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October 2023

SAFE-SEND

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Mathew, Sachin Cherian Visa; GOH, CHANG KANG CHARLES Visa; Ting, Irvin Sie Ze Visa; Sahu, Jyoti Visa; Leow, Wen Yuan Galvin Visa; Chan, Jing Rong Visa; and Yang, Loh Guo Visa, "SAFE-SEND", Technical Disclosure Commons, (October 12, 2023)
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SAFE-SEND

VISA

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TECHNICAL FIELD

[0001] The present subject matter is, in general, related to bank transactions, and in particular to providing a Safe-Send transaction that may allow a sender to recall money sent to a recipient even after the transaction is completed.

BACKGROUND

[0002] A bank transfer or transaction is a process of transferring money from a sender's account to a recipient's account. It may be performed electronically using a user's online banking account or net banking account or it can be done physically at the bank. A sender may request the sender's bank to transfer a certain amount to a recipient. To carry out the transaction, the sender has to provide the recipient's name, recipient's bank account number, and the amount to be transferred. Once the money is transferred from the sender's account to the recipient account, the transaction gets completed at the moment and the sender receives a transaction receipt having a transaction reference number.

[0003] However, if the sender accidentally sends the money to a wrong account or recipient, the sender may not be able to cancel or recall the transaction. Instead, the sender may have to contact the customer care department at the bank providing them with all necessary details to register a complaint or meet the manager in person to explain the situation to the manager. If it is an intra-bank transaction, the bank may try to reach out to the wrong recipient and request the reversal. If it is a transfer to another bank, the sender's bank would act as a facilitator, providing the sender with details of the wrong recipient's bank and branch. The sender may have to personally visit the manager of the wrong recipient's bank and produce all proofs and communications regarding the incorrect transaction. The bank manager may then contact the wrong recipient and request that the incorrect credit is re-transferred to the sender. This process is tedious and risky because it requires a lot of physical effort from the sender's end and the reversal of the fund completely depends on the discretion of the recipient.

[0004] In scenarios where two parties are transacting, for example in the case of a buyer and a seller, the buyer pays the seller in exchange for a product or service upon agreeing to certain terms and conditions. However, if a transaction is made by the buyer, and the seller does not deliver the product or services, the transaction performed by the buyer cannot be revoked. Hence to avoid such fraud an escrow account could be used where an agreement is made between the seller and the buyer as a protective measure that ensures funds are securely held

until the sale is completed. However, escrow is a third party that is involved in the transaction and may incur extra charges. Hence there exists a need to identify a mechanism that may allow a sender to recall the transaction if the transaction was done mistakenly or unnecessarily.

[0005] The information disclosed in the background section of the disclosure is only for enhancement of understanding of the general background of the invention and should not be taken as an acknowledgement or any form of suggestion that this information forms the prior art already known to a person skilled in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate exemplary embodiments and, together with the description, explain the disclosed principles. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The same numbers are used throughout the figures to reference like features and components. Some embodiments of device or system and/or methods in accordance with embodiments of the present subject matter are now described, by way of example only, and with reference to the accompanying figures, in which:

[0007] **Figure. 1** shows an exemplary system **100** where the proposed technique of performing a Safe-Send transaction that may allow a sender to recall money transferred to a receiver even after the transaction is completed may be implemented, in accordance with some embodiments of the present disclosure.

[0008] **Figure 2** shows an exemplary block diagram **200** of the system **100** as illustrated in **Figure 1**, in accordance with some embodiments of the present disclosure.

[0009] **Figure 3A** illustrates a flow diagram representing a method of performing regular transactions.

[0010] **Figure 3B** illustrates a flow diagram representing an exemplary method of performing a Safe-Send transaction where the transaction is completed without sender performing a recall, in accordance with some embodiments of the present disclosure.

[0011] **Figure 3C** illustrates a flow diagram representing an exemplary method of performing a Safe-Send transaction and then recalling the transferred amount within the Safe-Send time limit, in accordance with some embodiments of the present disclosure.

[0012] The figures depict embodiments of the disclosure for purposes of illustration only. One skilled in the art will readily recognize from the following description that alternative embodiments of the structures and methods illustrated herein may be employed without departing from the principles of the disclosure described herein.

