

METHOD AND SERVER DEVICE FOR EXECUTING CROSS-BORDER MONEY REMITTANCE

TECHNICAL FIELD

[0001] Various aspects relate to a computer-implemented method, user devices, and a server device for executing a cross-border money remittance.

BACKGROUND

[0002] The following discussion of the background to the invention is intended to facilitate an understanding of the present invention. However, it should be appreciated that the discussion is not an acknowledgment or admission that any of the material referred to was published, known or part of the common general knowledge in any jurisdiction as at the priority date of the application.

[0003] In various scenarios of carrying out a cross-border remittance, a user sending money (herein referred to as sending user or sender) and a user receiving the money (herein referred to as receiving user or receiver) may operate in different (e.g., banking) platforms. Hence, an institution of the sending user (herein referred to as sending institution) and an institution of the receiving user (herein referred to as receiving institution) may be associated with different platforms and/or applications. In such a scenario, there may be additional effort required (e.g., for switching from the application of the sending institution to a messenger application to inform the receiving user that the cross-border remittance has been carried out) and/or security risks (e.g., when inserting in the application of the sending institution wrong data about the receiving user). For example, the sending user may input wrong data regarding the receiving user when carrying out the cross-border remittance using the application of the sending institution due to a typing error (typo) of the sending user or of the receiving user priorly transmitting these data to the sending user, due to sending user considering the wrong data to be the correct data, due to translation mistakes (e.g., when translating from a language with a first alphabet to a language with another alphabet), etc.

[0004] Hence, a need exists to provide an improved method for executing a cross-border remittance.

SUMMARY

[0005] Various aspects of the present disclosure relate to a computer-implemented method for cross-border money remittance, the method executed by at least one processor, and including: initiating, using a money remittance application (e.g., a banking application of a first institution or an application associated with a digital wallet) running on a first user device, a cross-border money remittance for transferring money from a banking account of a first user to a digital wallet (e.g., a Weixin Pay Account) or banking account of a second user; (e.g., in response to initiating the cross-border money remittance) transmitting (e.g., remittance data including) remittance information regarding the cross-border money remittance to a first messenger application on the first user device; in response to receiving the remittance information regarding the cross-border money remittance, the first messenger application requesting (e.g., the first user to provide) user information indicating the second user (different from the first user); (e.g., in response to receiving the user information) the first messenger application transmitting a transaction notification to a second messenger application running on a second user device (different from the first user device) associated with the second user (e.g., to notify the second user regarding the cross-border money remittance), the transaction notification including information of the cross-border money remittance; in response to receiving the transaction notification, the second messenger application requesting the second user to initiate reception of the money; and in response to the second user initiating the reception of the money, completing the cross-border money remittance by transferring the money to the digital wallet or banking account of the second user.

[0006] Various aspects of the present disclosure relate to a server device for executing a cross-border money remittance, the server device including: at least one processors configured to: receive, from a money remittance application of a first user device (e.g., via a first institution platform associated with the money remittance application), an application programming interface, API, call associated with a messenger application, the API call including remittance information regarding a cross-border money remittance for

transferring money from a banking account of a first user to a digital wallet (e.g., a Weixin Pay Account) or banking account of a second user; in response to receiving the API call, transmit a transaction identification (e.g., a uniform resource locator, URL) unique to the cross-border money remittance to the money remittance application of the first user device (e.g., via the first institution platform), the transaction identification including the remittance information; receive, from a first instance of the messenger application running on the first user device, a transaction notification including user information indicating a second user device associated with the second user; in response to receiving the transaction notification, transmit remittance data to a second instance of the messenger application running on the second user device, the remittance data representing the remittance information and a reception request, wherein the reception request includes instructions to request the second user of the second user device to initiate reception of the money; receive an initiation notification from the second user device, the initiation notification indicating that the second user initiated the reception of the money; in response to receiving the initiation notification, provide control instructions to complete the cross-border money remittance by transferring the money to the digital wallet or banking account of the second user.

[0007] The approach discloses herein provide a linkage between a money remittance application and a messenger application, thereby allowing both, to notify another user about a cross-border money remittance directly when executing the cross-border money remittance via the money remittance application and to increase security of the cross-border money remittance by ensuring that the money is transferred to the correct receiving user.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Throughout the drawings, it should be noted that like reference numbers are used to depict the same or similar elements, features, and structures. The drawings are not necessarily to scale, emphasis instead generally being placed upon illustrating aspects of the disclosure. In the following description, some aspects of the disclosure are described with reference to the following drawings, in which:

FIG 1. is a block diagram showing an example electronic device according to various aspects of the present disclosure;

FIG2. is a block diagram showing an example system according to various aspects of the present disclosure;

FIG.3 is a flow chart showing a method for executing a cross-border remittance according various aspects of the present disclosure;

FIG.4A and FIG.4B is a communication flow chart showing a method for executing a cross-border remittance according various aspects of the present disclosure; and

FIG.5A to FIG.5C show exemplary front-end implementations of a method for executing a cross-border remittance according various aspects of the present disclosure.

DETAILED DESCRIPTION

[0009] The following detailed description refers to the accompanying drawings that show, by way of illustration, specific details and aspects in which the disclosure may be practiced. One or more aspects are described in sufficient detail to enable those skilled in the art to practice the disclosure. Other aspects may be utilized and structural, logical, and/or electrical changes may be made without departing from the scope of the disclosure. The various aspects of the disclosure are not necessarily mutually exclusive, as some aspects can be combined with one or more other aspects to form new aspects or embodiments. Various aspects are described in connection with methods and various aspects are described in connection with devices. However, it may be understood that aspects described in connection with methods may similarly apply to the devices, and vice versa.

[0010] **FIG.1** is a block diagram showing an example electronic device (e.g., a user device (which may also be referred to as client device)) 100 according various aspects. The electronic device 100 may be a laptop computer, a desktop computer, a tablet computer, an automobile computer, a smart phone, a personal digital assistant, a server, or other electronic devices capable of running computer applications. In

some aspects, the electronic device 100 includes one or more processors 102, an input/output (I/O) module 104, a memory (in some aspects referred to as memory device) 106, a power unit 108, and one or more network interfaces 110. The electronic device 100 may include additional components. In some embodiments, the processor 102, input/output (I/O) module 104, memory 106, power unit 108, and the network interface(s) 110 may be housed together in a common housing or other assembly.

[0011] The one or more processors 102 may be configured to execute instructions, for example, to generate output data based on data inputs. The instructions can include programs, codes, scripts, modules, or other types of data stored in memory (e.g., memory 106). Additionally or alternatively, the instructions may be encoded as pre-programmed or re-programmable logic circuits, logic gates, or other types of hardware or firmware components or modules. A processor of the one or more processors 102 may be, or may include, a multicore processor having a plurality of cores, and each such core may have an independent power domain and can be configured to enter and exit different operating or performance states based on workload. Additionally or alternatively, a processor of the one or more processors 102 may be, or may include, a general-purpose microprocessor, as a specialized co-processor or another type of data processing apparatus. In some cases, the one or more processors 102 may perform high-level operation of the electronic device 100. For example, the one or more processors 102 may be configured to execute or interpret software, scripts, programs, functions, executables, or other instructions stored in the memory 106.

[0012] The example I/O module 104 may include a mouse, keypad, touch screen, scanner, optical reader, and/or stylus (or other input device(s)) through which a user of the electronic device 100 may provide input to the electronic device 100, and may also include one or more audio speakers for providing audio output and a video display device for providing textual, audiovisual, and/or graphical output.

[0013] The example power unit 108 may be configured to provide power to the other components of the electronic device 100. For example, the other components may operate based on electrical power provided by the power unit 108 through a voltage bus or other connection. In some embodiments, the power unit 108 may include a battery or a battery system, for example, a rechargeable battery. In some embodiments, the power unit 108 may include an adapter (e.g., an AC adapter) that receives an external power signal (from an external source) and converts the external power signal to an internal power signal conditioned for a component of the electronic device 100. The power unit 108 may include other components or operate in another manner.

