payment cards into the hands of each recipient may be lacking, if an individual needs emergency funds, if payment cards or wallets are lost or stolen, etc.

Thus, there is a need for a technical solution to enable the withdrawal of funds from an ATM without the use of a payment card.

SUMMARY

The present disclosure provides a description of systems and methods for cardless withdrawal from an automated teller machine. The withdrawal of cash from an automated teller machine without the use of a payment card may provide for a technological solution to enable an individual that is the intended recipient of funds to do so without the need for the infrastructure and technology required to produce and distribute payment cards to recipients, particularly in situations where infrastructure may be lacking and time may be of the essence, such as in instances of aid distribution following a natural disaster.

A method for cardless withdrawal from an automated teller machine includes: receiving, by an input device of an automated teller machine (ATM), user input comprising at least: a first code, a device identifier associated with a computing device, and a transaction amount; electronically transmitting, by a transmitting device of the ATM, at least the first code, device identifier, and the transaction amount to a first computing system; receiving, by a receiving device of the ATM, a transaction account number from the first computing system; electronically transmitting, by the transmitting device of the ATM, a withdrawal request including at least the transaction account number and the transaction amount to an acquiring institution; receiving, by the receiving device of the ATM, an indication from the acquiring institution that indicates approval of the withdrawal request; and dispensing, by a dispensing module of the ATM, one or more payment instruments having a value equivalent to the transaction amount,wherein the withdrawal request further includes a predetermined personal identification number, and the method further comprises storing, in a memory of the ATM, data indicating an association between the first code and the predetermined personal identification number, and wherein the withdrawal request further includes a predetermined personal identification number, the method further comprising storing, in a memory of the ATM, data indicating an association between the first code and the predetermined personal identification number.

A system for cardless withdrawal from an automated teller machine includes: a dispensing module of an automated teller machine (ATM); an input device of the ATM configured to receive user input comprising at least: a first code, a device identifier associated with a computing device, and a transaction amount; a transmitting device of the ATM configured to electronically transmit at least the first code, device identifier, and the transaction amount to a first computing system; and a receiving device of the ATM configured to receive a transaction account number from

the first computing system. The transmitting device of the ATM is further configured to electronically transmit a withdrawal request including at least the transaction account number and the transaction amount to an acquiring institution. The receiving device of the ATM is further configured to receive an indication from the acquiring institution that indicates approval of the withdrawal request. The dispensing module of the ATM is configured to dispense one or more payment instruments having a value equivalent to the transaction amount, wherein the device identifier is a telephone number, wherein the computing device is a mobile computing device configured to receive a short messaging service message at the telephone number that includes at least the first code and transaction amount.

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 cardless cash withdrawal of funds from an automated teller machine in accordance with exemplary embodiments.

FIG. 2 is a block diagram illustrating an automated teller machine configured for cardless cash withdrawal for use in the system of FIG. 1 in accordance with exemplary embodiments.

FIG. 3 is a flow diagram illustrating a process for the submission of data for recipient identification to request cardless cash withdrawal from an automated teller machine using the system of FIG. 1 in accordance with exemplary embodiments.

FIG. 4 is a flow diagram illustrating a process for the cardless withdrawal of funds from an automated teller machine using the system of FIG. 1 in accordance with exemplary embodiments.

FIG. 5 is a flow chart illustrating an exemplary method for cardless withdrawal from an automated teller machine in accordance with exemplary embodiments.

FIG. 6 is a flow diagram illustrating the processing of a payment transaction in accordance with exemplary embodiments.

FIG. 7 is a block diagram illustrating a computer system architecture in accordance with exemplary embodiments.