DESCRIPTION OF THE DISCLOSURE

[0013] In the present document, the word "exemplary" is used herein to mean "serving as an example, instance, or illustration." Any embodiment or implementation of the present subject matter described herein as "exemplary" is not necessarily to be construed as preferred or advantageous over other embodiments.

[0014] While the disclosure is susceptible to various modifications and alternative forms, specific embodiment thereof has been shown by way of example in the drawings and will be described in detail below. It should be understood, however, that it is not intended to limit the disclosure to the particular forms disclosed, but on the contrary, the disclosure is to cover all modifications, equivalents, and alternative falling within the spirit and the scope of the disclosure.

[0015] The terms “comprises”, “comprising”, or any other variations thereof, are intended to cover a non-exclusive inclusion, such that a setup, device, or method that comprises a list of components or steps does not include only those components or steps but may include other components or steps not expressly listed or inherent to such setup or device or method. In other words, one or more elements in a device or system or apparatus proceeded by “comprises… a” does not, without more constraints, preclude the existence of other elements or additional elements in the device or system or apparatus.

[0016] The terms "an embodiment", "embodiment", "embodiments", "the embodiment", "the embodiments", "one or more embodiments", "some embodiments", and "one embodiment" mean "one or more (but not all) embodiments of the invention(s)" unless expressly specified otherwise. The terms "including", "comprising", “having” and variations thereof mean "including but not limited to", unless expressly specified otherwise.

[0017] The present disclosure relates to techniques (systems and methods) of performing a transaction that may allow a sender to recall money transferred to a receiver even after the transaction is completed. The technique may be termed as "Safe-Send." Hereinafter the proposed method is referred to as "Safe-Send method." According to the Safe-Send method, when the sender sends a transaction request to the sender's bank for a transaction to be performed for a specified amount, the sender's bank may configure a Safe-Send amount limit and a Safe-Send time limit for the user to perform a recall of the transaction or in other words cancel the transaction that was performed. For example, when a sender sends a transaction request, the sender's bank may configure a Safe-Send amount of $Y and a Safe-Send time limit of X hours for the transaction and when the transaction amount is more than the configured Safe-Send amount the sender may have the option of recalling the transaction within the configured Safe-Send time limit, if needed. The Safe-Send amount and the Safe-Send time is configured/assigned by the bank based on the sender's profile i.e., customer's profile. For example, a customer with net worth less than $100K may be assigned a Safe-Send amount of $5000 and a Safe-Send time limit of 6 hours, while a customer with net worth greater than $1 Million may be assigned a Safe-Send amount of 100K and a Safe-Send time limit of 24 hours. This is based on a concept called "Future-Lien" which essentially is a "promise" to lien money coming from a specified account in the future. So, once the money comes into the receiver's bank account, the money is under Lien and the receiver will not be able to withdraw or use the money that is under Lien for the Safe-Send time limit. During the Safe-Send time limit, the sender has the option to recall the money. To recall the money that is in Lien, the sender may have to use a "Recall" button that appears next to the transaction or transfer button, when a transacted amount in under Lien. The "Recall" button appears only during the Safe-Send time limit and disappears after the Safe-Send time limit. At the end of the Safe-Send time limit, the money in the receiver's account is removed from Lien and is available for the receiver to perform transactions. In various embodiments, the method is applicable to bank accounts, online wallets, and other such means of performing transactions.

[0018] Referring now to **Figure 1**, which illustrates an exemplary system **100** where the proposed technique of performing a Safe-Send transaction that may allow a sender to recall money transferred to a receiver even after the transaction is completed may be implemented, in accordance with some embodiments of the present disclosure. The system **100** may include a sender's mobile device **110** that has the sender's bank application installed in it, a receiver's