[0014] The electronic device 100 may be configured to operate in a wireless, wired, or cloud network environment (or a combination thereof). In some embodiments, the electronic device 100 may access the network using the network interface(s) 110. The network interface(s) 110 may include one or more adapters, modems, connectors, sockets, terminals, ports, slots, and the like. The wireless network that the electronic device 100 accesses may operate, for example, according to a wireless network standard or another type of wireless communication protocol. For example, the wireless network may be configured to operate as a Wireless Local Area Network (WLAN), a Personal Area Network (PAN), a metropolitan area network (MAN), or another type of wireless network. Examples of WLANs include networks configured to operate according to one or more of the 802.11 family of standards developed by IEEE (e.g., Wi-Fi networks), and others. Examples of PANs include networks that operate according to short-range communication standards (e.g., BLUETOOTH®, Near Field Communication (NFC), ZigBee), millimeter wave communications, and others. The wired network that the electronic device 100 accesses may, for example, include Ethernet, SONET, circuit-switched networks (e.g., using components such as SS7, cable, and the like), and others.

[0015] The memory 106 may include computer-readable storage media, for example, a volatile memory device, a non-volatile memory device, or both. The memory 106 may include one or more read-only memory devices, random-access memory devices, buffer memory devices, or a combination of these and other types of memory devices. In some instances, one or more components of the memory can be integrated or otherwise associated with another component of the electronic device 100. The memory 106 may store instructions that are executable by the one or more processors 102. In some examples, the memory 106 may store instructions for an operating system 112 and for application programs 114 (short: applications or apps).

[0016] According to various aspects, the memory 106 may store instructions for implementing a money remittance application 116. The money remittance application 116 may be associated with a corresponding institution, such as a banking institution (e.g., the money remittance application 116 may be a banking application of the banking institution) or an online payment institution (e.g., the money remittance application 116 may be a digital wallet application). The money remittance application 116 may be configured to allow a user to transfer money to another institution located in another country. For example, the money remittance application 116 may be a banking application of a banking institution located in Singapore which allows the user to transfer money from a banking account of the banking institution to another account (e.g., a banking account or a digital wallet) of another institution located in another country (e.g., China). A digital wallet of a user may be a digital account allowing a transfer and/or reception of money. For example, a digital wallet (account) may be a Weixin Pay (short: WePay) account. Money on the WePay account may then, for example, be used for a WeChat payment.

[0017] Hence, the money remittance application 116 may be associated with a corresponding institution and may communicate with a server of the corresponding institution. The server of the corresponding institution may also be referred to as institution platform of the corresponding institution.

[0018] According to various aspects, the memory 106 may store instructions for implementing a messenger application (may also be referred to as communication application) 118. The messenger application 118 may be a program application of an instant messaging service provider for instant messaging (between two or more users). According to various aspects, the messenger application 118 may include a cross-border money remittance (mini) application (e.g., WeRemit) providing the herein disclosed features of the cross-border money remittance 208 to the messenger application 118.

[0019] According to various aspects, the memory 106 may store instructions for implementing a browser application 120. The browser application 120 (also referred to as web-browser application) may be configured to allow a user to access a website (also referred to as webpage), e.g., using a uniform resource locator (URL) of the website.

[0020] FIG.2 shows an exemplary system 200 according to various aspects of the present disclosure. The system 200 may include a first user device 100(1) configured to in accordance with the electronic device 100 and a second user device 100(2) configured to in accordance with the electronic device 100. The first user device 100(1) may be associated with a first user 202(1) and the second user device 100(2) may be associated with a second user 202(2) (different from the first user).

[0021] The memory 106 of the first user device 100(1) may store the instructions for implementing the money remittance application 116. The money remittance application 116 may be associated with a first institution 204 (which may also be referred to as sending institution). The first institution 204 may provide a first institution platform (e.g., a first institution server) for processing transactions generated via the money remittance application 116.

[0022] The memory 106 of the first user device 100(1) may store the instructions for implementing the messenger application 118. The one or more processors 102 of the first user device 100(1) may implement an (first) instance 118(1) of the messenger application 118 on the first user device 100(1). The memory 106 of the second user device 100(2) may also store the instructions for implementing the messenger application 118. The one or more processors 102 of the second user device 100(2) may implement an (second) instance 118(2) of the messenger application 118 on the second user device 100(2). In the following the instance of the messenger application 118 running on the first user device 100(1) is referred to as first messenger application 118(1) and the instance of the messenger application 118 running on the second user device 100(2) is referred to as second messenger application 118(2). It is understood that both, the first messenger application 118(1) and the second messenger application 118(2) may be messenger applications of a same instant messaging service provider (e.g., WeChat). The first user 202(1) may be logged in the first messenger application 118(1) with a corresponding first user account and the second user 202(2) may be logged in the second messenger application 118(2) with a corresponding second user account (different from the first user account).

[0023] The second user 202(2) may have an account at a second institution 206 (e.g., banking account of a banking institution or a digital wallet (account) of an online payment institution). The second institution may also be referred to as receiving institution.

[0024] According to various aspects detailed herein, the first user 202(1) may employ the money remittance application 116 and the first messenger application 118(1) for a cross-border money remittance 208 for transferring money from an account (e.g., banking account) at the first institution 204 to the account (e.g., banking account or digital wallet) of the second user 202(2) at the second institution 206.

[0025] The system 200 may include a server device 210. The service device 210 may provide one or more services (e.g., a Tencent Remittance Service) associated with the cross-border money remittance 208. It is understood that the server device 210 serves for illustration and that the server device 210 may be a distributed server system providing the functionalities (e.g., services) detailed herein. In the following, various aspects of exemplary methods for executing the cross-border money remittance 208 are detailed. Various aspects refer to a transmission of information between at least two devices of the system 200. Such a transmission may occur via the internet. Hence, the devices of the system 200 may be (directly or indirectly) linked with each other via the internet.

[0026] **FIG.3** shows a flow chart of a method 300 for executing a cross-border remittance according various aspects. The method 300 may be a computer-implemented method. Method steps associated with a respective device (e.g., user device or server device) may be executed by at least one processor of the respective device.

[0027] The method 300 may include (in 302) initiating, using a money remittance application (e.g., the money remittance application 116) running on a first user device (e.g., the first user device 100(1)), a cross-border money remittance (e.g., the cross-border money remittance 208) for transferring money from a banking account of a first user (e.g., the first user 202(1)) to a digital wallet or banking account of a second user (e.g., the second user 202(2)).

[0028] The method 300 may include (in 304) in response to initiating the cross-border money remittance, transmitting remittance information regarding the cross-border money remittance to a first messenger application (e.g., the first messenger application 118(1)) on the first user device.

[0029] The method 300 may include (in 306) in response to receiving the remittance information, the first messenger application requesting (e.g., the first user to provide) user information indicating the second user.

[0030] The method 300 may include (in 308) in response to receiving the user information, the first messenger application transmitting a transaction notification to a second messenger application (e.g., the second messenger application 118(2)) running on a second user device (e.g., the second user device 100(2)) associated with the second user. The transaction notification may include information about the cross-border money remittance. The first messenger application may transmit the transaction notification via the server device 210.

[0031] The method 300 may include (in 310) in response to receiving the transaction notification, the second messenger application requesting the second user to initiate reception of the money (e.g., by implementing a reception button within a dialog box (chat) window associated with a text conversation between the first user and the second user).

[0032] The method 300 may include (in 312) in response to the second user initiating the reception of the money, completing the cross-border money remittance by transferring the money to the digital wallet or banking account of the second user.

[0033] **FIG.4A** and **FIG.4B** show a communication flow chart 400 including an exemplary detailed implementation of the method 300 and **FIG.5A** to **FIG.5C** show exemplary front-end implementations thereof.

[0034] In 402, the first (sending) user 202(1) may initiate the cross-border money remittance 208 using the money remittance application 116 on the first user device 100(1). The money remittance

application 116 may access a platform of the first (sending) institution 204 to initiate the cross-border money remittance 208. A graphical user interface (GUI) of the money remittance application 116 may show one or more pages 502 corresponding to the cross-border money remittance 208.

