a payment selection, wherein the payment selection includes a specific payment identifier selected from the transmitted one or more payment identifiers and one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers. The processing device is further configured to identify a set of credentials associated with the specific payment identifier in the specific account profile, where the set of credentials is a first set of payment credentials of the one or more first sets of payment credentials if the specific payment identifier is selected from the one or more payment identifiers, and is an additional set of credentials of one of the one or more additional sets of credentials if the specific payment identifier is selected from the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers, wherein the identified set of credentials comprise payment credentials suitable for inclusion in a transaction message associated with a payment transaction for funding of the payment transaction. The transmitting device is further configured to transmit the identified set of credentials.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

The scope of the present disclosure is best understood from the following detailed description of exemplary embodiments when read in conjunction

with the accompanying drawings. Included in the drawings are the following figures:

FIG. 1 is a block diagram illustrating a high level system architecture for the identification of payment credentials in a proxy electronic wallet in accordance with exemplary embodiments.

WHAT IS CLAIMED IS:

1. A method for identifying payment credentials using a proxy electronic wallet, comprising:

storing, in an account database, a plurality of account profiles, wherein each account profile is related to a wallet account including at least

a wallet identifier,

authentication credentials,

an account identifier associated with a digital entity paired to the related wallet account, where the digital entity is one of a plurality of digital entities,

one or more payment identifiers,

one or more first sets of payment credentials, where each set of the one or more first sets of payment credentials corresponds to a payment identifier of the one or more payment identifiers,

one or more paired wallet identifiers, where each paired wallet identifier is related to an additional wallet account, and, for each of the one or more paired wallet identifiers, the wallet account further including

one or more additional payment identifiers associated with the related wallet account, and

one or more additional sets of credentials associated with the related additional wallet account, where each set of the one or more additional sets of credentials corresponds to an additional payment identifier of the one or more additional payment identifiers associated with the respective related additional wallet account;

receiving, by a receiving device, an account request from a specific digital entity of the plurality of digital entities, wherein the account request includes at least a specific account identifier associated with the specific digital entity;

identifying, by a processing device, a specific account profile stored in the account database where the included account identifier corresponds to the specific account identifier included in the received account request;

transmitting, by a transmitting device, at least the one or more payment identifiers and the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers;

receiving, by the receiving device, a payment selection, wherein the payment selection includes a specific payment identifier selected from the transmitted one or more payment identifiers and one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers;

identifying, by the processing device, a set of credentials associated with the specific payment identifier in the specific account profile, where the set of credentials is a first set of payment credentials of the one or more first sets of payment credentials if the specific payment identifier is selected from the one or more payment identifiers, and is an additional set of credentials of one of the one or more additional sets of credentials if the specific payment identifier is selected from the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers, wherein the identified set of credentials comprise payment credentials suitable for inclusion in a transaction message associated with a payment transaction for funding of the payment transaction; and

transmitting, by the transmitting device, the identified set of credentials.

2. The method of claim 1, wherein the identified set of credentials are transmitted to the specific digital entity as a response to the received account request.

3. The method of claim 1, wherein

each additional set of credentials comprises account credentials, and

if the identified set of credentials is an additional set of credentials of one of the one or more additional sets of credentials, the identified set of credentials are transmitted to a third party associated with the wallet account related to the paired wallet identifier corresponding to the additional set of credentials.

4. The method of claim 3, further comprising:

receiving, by the receiving device, payment credentials associated with the identified set of credentials from the third party; and

transmitting, by the transmitting device, the received payment credentials.

5. The method of claim 4, wherein the received payment credentials are transmitted to the specific digital entity as a response to the received account request.

6. The method of claim 1, further comprising:

receiving, by the receiving device, a pairing request from the specific digital entity, wherein the pairing request includes at least the specific account identifier and supplied authentication credentials; and

validating, by the processing device, the supplied authentication credentials based on the authentication credentials stored in the specific account profile, wherein

the specific account identifier is stored in the specific account profile as the included account identifier if validation of the supplied authentication credentials is successful.

7. The method of claim 6, further comprising:

transmitting, by the transmitting device, a notification to the specific digital entity indicating successful pairing of the specific account identifier with the specific account profile.