mobile device **120** that has the receiver's bank application installed in it and a payee validation system **130**. When the sender wants to make a Safe-Send transaction to the receiver, the sender may open the bank application installed in the sender's mobile device **110** and may place a request to the bank to make a Safe-Send transaction of a specified transaction amount to the receiver. Upon receiving the transaction request from the sender, the sender's bank initiates a Safe-Send transaction comprising details of the sender's account number, transaction amount, Safe-Send amount, and Safe-Send time limit and sends the transaction initiation to the payee validation system **130**. Upon receiving the transaction initiation from the sender's bank, the payee validation system **130** sends a Future-Lien request to the receiver's bank and in response, the receiver's bank may accept to lien money coming from the sender's account for the specified Safe-Send time limit and the payee validation system receives an acknowledgement from the receiver's bank. Upon receiving the acknowledgement from the receiver's bank, the sender's bank makes the transaction for the specified transaction amount to the receiver's bank. The receiver bank acknowledges the transaction by sending a transaction ID to the sender's bank**.** The sender's bank then sends the transaction completed message and the transaction ID to the sender who receives the message and the transaction ID in the application installed in the mobile device **110**. Further, a "Recall" button also appears next to the transaction button in the application.

[0019] To recall the amount transferred the sender may press the "Recall" button anytime before the expiry of the Safe-Send time period. At the expiry of the Safe-Send time period the "Recall" button disappears, and the transferred amount is available for the receiver to use. If during the Safe-Send time period the sender recalls the transferred amount, the sender may press the "Recall" button that appeared in the application. Upon pressing the "Recall" button in the application, a recall request comprising the transaction ID is sent to the sender's bank. The bank initiates a Safe-Send recall comprising the transaction ID to the payee validation system **130** which in response sends the recall request to the sender's bank. Upon receiving the recall request from the payee validation system, the receiver's bank transfers the amount to the sender's bank and notifies the receiver in the receiver's application installed in the receiver's mobile device **120.** Further, the receiver's bank sends a recall completion message to the payee validation system which sends a recall completion message to the sender's bank. Upon receiving the recall completion message, the sender's bank sends a "Recall Completed" message to the sender in the sender's bank application installed in the sender's mobile device.

[0020] The sender's mobile device **110** and the receiver's mobile device **120** may include a mobile phone, a tablet, a laptop or any other device that may support the bank application.

[0021] Referring now to **Figure 2** that shows an exemplary block diagram **200** of the system **100** as illustrated in **Figure 1**. As shown in **Figure 2**, the consumer's mobile device may include a memory **212**, a transceiver **216**, and a processor **214**. The transceiver **216** is configured to facilitate exchange of data between the sender's mobile device and the payee validation system **130** and/or the receiver's mobile device **120**. The memory **212** is configured to store necessary commands needed for the sender's mobile device to display the sender's bank application and to make a transaction request in the sender's bank. The processor **214** is communicatively coupled to the memory **212** and to the transceiver **216**. The processor **214** processes or performs various operations of the mobile device **110**. In an exemplary embodiment, the processor **214** may execute the instructions to run the sender bank's mobile applications and to perform a Safe-Send transaction to the receiver's bank. Further, the processor **214**, may also recall the transaction within a specified time period even after making a transfer to the receiver.

[0022] As illustrated in **Figure 2**, the receiver's mobile device **120** may include at least one processor **224**, a transceiver **226**, and a memory **222** storing instructions executable by the at least one processor **224**. The processor **224** may execute payee validation system generated requests. In an exemplary embodiment, the processor **224** may receive a "Future Lien" request from the payee validation system and in response may accept to lien money coming from the sender's bank for the specified Safe-Send time limit and further, sends an acknowledgement to the payee validation system. Further, when the sender recalls the transferred amount, the processor **224** may receive the "Recall" request and transfer the amount to the sender's bank. After the amount is transferred, the processor **224** may notify the receiver about the "Recall" and sends a "Recall Completed" message to the payee validation system.

[0023] . The memory **222** may be communicatively coupled to the processor **224.** Further, the receiver's mobile device **120** may includes the transceiver **226** configured to receive the requests from the sender's bank or the payee validation system **130**. The transceiver **226** is also configured to send responses and acknowledgements to the sender's bank or the payee validation system 130.