[0035] If the first institution 204 would directly complete the cross-border money remittance 208 and finish the process, the sending user 202(1) would be unable to know whether the receiving user 202(2) has received a notification that a remittance transaction has been initiated and may have to exit the money remittance application 116 to a messenger application 118 manually to inform the receiving user 202(2) that funds have been sent through the form of a text message or a screenshot. Accordingly, the receiving user 202(2) may, after receiving a personal message from the sending user 202(1), have to exit a messenger application 118 and enter a receiving platform separately to track if funds have been received. Further, in the case that the sending user 202(1) enters (mistakenly or without knowing better) wrong data about the receiving user 202(2), none of them would know. The processing in accordance with the present disclosure allows to mitigate both of these issues. Various aspects improve the experience by providing a seamless way for senders to send a transaction notification from the money remittance application 116 directly into the messenger application 118 (e.g., WeChat) (which may be connected to a mini application). The receiving user can then click on a notification button within the dialog box window of the conversation to complete the process of receiving the funds.

[0036] In 404, the first institution 204 may transmit a transfer request in accordance with the cross-border money remittance 208 to the server device 210. The money remittance application 116 may (e.g., via the first institution 204) transmit an application programming interface, API, call to the server device 210. The API call may (e.g., in addition to the transfer request) include a first user identification identifying the second user 202(2). A user identification may, for example, be or may include a mobile identification, such as a mobile phone number, of the second user 202(2) and/or a legal name of the second user 202(2). The mobile phone number may be linked to an account of the messenger application 118 and may serve as a routing identification (e.g., as key routing information). Optionally, the server device 210 may check a balance of the banking account of the first user 202(1).

[0037] In 406, the server device 210 transmit a transfer request (e.g., forward the transfer request received from the first institution 204) to the second institution 206. In response to receiving (in 408) a response indicated a creation of the transfer, the server device 210 may (in 412) transmit a transaction identification unique to the cross-border money remittance 208 to the money remittance application 116 (e.g., via the first institution 204 in 410 and 412). The transaction identification may include remittance information (e.g., including one or more of: a date and/or time of the transaction (viz. the cross-border money remittance 208), a legal name of the sending user, a legal name of the receiving user, an amount of the transaction (i.e., how much money is to be transferred), a currency of the money to be transferred, etc.) regarding the cross-border money remittance 208. Hence, if the transaction is successfully processed, the server device 210 may provide an API response (to the API call) to the first institution 204. The transaction identification may be uniquely generated for each cross-border money remittance 208.

[0038] In response to receiving the transaction identification, the money remittance application 116 may provide a graphical component (e.g., a button, such as a share button) on a graphical user interface (GUI) of the money remittance application 116 which allows the first user 202(1) to provide processing instructions (which instruct to process the cross-border money remittance 208 using the first messenger application 118(1)), e.g., by selecting the share button. For example, the money remittance application 116 may show a transaction complete page (e.g., as in ② in FIG.5A) embedded with the share button 504. Hence, it is understood that the graphical component (e.g., the share button) may be directly linked to the transaction identification. Thus, when a specific cross-border money remittance 208 is initiated and a corresponding unique transaction identification is received, the graphical component (e.g., the share button) may be dynamically provided on the GUI (e.g., shown in a bottom region of the GUI of the first messenger application 118(1)). Illustratively, the unique transaction identification (short: transaction identifier) may be mapped dynamically to the GUI (e.g., shown in a bottom region thereof) each time a transaction identification associated with a bijectively assigned cross-border money remittance 208 is received. Illustratively, the information behind the graphical element (e.g., the share button) may be dynamic based on the (received, unique) transaction identification. This may ensure that, when the sending user 202(1)

clicks on graphical element (e.g., the share button), the remittance information (which are included in the transaction identification), such as one or more of: the transaction date and/or transaction time the legal name of the sending user, the legal name of the receiving user, the amount of the transaction, the currency, etc., may be automatically mapped to a corresponding share instance (for sharing via the first messenger application 118(1)). Thus, according to various aspects, the money remittance application 116 may, in response to receiving the transaction identification, dynamically provide the graphical component (e.g., the share button) on the GUI of the money remittance application 116.

[0039] In 414, the first user may provide the processing instructions (e.g., by selecting the share button) and the money remittance application 116 may (directly or indirectly) invoke (in 416) the first messenger application 118(1). By this, the remittance information may be transmitted to the first messenger application 118(1).

[0040] In some aspects, the money remittance application 116 may include a (pre-package) software development kit (SDK) allowing the money remittance application 116 to invoke the first messenger application 118(1). In this case, the money remittance application 116 may, in response to receiving the processing instructions (e.g., responsive to the first user 202(1) selecting (e.g., clicking) the share (to the first messenger application 118(1)) button), directly invoke the first messenger application 118(1) (and provide the remittance information thereto).

[0041] In other aspects, the transaction identification may include or may be a uniform resource locator, URL, and the money remittance application 116 may, in response to receiving the processing instructions (e.g., responsive to the first user 202(1) selecting (e.g., clicking) the share (to the first messenger application 118(1)) button), invoke the browser application 120 to call a website corresponding to the URL. This website may include the functionality to (e.g., in response to selecting a button 506 embedded to the website and optionally further allowing invoking the first messenger application 118(1) in 508) invoke (in 510) the first messenger application 118(1) using a (pre-package) SDK. This website may be a H5 browser page. This browser page may be uniquely generated for the particular cross-border money remittance 208. As detailed above, the graphical component (e.g., the share button) may be directly linked to the transaction identification (unique to the cross-border money remittance 208) and may, therefore, be dynamically mapped to the GUI (e.g., at a bottom thereof) for each cross-border money remittance 208 which is be processed.

[0042] According to various aspects, the URL may be encrypted through urlencode (thereby requiring decryption through urlencode).

[0043] The first messenger application 118(1) may then show information about the cross-border money remittance 208 (e.g., in 512). The first messenger application 118(1) may include the cross-border money remittance (mini) application (e.g., WeRemit) configured to show the information. Information about the cross-border money remittance 208 may also be referred to as information regarding the cross-border money remittance 208 and may be information of the cross-border money remittance 208. Information about (e.g., of) the cross-border money remittance 208 may, for example, include one or more of the following: an amount of the transaction, a sending country in which the first institution 204 is located, a receiving country in which the second institution 206 is located, a legal name of the second user 202(2), a legal name of the first user 202(1), etc.

[0044] In 418, the first messenger application 118(1) may request (the first user 202(1) to provide (e.g., select)) user information (e.g., in 516) indicating the second user 202(2). In some aspects, the first user 202(1) may be allowed to select himself/herself as second user 202(2) in order to transfer money via a cross-border money remittance 208 from a banking account of one country to a digital wallet or banking account in another country.

[0045] The first messenger application 118(1) may be configured such that the first user 202(1) can provide the user information by selecting the second user 202(2) from his/her contact list (pre-stored within the first messenger application 118(1)).

[0046] In response to receiving the user information (and optionally in the case that the second user is different from the first user), the first messenger application 118(1) may transmit (in 420) a transaction

notification to the second messenger application 118(2) running on the second user device 100(2) (e.g., via the server device 210). By this, the second user 202(2) may be notified about the cross-border money remittance 208 initiated by the first user 202(1). The second messenger application 118(2) may be configured to show, on a GUI 520, 522 of the second messenger application 118(2), information about the cross-border money remittance 208. The first messenger application 118(1) may be configured to show, on a GUI 520 of the first messenger application 118(1) information about the cross-border money remittance 208. The first messenger application 118(1) and/or the second messenger application 118(2) may be configured to show, on the GUI 520, the information about the cross-border money remittance 208 in a dialog box (also referred to as chat box (short: chat) or conversation box) window associated with a text conversation between the first user 202(1) and the second user 202(2). For example, a clickable mini-program card 520 may be displayed to the first user 202(1) and/or the second user 202(2). The clickable mini-program card 520 may include some information about the cross-border money remittance 208. Upon clicking on this mini-program card, the (first and/or second) messenger application 118 may enter a page 522, 526, 528 showing the transaction details (and optionally further customizable skins chosen by the sending user).