Further areas of applicability of the present disclosure will become apparent from the detailed description provided hereinafter. It should be understood

WHAT IS CLAIMED IS:

1. A method for cardless withdrawal from an automated teller machine, comprising:

receiving, by an input device of an automated teller machine (ATM), user input comprising at least: a first code, a device identifier associated with a computing device, and a transaction amount;

electronically transmitting, by a transmitting device of the ATM, at least the first code, device identifier, and the transaction amount to a first computing system;

receiving, by a receiving device of the ATM, a transaction account number from the first computing system;

electronically transmitting, by the transmitting device of the ATM, a withdrawal request including at least the transaction account number and the transaction amount to an acquiring institution;

receiving, by the receiving device of the ATM, an indication from the acquiring institution that indicates approval of the withdrawal request; and

dispensing, by a dispensing module of the ATM, one or more payment instruments having a value equivalent to the transaction amount;

wherein the withdrawal request further includes a predetermined personal identification number, and the method further comprises storing, in a memory of the ATM, data indicating an association between the first code and the predetermined personal identification number, and wherein the withdrawal request further includes a predetermined personal identification number, the method further comprising storing, in a memory of the ATM, data indicating an association between the first code and the predetermined personal identification number.

2. The method of claim 1, further comprising:

storing, in a provider database of the ATM, a plurality of provider profiles, wherein each profile is related to a service provider and includes a structured data set including at least a provider code and a communication address; and

executing, by a querying module of the ATM, a query on the provider database to identify a specific provider profile where the included provider code corresponds to the first code, wherein

the electronic transmission to the first computing system is transmitted to the communication address included in the specific provider profile.

3.

The method of claim 1, wherein the device identifier is a telephone number.

4. The method of claim 3, wherein the computing device is a mobile computing device configured to receive a short messaging service message at the telephone number that includes at least the first code and transaction amount.

5. The method of claim 1, further comprising:

receiving, by the input device of the ATM, a user request for cardless withdrawal; and

displaying, by a display device of the ATM, a prompt for user input of the first code, the device identifier, and the transaction amount, wherein

the prompt is displayed prior to receipt of the user input.

6. The method of claim 1, wherein receiving the transaction account number includes receiving an indication of authentication of the first code, device identifier, and transaction amount.

7. The method of claim 1, wherein the first code is a four digit numeric code.

8. A system for cardless withdrawal from an automated teller machine, comprising: a dispensing module of an automated teller machine (ATM);

an input device of the ATM configured to receive user input comprising at least: a first code, a device identifier associated with a computing device, and a transaction amount;

a transmitting device of the ATM configured to electronically transmit at least the first code, device identifier, and the transaction amount to a first computing system; and

a receiving device of the ATM configured to receive a transaction account number from the first computing system, wherein

the transmitting device of the ATM is further configured to electronically transmit a withdrawal request including at least the transaction account number and the transaction amount to an acquiring institution,

the receiving device of the ATM is further configured to receive an indication from the acquiring institution that indicates approval of the withdrawal request, and

the dispensing module of the ATM is configured to dispense one or more payment instruments having a value equivalent to the transaction amount, wherein the device identifier is a telephone number, wherein the computing device is a mobile computing device configured to receive a short messaging service message at the telephone number that includes at least the first code and transaction amount.

9. The system of claim 8, further comprising:

a provider database of the ATM configured to store a plurality of provider profiles, wherein each profile is related to a service provider and includes a structured data set including at least a provider code and a communication address; and

a querying module of the ATM configured to execute a query on the provider database to identify a specific provider profile where the included provider code corresponds to the first code, wherein

the electronic transmission to the first computing system is transmitted to the communication address included in the specific provider profile.

10. The system of claim 8, wherein the withdrawal request further includes a predetermined personal identification number.

11. The system of claim 10, further comprising:

a memory of the ATM configured to store data indicating an association between the first code and the predetermined personal identification number.

12. The system of claim 8, further comprising:

a display device of the ATM, wherein

the input device of the ATM is further configured to receive a user request for cardless withdrawal,

the display device of the ATM is configured to display a prompt for user input of the first code, the device identifier, and the transaction amount, and

the prompt is displayed prior to receipt of the user input.

13. The system of claim 8, wherein receiving the transaction account number includes receiving an indication of authentication of the first code, device identifier, and transaction amount.

14. The system of claim 8, wherein the first code is a four digit numeric code.