[0024] As illustrated in **Figure 2**, the payee validation system **130** may include at least one processor **234** and a memory **232** storing instructions executable by the at least one processor **234**. The processor **234** may execute sender's and receiver's bank generated requests. In an exemplary embodiment, the processor **234** may receive a transaction initiation comprising details of the sender's account number, transaction amount, Safe-Send amount, and Safe-Send time limit from the sender's bank and in response may send a "Future Lien" request to the receiver's bank. Further the processor **234** may receive an acknowledgement from the receiver's bank if the receiver's bank accepts to lien money coming from the sender's bank for the specified Safe-Send time limit. Further, when the sender recalls the transferred amount, the processor **234** may receive a "Recall" initiation comprising the transaction ID from the sender's bank and in response may send the transaction ID to the receiver's bank. After the amount is transferred, the processor **234** may receive a "Recall Completed" message from the receiver's bank and may send the "Recall Completed" message to the receiver's bank.

[0025] . The memory **232** may be communicatively coupled to the processor **234.** Further, the receiver's mobile device **120** may includes a transceiver **236** configured to receive the requests from the sender's bank or the payee validation system. The transceiver **236** is also configured to send responses and acknowledgements to the sender's bank or the receiver's bank.

[0026] The memory **212**, **222, 232** may include a Random-Access Memory (RAM) unit and/or a non-volatile memory unit such as a Read Only Memory (ROM), optical disc drive, magnetic disc drive, flash memory, Electrically Erasable Read Only Memory (EEPROM), a memory space on a server or cloud and so forth. For the sake of illustration, it is assumed here that the memory is a non-volatile memory. Examples of the processor may include, but not restricted to, a general-purpose processor, a Field Programmable Gate Array (FPGA), an Application Specific Integrated Circuit (ASIC), a Digital Signal Processor (DSP), microprocessors, microcomputers, micro-controllers, digital signal processors, central processing units, state machines, logic circuitries, and/or any devices that manipulate signals based on operational instructions.

[0027] Referring now to **Figure 3A** which illustrates a flow diagram representing a method of performing regular transactions. The method includes sending a transaction request to the sender's bank (P1 is a sender and P2 is receiver). The transaction request includes the sender's account number and the amount of the transaction. The sender's bank transfers the specified

amount of the transaction to the receiver's bank and the receiver's bank sends an acknowledgment to the sender's bank confirming the receipt of the transferred amount. Upon receiving the acknowledgment from the receiver's bank, the sender's bank sends a message to the sender informing the status of the transfer i.e., the transfer is completed.

[0028] Referring now to **Figure 3B** that illustrates a flow diagram representing an exemplary method of performing a Safe-Send transaction where the transaction is completed without the sender performing a recall, in accordance with some embodiments of the present disclosure. The method includes, as **step 1**, the sender P1 places a request to the sender's bank P1 to make a Safe-Send transaction of a specified transaction amount to the receiver P2. For example, the sender places a request to transfer $7000 from the sender's account #123456. As **step 2**, upon receiving the transaction request from the sender, the sender's bank initiates a Safe-Send transaction comprising details of the sender's account number, transaction amount, Safe-Send amount and Safe-Send time limit and sends the transaction initiation to the payee validation system. As **step 3**, upon receiving the transaction initiation from the sender's bank, the payee validation system sends a Future-Lien request to the receiver's bank and in response, the receiver's bank may accept to lien money coming from the sender's account for the specified Safe-Send time limit. For example, the payee validation system sends a Future-Lien request to the receiver's bank for $7000 received from the sender's account #123456.

[0029] As **step 4**, upon accepting to lien money coming from the sender's account for the specified Safe-Send time limit, the receiver's bank sends an acknowledgement to the payee validation system. As **step 5**, the payee validation system sends a message to the sender's bank informing the approval received from the receiver's bank for the Safe-Send transfer initiated. As **step 6**, upon receiving the approval message from the payee validation system the sender's bank transfers the specified amount to the receiver's bank with pre-approved Lien. Hence, the transferred amount might not be available for the user for the specified time limit for usage due to lien. For example, the time limit specified for the Safe-Send transaction is 6 hours. Within the specified time limit of 6 hours, the sender may recall the money transferred. So, the receiver may not be able to use the money. As **step 7**, the receiver's bank sends an acknowledgement of the receipt of the transferred amount and a transaction ID to the sender's bank**.** The sender's bank, as **step 8**, sends the transaction completed message and the transaction ID to the sender who receives the message and the transaction ID in the application installed in the mobile device. Further a "Recall" button also appears next to the transaction button in the application.