[0047] According to various aspects, the first messenger application 118(1) may be configured such that, when requesting the user information about the second user 202(2), the first user 202(1) can select (on a GUI of the first messenger application 118(1)) how the GUI of the second messenger application 118(2) should show the (transaction) information about the cross-border money remittance 208 (e.g., a theme and/or font). For example, the first user 202(1) can select the theme and/or font and/or skin in 514 (see also FIG.5B showing exemplary themes and/or skins). These instructions about the theme and/or font may be transmitted to the second messenger application 118(2) together with the transaction notification. Optionally, the first messenger application 118(1) may be configured such that the first user 202(1) can also upload one or more photos and/or one or more videos and transmit them together with the transaction notification.

[0048] According to various aspects, the first messenger application 118(1) may be configured such that the first user 202(1) can provide (e.g., in 518) a user-specific text message which is to be shown on the GUI of the second messenger application 118(2) together with the transaction information (e.g., in 520). This text message may be transmitted to the second messenger application 118(2) together with the transaction notification.

[0049] Illustratively, personal customization options may be inserted in the (remittance) transaction notification in which the sending user can choose different skin and/or theme designs on how the receiving user receives the transaction notification (optionally together with a personalized text message).

[0050] The information about the cross-border money remittance 208 may be shown via the GUI of the cross-border money remittance (mini) application (e.g., WeRemit) (also referred to as Mini Program in WeChat).

[0051] In 422, the second messenger application 118(2) may request the second user 202(2) to initiate reception of the money. For example, the GUI of the second messenger application 118(2) may show a reception button 524 requesting the second user 202(2) to initiate the reception of the money. The reception button 524 may be an actionable button allowing an action to initiate the reception of the money (e.g., funds).

[0052] In response to the second user 202(2) initiating the reception of the money, the second messenger application 118(2) may (in 424) transmit reception instructions to the server device 210. The server device 210 may then communicate with the first institution 204 (in 426) and/or the second institution 206 to complete the cross-border money remittance 208 by transferring the money to the digital wallet or banking account of the second user 202(2) (at the second institution 206). In some aspects, the transfer of the money may occur via an online payment account of the server device 210.

[0053] According to various aspects, the server device 210 may be configured to ensure safety and/or security of the cross-border money remittance 208. The reception instructions may include a second identification of the second user 202(2). The second identification may be a user identification (e.g., the

mobile phone number) of an account with which the second user 202(2) is logged in to the second messenger application 118(2). The server device 210 may be configured to determine whether the first identification and the second identification correspond to each other (viz. are the same) and to complete the cross-border money remittance 208 only if the first identification and the second identification correspond to each other. Thus, if the transaction notification is sent to a wrong receiving user (different from the second user selected when initiating the cross-border money remittance 208), the cross-border money remittance 208 may not be completed (e.g., not further processed). As detailed herein, the first identification may be used as transaction routing information. The wrong receiving user may, for example, be due to the first user 202(1) selecting a wrong receiving user in 418, 516.

[0054] With reference to FIG.4B, the server device 210 (e.g., at least one processor thereof) may be configured to, after completing the cross-border money remittance 208, allow the first user 202(1) and/or the second user 202(2) to request a status of the cross-border money remittance 208. For example, the first user 202(1) may (in 430) request, via the first messenger application 118(1), the status of the cross-border money remittance 208. The server device 210 may request a first status (in 434) of the cross-border money remittance 208 from the first institution 204 and a second status (in 436) of the cross-border money remittance 208 from the second institution 206. In response to receiving a respective response, the server device 210 may determine the status of the cross-border money remittance 208 using the first status and the second status. The server device 210 may (in 438) transmit the status of the cross-border money remittance 208 to the first messenger application 118(1). Accordingly, the second user 202(2) may (in 432) request, via the second messenger application 118(2), the status of the cross-border money remittance 208. The server device 210 may request the first status and the second status and then transmit the status of the cross-border money remittance 208 (in 440) to the second messenger application 118(2).

[0055] With reference to FIG.5C, the server device 210 (e.g., at least one processor thereof) may be configured to control the GUI of the first messenger application 118(1) to show the status of the cross-border money remittance 208 (in 526). The server device 210 (e.g., at least one processor thereof) may be configured to control the GUI of the second messenger application 118(2) to show the status of the cross-border money remittance 208 (in 528).

[0056] Illustratively, the sending user and the receiving user can check the status of the cross-border money remittance 208 within the messenger application 118 (e.g., within the cross-border money remittance (mini) application).

[0057] Illustratively, various aspects refer to an approach which connects a sending user and a receiving user which are operating on different (banking) platforms (which may be the majority of the cases of cross-border remittance scenarios). For example, the approach provides connectivity between a sending user and a receiving user which are operating on two different (mobile) application.

[0058] Illustratively, the functionalities of a money remittance application 116 and a messenger application 118 are linked to each other, thereby increasing security and comfort of executing a cross-border money remittance 208. Further, a skin selection is provided which enables the sending user to select how the receiving user will see the transaction notification (notifying the receiving user about the cross-border money remittance 208).

[0059] While the method described above is illustrated and described as a series of steps or events, it will be appreciated that any ordering of such steps or events are not to be interpreted in a limiting sense. For example, some steps may occur in different orders and/or concurrently with other steps or events apart from those illustrated and/or described herein. In addition, not all illustrated steps may be required to implement one or more aspects or embodiments described herein. Also, one or more of the steps depicted herein may be carried out in one or more separate acts and/or phases.

[0060] A non-transitory computer-readable medium storing computer executable code including instructions for executing at least part of a cross-border money remittance according to the method 300 (and optionally in accordance with one or more aspects of the detailed communication flow diagram 400) is also provided. The aforementioned instructions may include a computer program element or a computer program product.

[0061] Some of the subject matter and operations described in this specification can be implemented in digital electronic circuitry, or in computer software, firmware, or hardware, including the structures disclosed in this specification and their structural equivalents, or in combinations of one or more of them. Some of the subject matter described in this specification can be implemented as one or more computer programs, i.e., one or more modules of computer program instructions, encoded on a computer storage medium for execution by, or to control the operation of, data-processing apparatus. A computer storage medium can be, or can be included in, a computer-readable storage device, a computer-readable storage substrate, a random or serial access memory array or device, or a combination of one or more of them. Moreover, while a computer storage medium is not a propagated signal, a computer storage medium can be a source or destination of computer program instructions encoded in an artificially generated propagated signal. The computer storage medium can also be, or be included in, one or more separate physical components or media (e.g., multiple CDs, disks, or other storage devices).

[0062] The following examples pertain to various aspects of the present disclosure. It is noted that aspects described with reference to a device may be accordingly implemented in a method, and vice versa.

[0063] Example 1 is a computer-implemented method for cross-border money remittance, the method executed by at least one processor, and including: initiating, using a money remittance application (e.g., a banking application of a first institution or an application associated with a digital wallet) running on a first user device, a cross-border money remittance for transferring money from a banking account of a first user to a digital wallet (e.g., a Weixin Pay Account) or banking account of a second user; (e.g., in response to initiating the cross-border money remittance) transmitting (e.g., remittance data including) remittance information regarding the cross-border money remittance to a first messenger application on the first user device; in response to receiving the remittance information regarding the cross-border money remittance, the first messenger application requesting (e.g., the first user to provide) user information indicating the second user (different from the first user); (e.g., in response to receiving the user information) the first messenger application transmitting a transaction notification to a second messenger application running on a second user device (different from the first user device) associated with the second user (e.g., to notify the second user regarding the cross-border money remittance), the transaction notification including information about (e.g., of) the cross-border money remittance; in response to receiving the transaction notification, the second messenger application requesting the second user to initiate reception of the money; and in response to the second user initiating the reception of the money, completing the cross-border money remittance by transferring the money to the digital wallet or banking account of the second user.

[0064] In Example 2, the method of Example 1 can optionally further include: the money remittance application receiving processing instructions to process the cross-border money remittance using the first messenger application (e.g., in response to the first user selecting a button, such as a share to the first messenger application button, shown in the money remittance application), wherein the remittance information are transmitted to the first messenger application in response to receiving the processing instructions.

[0065] In Example 3, the method of Example 1 or 2 can optionally further include: the money remittance application transmitting an application programming interface, API, call to a server associated with the first messenger application, the API call including the remittance information (e.g., including key routing information of the second user); the money remittance application receiving, from the server, a transaction identification (e.g., a uniform resource locator, URL) unique to the cross-border money remittance, the transaction identification including the remittance information.