8. The method of claim 6, wherein receiving the pairing request and validating the supplied authentication credentials are performed prior to receiving the account request.

9. The method of claim 1, wherein

the account request further includes supplied authentication credentials, and

the method further comprises:

validating, by the processing device, the supplied authentication credentials based on the authentication credentials stored in the specific account profile, wherein

the one or more payment identifiers and the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers are not transmitted if validation of the supplied authentication credentials is unsuccessful.

10. A system for identifying payment credentials using a proxy electronic wallet, comprising:

an account database configured to store a plurality of account profiles, wherein each account profile is related to a wallet account including at least

a wallet identifier,

authentication credentials,

an account identifier associated with a digital entity paired to the related wallet account, where the digital entity is one of a plurality of digital entities,

one or more payment identifiers,

one or more first sets of payment credentials, where each set of the one or more first sets of payment credentials corresponds to a payment identifier of the one or more payment identifiers,

one or more paired wallet identifiers, where each paired wallet identifier is related to an additional wallet account, and, for each of the one or more paired wallet identifiers, the wallet account further including

one or more additional payment identifiers associated with the related wallet account, and

one or more additional sets of credentials associated with the related additional wallet account, where each set of the one or more additional sets of credentials corresponds to an additional payment identifier of the one or more additional payment identifiers associated with the respective related additional wallet account;

a receiving device configured to receive an account request from a specific digital entity of the plurality of digital entities, wherein the account request includes at least a specific account identifier associated with the specific digital entity;

a processing device configured to identify a specific account profile stored in the account database where the included account identifier corresponds to the specific account identifier included in the received account request; and

a transmitting device configured to transmit at least the one or more payment identifiers and the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers, wherein

the receiving device is further configured to receive a payment selection, wherein the payment selection includes a specific payment identifier selected from the transmitted one or more payment identifiers and one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers,

the processing device is further configured to identify a set of credentials associated with the specific payment identifier in the specific account profile, where the set of credentials is a first set of payment credentials of the one or more first sets of payment credentials if the specific payment identifier is selected from the one or more payment identifiers, and is an additional set of credentials of one of the one or more additional sets of credentials if the specific payment identifier is selected from the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers, wherein the identified set of credentials comprise

payment credentials suitable for inclusion in a transaction message associated with a payment transaction for funding of the payment transaction, and

the transmitting device is further configured to transmit the identified set of credentials.

11. The system of claim 10, wherein the identified set of credentials are transmitted to the specific digital entity as a response to the received account request.

12. The system of claim 10, wherein

each additional set of credentials comprises account credentials, and

if the identified set of credentials is an additional set of credentials of one of the one or more additional sets of credentials, the identified set of credentials are transmitted to a third party associated with the wallet account related to the paired wallet identifier corresponding to the additional set of credentials.

13. The system of claim 12, wherein

the receiving device is further configured to receive payment credentials associated with the identified set of credentials from the third party, and

the transmitting device is further configured to transmit the received payment credentials.

14. The system of claim 13, wherein the received payment credentials are transmitted to the specific digital entity as a response to the received account request.

15. The system of claim 10, wherein

the receiving device is further configured to receive a pairing request from the specific digital entity, wherein the pairing request includes at least the specific account identifier and supplied authentication credentials,

the processing device is further configured to validate the supplied authentication credentials based on the authentication credentials stored in the specific account profile, and

the specific account identifier is stored in the specific account profile as the included account identifier if validation of the supplied authentication credentials is successful.

16. The system of claim 15, wherein the transmitting device is further configured to transmit a notification to the specific digital entity indicating successful pairing of the specific account identifier with the specific account profile.

17. The system of claim 15, wherein receiving the pairing request and validating the supplied authentication credentials are performed prior to receiving the account request.

18. The system of claim 10, wherein

the account request further includes supplied authentication credentials, and

the processing device is further configured to validate the supplied authentication credentials based on the authentication credentials stored in the specific account profile, and

the one or more payment identifiers and the one or more additional payment identifiers corresponding to each of the one or more paired wallet identifiers are not transmitted if validation of the supplied authentication credentials is unsuccessful.