As illustrated in Figure 3B, after the specified time limit, as **step 9**, the Lien ends and the "Recall" button may disappear from the sender's application and the receiver may now use the amount that was transferred. As **step 10**, the receiver's bank notifies the receiver about the status of the money received and as step 11, the receiver's bank notifies the payee validation system.

[0030] Referring now to **Figure 3C** that illustrates a flow diagram representing an exemplary method of performing a Safe-Send transaction and then recalling the transferred amount within the Safe-Send time limit, in accordance with some embodiments of the present disclosure. The method includes, as **step 1**, the sender places a request to the bank to make a Safe-Send transaction of a specified transaction amount to the receiver. For example, the sender places a request to transfer $7000 from the sender's account #123456. As **step 2**, upon receiving the transaction request from the sender, the sender's bank initiates a Safe-Send transaction comprising details of the sender's account number, transaction amount, Safe-Send amount and Safe-Send time limit and sends the transaction initiation to the payee validation system. As **step 3**, upon receiving the transaction initiation from the sender's bank, the payee validation system sends a Future-Lien request to the receiver's bank and in response, the receiver's bank may accept to lien money coming from the sender's account for the specified Safe-Send time limit. For example, the payee validation system sends a Future-Lien request to the receiver's bank for $7000 received from the sender's account #123456. As **step 4**, upon accepting to lien money coming from the sender's account for the specified Safe-Send time limit, the receiver's bank sends an acknowledgement to the payee validation system. As **step 5**, the payee validation system sends a message to the sender's bank informing the approval received from the receiver's bank for the Safe-Send transfer initiated. As **step 6**, upon receiving the approval message from the payee validation system the sender's bank transfers the specified amount to the receiver's bank with pre-approved Lien. Hence, the transferred amount might not be available for the user for the specified time limit for usage due to lien. For example, the time limit specified for the Safe-Send transaction is 6 hours. Within the specified time limit of 6 hours, the sender may recall the money transferred. So, the receiver may not be able to use the money.

[0031] As **step 7**, the receiver's bank sends an acknowledgement of the receipt of the transferred amount and a transaction ID to the sender's bank**.** The sender's bank, as **step 8**, sends the transaction completed message and the transaction ID to the sender who receives the

message and the transaction ID in the application installed in the mobile device. For example, the transaction ID generated for the transaction of $7000 is “XYZ”. Further a “Recall” button also appears next to the transaction button in the application. To recall the amount transferred the sender may press the “Recall” button anytime before the expiry of the Safe-Send time period. At the expiry of the Safe-Send time period the “Recall” button disappears, and the transferred amount is available for the receiver to use. As illustrated in Figure 3C, within the specified time limit, as **step 9**, the sender presses the “Recall” button and the transaction ID is sent to the sender’s bank. As **step 10**, the sender’s bank initiates Safe-Send Recall for the received transaction ID and sends the transaction ID to the payee validation system. As **step 11**, the payee validation system sends the Safe-Send Recall to the receiver’s bank and as **step 12**, the receiver bank transfers the amount that was earlier transferred by the sender’s bank. For example, “XYZ” is the transaction ID that was generated for the transfer of $7000 from the sender to the receiver during Safe-Send transfer. During Safe-Send Recall, the receiver bank receives the transaction ID “XYZ” and transfers the amount of $7000 to the sender’s bank. As **step 13**, the receiver’s bank notifies the receiver about the recall of the transferred amount and the completion of Recall. Finally, **as step 14**, the receiver bank notifies the payee validation system about the completion of Recall which in turn notifies the sender’s bank and the sender’s bank notifies the sender.