[0066] In Example 4, the method of Example 3 can optionally include that transmitting the remittance information to the first messenger application includes: in response to receiving the transaction identification (and optionally further the processing instructions provided that in combination with Example 2), the money remittance application invoking the first messenger application and transmitting the transaction identification to the first messenger application.

[0067] In Example 5, the method of Example 3 can optionally include that the transaction identification includes a uniform resource locator, URL, and that transmitting the remittance information to the first messenger application includes: in response to receiving the transaction identification (and

optionally further the processing instructions provided that in combination with Example 2), the money remittance application instructing a browser application on the first user device to call a website corresponding to the uniform resource locator; and the browser application invoking the first messenger application, thereby transmitting the transaction identification to the first messenger application.

[0068] In Example 6, the subject matter of any one of Examples 1 to 5 can optionally include that the remittance information the transaction notification each include a first user identification identifying the second user (e.g., a mobile identification, such as a mobile phone number, of the second user and/or a legal name of the second user); and wherein completing the cross-border money remittance in response to the second user initiating the reception of the money includes: in response to the second user initiating the reception of the money, determining whether the first user identification corresponds to a second user identification associated with the second messenger application; and completing the cross-border money remittance only in the case that it is determined that the first user identification corresponds to the second user identification.

[0069] In Example 7, the subject matter of any one of Examples 1 to 6 can optionally include that the transaction notification includes transaction information regarding the cross-border money remittance; and wherein the method further includes a graphical user interface, GUI, of the second messenger application showing the transaction information.

[0070] In Example 8, the subject matter of Example 7 can optionally include that the second messenger application requesting the second user to initiate the reception of the money includes the graphical user interface of the second messenger application showing a reception button requesting the second user to initiate the reception of the money (wherein optionally the second user initiating the reception of the money includes receiving data representing that the second user selected the reception button).

[0071] In Example 9, the subject matter of Example 7 or 8 can optionally include that the graphical user interface of the second messenger application shows the transaction information (and optionally further the reception button) within a dialog box (chat) window associated with a text conversation between the first user and the second user.

[0072] In Example 10, the method of any one of Examples 7 to 9 can optionally further include: the first messenger application receiving first instructions on how the graphical user interface of the second messenger application should show the transaction information (e.g., a theme), wherein the transaction notification includes the first instructions; and/or the first messenger application receiving second instructions indicating a user-specific text message which is to be shown on the graphical user interface of the second messenger application together with the transaction information, wherein the transaction notification includes the second instructions.

[0073] In Example 11, the subject matter of any one of Examples 1 to 10 can optionally include that the banking account of the first user is associated with a first institution platform and wherein the digital wallet or banking account of the second user is associated with a second institution platform different from the first institution platform.

[0074] In Example 12, the subject matter of any one of Examples 1 to 11 can optionally include that the first messenger application and/or the second messenger application includes a cross-border money remittance (mini) application.

[0075] In Example 13, the method of any one of Examples 1 to 12 can optionally further include: in response to the first messenger application receiving instructions requesting a status of the cross-border money remittance, a graphical user interface, GUI, of the first messenger application showing information indicating whether the second user initiated the reception of the money and/or whether the money has been transferred to the digital wallet or banking account of the second user.

[0076] In Example 14, the method of any one of Examples 1 to 13 can optionally further include: in response to the second messenger application receiving instructions requesting a status of the cross-border money remittance, a graphical user interface, GUI, of the second messenger application showing

information indicating whether the money has been transferred to the digital wallet or banking account of the second user.

[0077] Example 15 is a non-transitory computer-readable medium storing computer executable code including instructions for cross-border money remittance according to the method of any one of Examples 1 to 14.

[0078] Example 16 is a user device for executing a cross-border money remittance, the user device including: at least one processors configured to: initiate, using a money remittance application (e.g., a banking application of a first institution or an application associated with a digital wallet), a cross-border money remittance for transferring money from a banking account of a first user to a digital wallet (e.g., a Weixin Pay Account) or banking account of a second user; (e.g., in response to initiating the cross-border money remittance) transmit (e.g., remittance data including) remittance information regarding the cross-border money remittance to a first messenger application on the user device; control the first messenger application to request (e.g., the first user to provide) user information indicating the second user (different from the first user), and, in response to receiving the user information, transmit a transaction notification and a reception request to a second messenger application running on a further (e.g., second) user device associated with the second user (e.g., to notify the second user regarding the cross-border money remittance), wherein the transaction notification includes information about the cross-border money remittance, and wherein the reception request includes instructions to request the second user to initiate reception of the money.

[0079] In Example 17, the subject matter of Example 16 can optionally include that the at least one processors is further configured to: receive, via the money remittance application, processing instructions to process the cross-border money remittance using the first messenger application (e.g., in response to the first user selecting a button, such as a share to the first messenger application button, shown in the money remittance application); and transmit the remittance information to the first messenger application in response to receiving the processing instructions.

[0080] In Example 18, the subject matter of Example 16 or 17 can optionally include that the at least one processors is further configured to: control the money remittance application to transmit an application programming interface, API, call to a server associated with the first messenger application, the API call including the remittance information (e.g., including key routing information of the second user); receive, from the server via the money remittance application, a transaction identification (e.g., a uniform resource locator, URL) unique to the cross-border money remittance, the transaction identification including the remittance information.

[0081] In Example 19, the subject-matter of Example 18 can optionally include that the at least one processors is further configured to: in response to receiving the transaction identification (and optionally further the processing instructions provided that in combination with Example 2), control the money remittance application to invoke the first messenger application and to transmit the transaction identification to the first messenger application.

[0082] In Example 20, the subject-matter of Example 18 can optionally include that the transaction identification includes a uniform resource locator, URL, wherein the at least one processors is further configured to: in response to receiving the transaction identification (and optionally further the processing instructions provided that in combination with Example 2), control the money remittance application to instruct a browser application on the first user device to call a website corresponding to the uniform resource locator; and control the browser application to invoke the first messenger application, thereby transmitting the transaction identification to the first messenger application.

[0083] In Example 21, the subject matter of any one of Examples 16 to 20 can optionally include that the at least one processors is further configured to: receive, via the first messenger application, first instructions on how a graphical user interface of the second messenger application should show the transaction information (e.g., a theme), wherein the transaction notification includes the first instructions; and/or receive, via the first messenger application, second instructions indicating a user-specific text

message which is to be shown on the graphical user interface of the second messenger application together with the transaction information, wherein the transaction notification includes the second instructions.

[0084] In Example 22, the subject matter of any one of Examples 16 to 21 can optionally include that the banking account of the first user is associated with a first institution platform and wherein the digital wallet or banking account of the second user is associated with a second institution platform different from the first institution platform.

[0085] In Example 23, the subject matter of any one of Examples 16 to 22 can optionally include that the first messenger application includes a cross-border money remittance (mini) application.

[0086] In Example 24, the subject matter of any one of Examples 16 to 23 can optionally include that the at least one processors is further configured to: receive, via the first messenger application, instructions requesting a status of the cross-border money remittance; in response to receiving the instructions, control a graphical user interface, GUI, of the first messenger application to show information indicating whether the second user initiated the reception of the money and/or whether the money has been transferred to the digital wallet or banking account of the second user.

[0087] Example 25 is a user device for receiving a cross-border money remittance, the user device including: at least one processors configured to: receive, from a further (e.g., first) user device, remittance data representing a transaction notification and a reception request, wherein the transaction notification includes information about a cross-border money remittance for transferring money from a banking account of a further (e.g., first) user to a digital wallet (e.g., a Weixin Pay Account) or banking account of a user of the user device, and wherein the reception request includes instructions to request the user of the user device to initiate reception of the money; in response to receiving the remittance data, control a messenger application on the user device to request the user to initiate reception of the money; and in response to receiving initiation instructions indicating that the second user initiated the reception of the money, provide control instructions to complete the cross-border money remittance by transferring the money to the digital wallet or banking account of the user.

[0088] In Example 26, the subject matter of Example 25 can optionally include that the remittance data include a first user identification identifying the user of the user device (e.g., a mobile identification, such as a mobile phone number, of the second user and/or a legal name of the second user); and wherein the at least one processors is further configured to: in response to receiving the initiation instructions, determine whether the first user identification corresponds to a second user identification associated with the messenger application; and provide the control instructions to complete the cross-border money remittance only in the case that it is determined that the first user identification corresponds to the second user identification.

[0089] In Example 27, the subject matter of Example 25 or 26 can optionally include that the at least one processors is further configured to: in response to receiving the remittance data, control a graphical user interface, GUI, of the messenger application to show transaction information regarding the cross-border money remittance.

[0090] In Example 28, the subject matter of Example 27 can optionally include that the at least one processors is further configured to: control graphical user interface of the messenger application to show a reception button to request the user to initiate reception of the money (and optionally to receive the initiation instructions responsive to the user selecting the reception button).

[0091] In Example 29, the subject matter of Example 27 or 28 can optionally include that the at least one processors is further configured to: control the graphical user interface to show the transaction information (and optionally further the reception button) within a dialog box (chat) window associated with a text conversation between the user and the further user.

[0092] In Example 30, the subject matter of any one of Examples 27 to 29 can optionally include that the at least one processors is further configured to: wherein the remittance data further include first instructions on how the graphical user interface of the messenger application should show the transaction information (e.g., a theme), wherein the at least one processors is further configured to control the

messenger application to show the transaction information in accordance with the first instructions; and/o wherein the remittance data further include second instructions indicating a text message (from the further user) which is to be shown on the graphical user interface of the messenger application together with the transaction information, wherein the at least one processors is further configured to control the messenger application to show the text message together with the transaction information.

[0093] In Example 31, the subject matter of any one of Examples 25 to 30 can optionally include that the banking account of the further user is associated with a first institution platform and wherein the digital wallet or banking account of the user is associated with a second institution platform different from the first institution platform.

[0094] In Example 32, the subject matter of any one of Examples 25 to 31 can optionally include that the messenger application includes a cross-border money remittance (mini) application.

[0095] In Example 33, the subject matter of any one of Examples 25 to 32 can optionally include that the at least one processors is further configured to: receive, via the messenger application, instructions requesting a status of the cross-border money remittance; and in response to receiving the instructions, control a graphical user interface, GUI, of the messenger application to show information indicating whether the money has been transferred to the digital wallet or banking account of the user.

[0096] Example 34 is a server device for executing a cross-border money remittance, the server device including: at least one processors configured to: receive, from a money remittance application of a first user device (e.g., via a first institution platform associated with the money remittance application), an application programming interface, API, call associated with a messenger application, the API call including remittance information regarding a cross-border money remittance for transferring money from a banking account of a first user to a digital wallet (e.g., a Weixin Pay Account) or banking account of a second user; in response to receiving the API call, transmit a transaction identification (e.g., a uniform resource locator, URL) unique to the cross-border money remittance to the money remittance application of the first user device (e.g., via the first institution platform), the transaction identification including the remittance information; receive, from a first instance of the messenger application running on the first user device, a transaction notification including user information indicating a second user device associated with the second user; in response to receiving the transaction notification, transmit remittance data to a second instance of the messenger application running on the second user device, the remittance data representing the remittance information and a reception request, wherein the reception request includes instructions to request the second user of the second user device to initiate reception of the money; receive an initiation notification from the second user device, the initiation notification indicating that the second user initiated the reception of the money; in response to receiving the initiation notification, provide control instructions to complete the cross-border money remittance by transferring the money to the digital wallet or banking account of the second user.

[0097] In Example 35, the subject matter of Example 34 can optionally include that the remittance information include a first user identification identifying the second user (e.g., a mobile identification, such as a mobile phone number, of the second user and/or a legal name of the second user); wherein the initiation notification includes a second user identification associated with the second instance of the messenger application running on the second user device; and wherein the at least one processors is configured to determine whether the first user identification corresponds to the second user identification and to provide the control instructions to complete the cross-border money remittance only in the case that it is determined that the first user identification corresponds to the second user identification.

[0098] In Example 36, the subject matter of Example 34 or 35 can optionally include that the banking account of the first user is associated with a first institution (platform) and wherein the digital wallet or banking account of the second user is associated with a second institution (platform) different from the first institution (platform).

[0099] In Example 37, the subject matter of Example 36 can optionally include that the at least one processors is further configured to: in response to receiving, from the first instance of the messenger application running on the first user device, instructions requesting a status of the cross-border money

remittance, transmit a first request to the first institution requesting a first status of the cross-border money remittance and transmit a second request to the second institution requesting a second status of the cross-border money remittance; and in response to receiving a first response from the first institution responsive to the first request and a second response from the second institution responsive to the second request, determine the status of the cross-border money remittance using the first status and the second status, and transmit the status of the cross-border money remittance to the first instance of the messenger application running on the first user device.

[00100] In Example 38, the subject matter of Example 36 or 37 can optionally include that the at least one processors is further configured to: in response to receiving, from the second instance of the messenger application running on the second user device, instructions requesting a status of the cross-border money remittance, transmit a first request to the first institution requesting a first status of the cross-border money remittance and transmit a second request to the second institution requesting a second status of the cross-border money remittance; and in response to receiving a first response from the first institution responsive to the first request and a second response from the second institution responsive to the second request, determine the status of the cross-border money remittance using the first status and the second status, and transmit the status of the cross-border money remittance to the second instance of the messenger application running on the second user device.

[00101] Example 39 is a system for cross-border money remittance, the system including: a first user device according to any one of Examples 16 to 24; and a second user device according to any one of Examples 25 to 33; and optionally further a server device according to any one of Examples 34 to 38.

[00102] It is understood that Examples referring to a device (e.g., user device or server device) may be carried out in a corresponding computer-implemented method and that a non-transitory computer-readable medium may store instructions to execute (using at least one processor) the corresponding computer-implemented method.

[00103] Various aspects detailed herein refer to a sharelink – messenger embedded remittance feature.

[00104] It should be understood that the singular terms "a", "an", and "the" include plural references unless context clearly indicates otherwise. Similarly, the word "or" is intended to include "and" unless the context clearly indicates otherwise.

[00105] It will be further understood that the terms "comprise" (and any form of comprise, such as "comprises" and "comprising"), "have" (and any form of have, such as "has" and "having"), "include" (and any form of include, such as "includes" and "including"), and "contain" (and any form of contain, such as "contains" and "containing") are open-ended linking verbs. As a result, a method or device that "comprises," "has," "includes" or "contains" one or more steps or elements possesses those one or more steps or elements, but is not limited to possessing only those one or more steps or elements. Likewise, a step of a method or an element of a device that "comprises," "has," "includes" or "contains" one or more features possesses those one or more features, but is not limited to possessing only those one or more features. Furthermore, a device or structure that is configured in a certain way is configured in at least that way, but may also be configured in ways that are not listed.

[00106] Approximating language, as used herein throughout the specification and claims, may be applied to modify any quantitative representation that could permissibly vary without resulting in a change in the basic function to which it is related. Accordingly, a value modified by a term or terms, such as "about," "substantially", is not limited to the precise value specified but within tolerances that are acceptable for operation of the embodiment for an application for which it is intended. In some instances, the approximating language may correspond to the precision of an instrument for measuring the value.

[00107] As used herein, the phrase of the form of "at least one of A or B" may include A or B or both A and B. Correspondingly, the phrase of the form of "at least one of A or B or C", or including further listed items, may include any and all combinations of one or more of the associated listed items.

[00108] The term “exemplary” may be used herein to mean “serving as an example, instance, or illustration”. Any aspect or design described herein as “exemplary” is not necessarily to be construed as preferred or advantageous over other aspects or designs.

[00109] The terms “at least one” and “one or more” may be understood to include a numerical quantity greater than or equal to one (e.g., one, two, three, four, [...], etc.). The term “a plurality” may be understood to include a numerical quantity greater than or equal to two (e.g., two, three, four, five, [...], etc.). The phrase “at least one of” with regard to a group of elements may be used herein to mean at least one element from the group consisting of the elements. For example, the phrase “at least one of” with regard to a group of elements may be used herein to mean a selection of: one of the listed elements, a plurality of one of the listed elements, a plurality of individual listed elements, or a plurality of a multiple of listed elements.