[0032] The illustrated steps are set out to explain the exemplary embodiments shown, and it should be anticipated that ongoing technological development will change the manner in which particular functions are performed. These examples are presented herein for purposes of illustration, and not limitation. Further, the boundaries of the functional building blocks have been arbitrarily defined herein for the convenience of the description. Alternative boundaries can be defined so long as the specified functions and relationships thereof are appropriately performed. Alternatives (including equivalents, extensions, variations, deviations, etc., of those described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the disclosed embodiments. It must also be noted that as used herein, the singular forms “a,” “an,” and “the” include plural references unless the context clearly dictates otherwise.

[0033] Furthermore, one or more computer-readable storage media may be utilized in implementing embodiments consistent with the present disclosure. A computer readable storage medium refers to any type of physical memory on which information or data readable

by a processor may be stored. Thus, a computer readable storage medium may store instructions for execution by one or more processors, including instructions for causing the processor(s) to perform steps or stages consistent with the embodiments described herein. The term "computer readable medium" should be understood to include tangible items and exclude carrier waves and transient signals, i.e., are non-transitory. Examples include Random Access Memory (RAM), Read-Only Memory (ROM), volatile memory, non-volatile memory, hard drives, CD ROMs, DVDs, flash drives, disks, and any other known physical storage media.

[0034] Finally, the language used in the specification has been principally selected for readability and instructional purposes, and it may not have been selected to delineate or circumscribe the inventive subject matter. Accordingly, the disclosure of the embodiments of the disclosure is intended to be illustrative, but not limiting, of the scope of the disclosure.

SAFE-SEND

ABSTRACT

The present disclosure relates to a method of performing a Safe-Send transaction that may allow a sender to recall money transferred to a receiver even after the transaction is completed. According to the method, when the sender sends a transaction request the sender's bank configures a Safe-Send limit and a Safe-Send time limit for the sender to perform a recall of the transaction. This is based on a concept called "Future-Lien." So, once the money is transferred to the receiver's bank account, the money is under Lien and the receiver would not be able to use the money for the Safe-Send time limit. During the Safe-Send time limit, the sender has the option to recall the money. At the end of the Safe-Send time limit, if the money is not recalled the money in the receiver's account is removed from Lien and is available for use by the receiver.