[00110] The words “plural” and “multiple” in the description and in the claims expressly refer to a quantity greater than one. Accordingly, any phrases explicitly invoking the aforementioned words (e.g., “a plurality of (objects)”, “multiple (objects)”) referring to a quantity of objects expressly refer to more than one of the said objects. The terms “group (of)”, “set (of)”, “collection (of)”, “series (of)”, “sequence (of)”, “grouping (of)”, etc., and the like in the description and in the claims, if any, refer to a quantity equal to or greater than one, i.e. one or more.

[00111] The term “data” as used herein may be understood to include information in any suitable analog or digital form, e.g., provided as a file, a portion of a file, a set of files, a signal or stream, a portion of a signal or stream, a set of signals or streams, and the like. Further, the term “data” may also be used to mean a reference to information, e.g., in form of a pointer. The term “data”, however, is not limited to the aforementioned examples and may take various forms and represent any information as understood in the art. Any type of information, as described herein, may be handled for example via one or more processors in a suitable way, e.g. as data.

[00112] A “transmission” of information may be a transmission of data representing the information. A “transmission” of data may be a direct transmission (without any manipulation of the data in between) or an indirect transmission (with some processing of the data in between). For example, a first device transmitting data to a second device may transmit the data indirectly by transmitting data representing some specific information to a third device (e.g., a server device) and the third device may transmit data (e.g., processed or unprocessed) representing the information to the second device.

[00113] The terms “processor” or “controller” as, for example, used herein may be understood as any kind of entity that allows handling data. The data may be handled according to one or more specific functions executed by the processor or controller. Further, a processor or controller as used herein may be understood as any kind of circuit, e.g., any kind of analog or digital circuit. A processor or a controller may thus be or include an analog circuit, digital circuit, mixed-signal circuit, logic circuit, processor, microprocessor, Central Processing Unit (CPU), Graphics Processing Unit (GPU), Digital Signal Processor (DSP), Field Programmable Gate Array (FPGA), integrated circuit, Application Specific Integrated Circuit (ASIC), etc., or any combination thereof. Any other kind of implementation of the respective functions, which will be described below in further detail, may also be understood as a processor, controller, or logic circuit. It is understood that any two (or more) of the processors, controllers, or logic circuits detailed herein may be realized as a single entity with equivalent functionality or the like, and conversely that any single processor, controller, or logic circuit detailed herein may be realized as two (or more) separate entities with equivalent functionality or the like.

[00114] The term “memory” as used herein may be understood as a computer-readable medium (e.g., a non-transitory computer-readable medium), in which data or information can be stored for retrieval. References to “memory” included herein may thus be understood as referring to volatile or non-volatile memory, including random access memory (RAM), read-only memory (ROM), flash memory, solid-state storage, magnetic tape, hard disk drive, optical drive, among others, or any combination thereof. Furthermore, it is appreciated that registers, shift registers, processor registers, data buffers, among others, are also embraced herein by the term memory. It is also appreciated that a single component referred to as “memory” or “a memory” may be composed of more than one different type of memory, and thus may refer to a collective component including one or more types of memory. It is readily understood that any

single memory component may be separated into multiple collectively equivalent memory components, and vice versa. Furthermore, while memory may be depicted as separate from one or more other components (such as in the drawings), it is understood that memory may be integrated within another component, such as on a common integrated chip.

[00115] The term “module” detailed herein refers to, or forms part of, or includes an Application Specific Integrated Circuit (ASIC); an electronic circuit; a combinational logic circuit; a field programmable gate array (FPGA); a processor (shared, dedicated, or group) that executes code; other suitable hardware components that provide the described functionality; or a combination of some or all of the above, such as in a system-on-chip. The term module may include memory (shared, dedicated, or group) that stores code executed by the processor.

[00116] The term “first”, “second”, “third” detailed herein are used to distinguish one element from another similar element and may not necessarily denote order or relative importance, unless otherwise stated. For example, a first table and a second table may be used to distinguish two tables including different data points.

[00117] Some of the operations described in this specification can be implemented as operations performed by a data processing apparatus on data stored on one or more computer-readable storage devices or received from other sources.

[00118] The term “data processing apparatus” encompasses all kinds of apparatus, devices, and machines for processing data, including by way of example a programmable processor, a computer, a system on a chip, or multiple ones, or combinations, of the foregoing. The apparatus can include special purpose logic circuitry, e.g., an FPGA (field programmable gate array) or an ASIC (application specific integrated circuit). The apparatus can also include, in addition to hardware, code that creates an execution environment for the computer program in question, e.g., code that constitutes processor firmware, a protocol stack, a database management system, an operating system, a cross-platform runtime environment, a virtual machine, or a combination of one or more of them.

[00119] A computer program (also known as a program, software, software application, script, or code) can be written in any form of programming language, including compiled or interpreted languages, declarative or procedural languages, and it can be deployed in any form, including as a stand-alone program or as a module, component, subroutine, object, or other unit suitable for use in a computing environment. A computer program may, but need not, correspond to a file in a file system. A program can be stored in a portion of a file that holds other programs or data (e.g., one or more scripts stored in a markup language document), in a single file dedicated to the program, or in multiple coordinated files (e.g., files that store one or more modules, sub programs, or portions of code). A computer program can be deployed to be executed on one computer or on multiple computers that are located at one site or distributed across multiple sites and interconnected by a communication network.

[00120] A user device, as described herein, may be any suitable device capable to interact with a user via one or more user interfaces (e.g., including a speaker, a display (e.g., a touchscreen), etc. The user device may be, for example, a smartphone, a tablet, a laptop, a smartwatch, a TV, a head-mounted display, augmented reality glasses, etc.

[00121] Various aspects refer to applications (short: apps). An application may be a computer program configured to be executed by one or more processors on a device, such as a user device.

[00122] A processor of a user device may be configured to implement a graphical user interface (GUI). A graphical user interface may be a digital interface which provides graphical components (e.g., graphical icons) on a display device (e.g., a touchscreen, a screen, etc.) and which allows a user to interact with the graphical components.

[00123] The term “remittance” as used herein may refer to a transfer of money from an (e.g., banking) institution in one country to an (e.g., banking) institution in another country. Therefore, the term “remittance” may also be referred to as “cross-border remittance” or “cross-border money remittance”. The term “cross-border” may include the transfer across a border (viz. from one country to another). Hence, a

remittance may be a financial transaction from a first institution in a first country to a second institution (different from the first institution) in a second country different from the first country. A user who is sending the money may be referred to as sending user (or short: sender) and a user to which the money is sent (i.e., the user who is receiving the money) may be referred to as receiving user (or short: receiver).

[00124] A transaction may include a transfer of money from a first institution to a second institution. An institution may be a banking institution providing a banking account from which money may be transferred or to which money may be transferred. An institution may be an online payment institution providing a digital wallet (also referred to as online payment account) from which money may be transferred or to which money may be transferred. A digital wallet may be linked to a banking account of a banking institution. A digital wallet may include (e.g., may store) a digital version of a banking card (e.g., a debit card, a credit card, etc.) associated with the banking institution.

[00125] Various aspects detailed herein refer an element (e.g., an identification, information, data, a web page, etc.) being “unique to be the cross-border money remittance”. The term “unique” may indicated that this element is associated with exactly one specific cross-border money remittance. Hence, this element is unambiguously assigned to exactly one cross-border money remittance. Thus, in an exemplary scenario in which a plurality of cross-border money remittances are processed (e.g., initiated and/or completed), there may be a plurality of elements (e.g., transaction identifications) and each element of the plurality of elements may be bijectively assigned to exactly one cross-border money remittance of the plurality of cross-border money remittances.

[00126] Some of the processes and logic flows described in this specification can be performed by one or more programmable processors executing one or more computer programs to perform actions by operating on input data and generating output. The processes and logic flows can also be performed by, and apparatus can also be implemented as, special purpose logic circuitry, e.g., an FPGA (field programmable gate array) or an ASIC (application specific integrated circuit).

[00127] While this specification contains many details, these should not be understood as limitations on the scope of what may be claimed, but rather as descriptions of features specific to particular examples. Certain features that are described in this specification or shown in the drawings in the context of separate embodiments can also be combined. Conversely, various features that are described or shown in the context of a single embodiment can also be implemented in multiple embodiments separately or in any suitable sub-combination.

[00128] Similarly, while operations are depicted in the drawings in a particular order, this should not be understood as requiring that such operations be performed in the particular order shown or in sequential order, or that all illustrated operations be performed, to achieve desirable results. In certain circumstances, multitasking and parallel processing may be advantageous. Moreover, the separation of various system components in the embodiments described above should not be understood as requiring such separation in all embodiments, and it should be understood that the described program components and systems can generally be integrated together in a single product or packaged into multiple products.

[00129] A number of embodiments have been described. Nevertheless, it will be understood that various modifications can be made. Accordingly, other embodiments are within the scope of the following claims.

CLAIMS

What is claimed is:

1. A computer-implemented method for cross-border money remittance, the method executed by at least one processor, and comprising:
 - initiating, using a money remittance application running on a first user device, a cross-border money remittance for transferring money from a banking account of a first user to a digital wallet or banking account of a second user;
 - transmitting remittance information regarding the cross-border money remittance to a first messenger application on the first user device;
 - in response to receiving the remittance information regarding the cross-border money remittance, the first messenger application requesting user information indicating the second user;
 - the first messenger application transmitting a transaction notification to a second messenger application running on a second user device associated with the second user, the transaction notification comprising information of the cross-border money remittance;
 - in response to receiving the transaction notification, the second messenger application requesting the second user to initiate reception of the money; and
 - in response to the second user initiating the reception of the money, completing the cross-border money remittance by transferring the money to the digital wallet or banking account of the second user.
2. The method according to claim 1, further comprising:
 - the money remittance application receiving processing instructions to process the cross-border money remittance using the first messenger application, wherein the remittance information are transmitted to the first messenger application in response to receiving the processing instructions.
3. The method according to claim 1 or 2, further comprising:
 - the money remittance application transmitting an application programming interface, API, call to a server associated with the first messenger application, the API call comprising the remittance information;
 - the money remittance application receiving, from the server, a transaction identification unique to the cross-border money remittance, the transaction identification comprising the remittance information.
4. The method according to claim 3, wherein transmitting the remittance information to the first messenger application comprises:
 - in response to receiving the transaction identification, the money remittance application invoking the first messenger application and transmitting the transaction identification to the first messenger application.
5. The method according to claim 3, wherein the transaction identification comprises a uniform resource locator and wherein transmitting the remittance information to the first messenger application comprises:
 - in response to receiving the transaction identification, the money remittance application instructing a browser application on the first user device to call a website corresponding to the uniform resource locator; and
 - the browser application invoking the first messenger application, thereby transmitting the transaction identification to the first messenger application.

6. The method according to any one of claims 1 to 5, wherein the remittance information the transaction notification each comprise a first user identification identifying the second user; and wherein completing the cross-border money remittance in response to the second user initiating the reception of the money comprises:
 - in response to the second user initiating the reception of the money, determining whether the first user identification corresponds to a second user identification associated with the second messenger application; and
 - completing the cross-border money remittance only in the case that it is determined that the first user identification corresponds to the second user identification.
7. The method according to any one of claims 1 to 6,
 - wherein the transaction notification comprises transaction information regarding the cross-border money remittance; and
 - wherein the method further comprises a graphical user interface, GUI, of the second messenger application showing the transaction information.
8. The method according to claim 7,
 - wherein the second messenger application requesting the second user to initiate the reception of the money comprises the graphical user interface of the second messenger application showing a reception button requesting the second user to initiate the reception of the money.
9. The method according to claim 8,
 - wherein the graphical user interface of the second messenger application shows the transaction information and the reception button within a dialog box window associated with a text conversation between the first user and the second user.
10. The method according to any one of claims 7 to 9, further comprising:
 - the first messenger application receiving first instructions on how the graphical user interface of the second messenger application should show the transaction information, wherein the transaction notification comprises the first instructions; and/or
 - the first messenger application receiving second instructions indicating a user-specific text message which is to be shown on the graphical user interface of the second messenger application together with the transaction information, wherein the transaction notification comprises the second instructions.
11. The method according to any one of claims 1 to 10,
 - wherein the banking account of the first user is associated with a first institution platform and wherein the digital wallet or banking account of the second user is associated with a second institution platform different from the first institution platform.
12. The method according to any one of claims 1 to 11,
 - wherein the first messenger application and/or the second messenger application comprises a cross-border money remittance application.

13. The method according to any one of claims 1 to 12, further comprising:
in response to the first messenger application receiving instructions requesting a status of the cross-border money remittance, a graphical user interface, GUI, of the first messenger application showing information indicating whether the second user initiated the reception of the money and/or whether the money has been transferred to the digital wallet or banking account of the second user.
14. The method according to any one of claims 1 to 13, further comprising:
in response to the second messenger application receiving instructions requesting a status of the cross-border money remittance, a graphical user interface, GUI, of the second messenger application showing information indicating whether the money has been transferred to the digital wallet or banking account of the second user.
15. A non-transitory computer-readable medium storing computer executable code comprising instructions for cross-border money remittance according to the method of any one of claims 1 to 14.
16. A server device for executing a cross-border money remittance, the server device comprising:
at least one processors configured to:
receive, from a money remittance application of a first user device, an application programming interface, API, call associated with a messenger application, the API call comprising remittance information regarding a cross-border money remittance for transferring money from a banking account of a first user to a digital wallet or banking account of a second user;
in response to receiving the API call, transmit a transaction identification unique to the cross-border money remittance to the money remittance application of the first user device, the transaction identification comprising the remittance information;
receive, from a first instance of the messenger application running on the first user device, a transaction notification comprising user information indicating a second user device associated with the second user;
in response to receiving the transaction notification, transmit remittance data to a second instance of the messenger application running on the second user device, the remittance data representing the remittance information and a reception request, wherein the reception request comprises instructions to request the second user of the second user device to initiate reception of the money;
receive an initiation notification from the second user device, the initiation notification indicating that the second user initiated the reception of the money;
in response to receiving the initiation notification, provide control instructions to complete the cross-border money remittance by transferring the money to the digital wallet or banking account of the second user.
17. The server device according to claim 16,
wherein the remittance information comprise a first user identification identifying the second user;
wherein the initiation notification comprises a second user identification associated with the second instance of the messenger application running on the second user device; and
wherein the at least one processors is configured to determine whether the first user identification corresponds to the second user identification and to provide the control instructions

to complete the cross-border money remittance only in the case that it is determined that the first user identification corresponds to the second user identification.

18. The server device according to claim 16 or 17,
wherein the banking account of the first user is associated with a first institution and wherein the digital wallet or banking account of the second user is associated with a second institution different from the first institution.

19. The server device according to claim 18, wherein the at least one processors is further configured to:

in response to receiving, from the first instance of the messenger application running on the first user device, instructions requesting a status of the cross-border money remittance, transmit a first request to the first institution requesting a first status of the cross-border money remittance and transmit a second request to the second institution requesting a second status of the cross-border money remittance; and in response to receiving a first response from the first institution responsive to the first request and a second response from the second institution responsive to the second request, determine the status of the cross-border money remittance using the first status and the second status, and transmit the status of the cross-border money remittance to the first instance of the messenger application running on the first user device; and/or

in response to receiving, from the second instance of the messenger application running on the second user device, instructions requesting a status of the cross-border money remittance, transmit a first request to the first institution requesting a first status of the cross-border money remittance and transmit a second request to the second institution requesting a second status of the cross-border money remittance; and in response to receiving a first response from the first institution responsive to the first request and a second response from the second institution responsive to the second request, determine the status of the cross-border money remittance using the first status and the second status, and transmit the status of the cross-border money remittance to the second instance of the messenger application running on the second user device.

20. A system for cross-border money remittance, the system comprising:
the first user device;
the second user device; and
the server device according to any one of Examples 16 to 19.