Figure. 3C

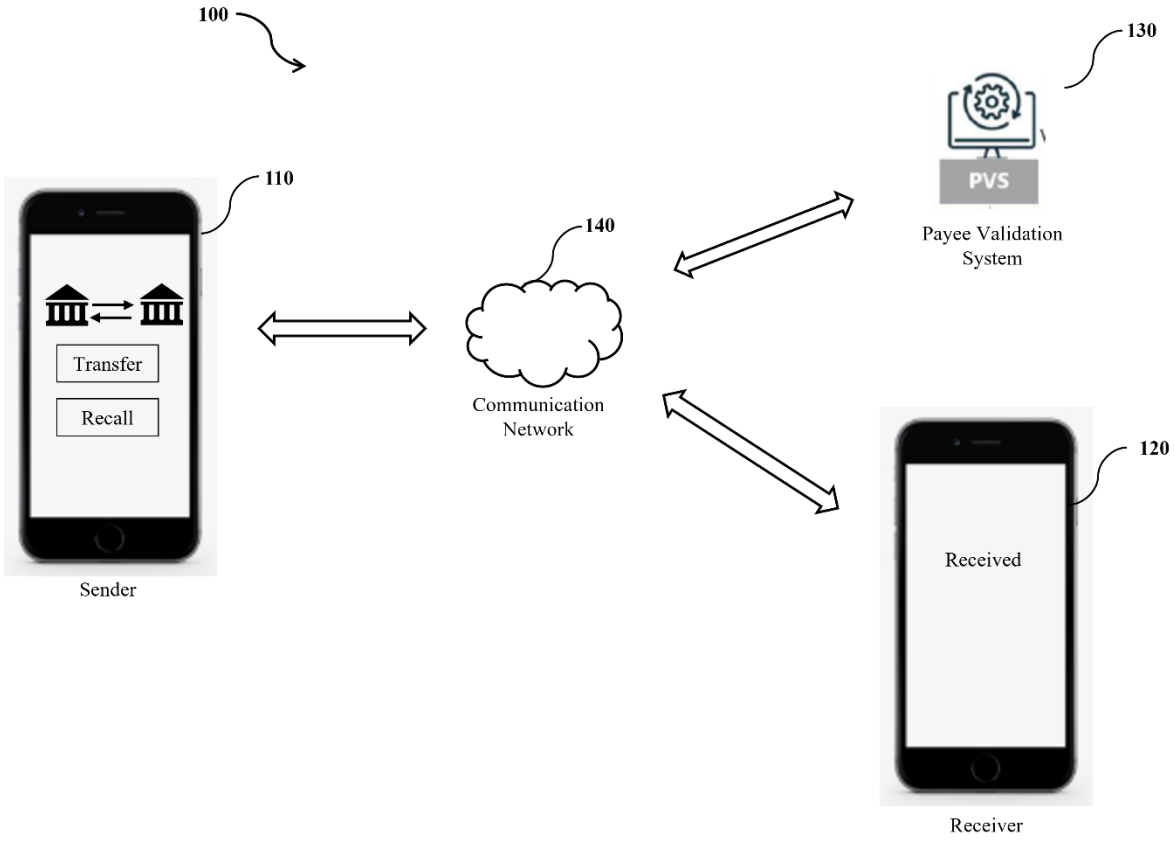

Figure 1

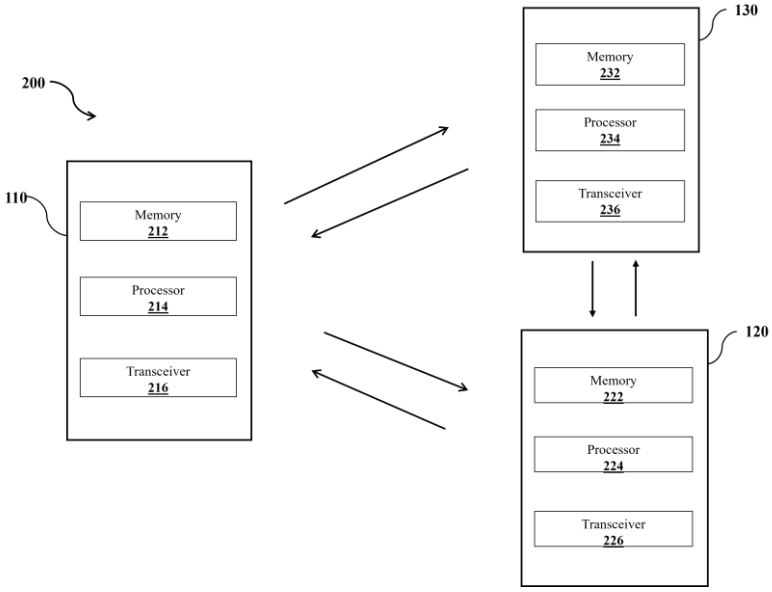

Figure 2

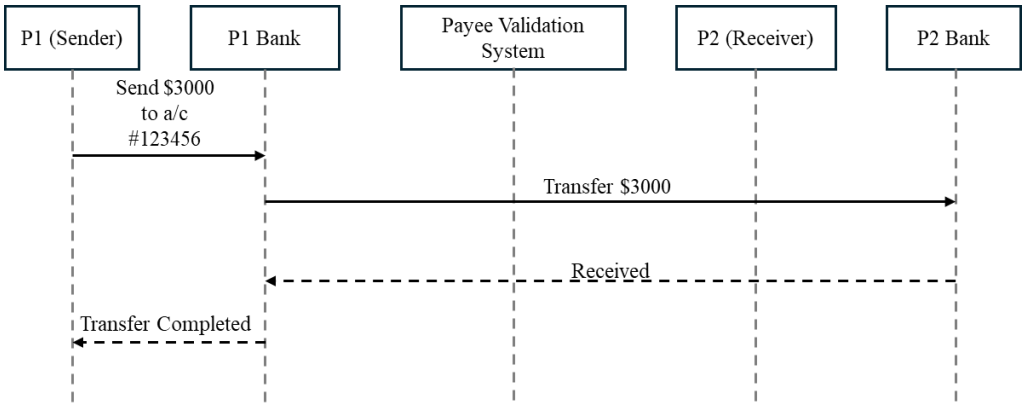

Figure 3A

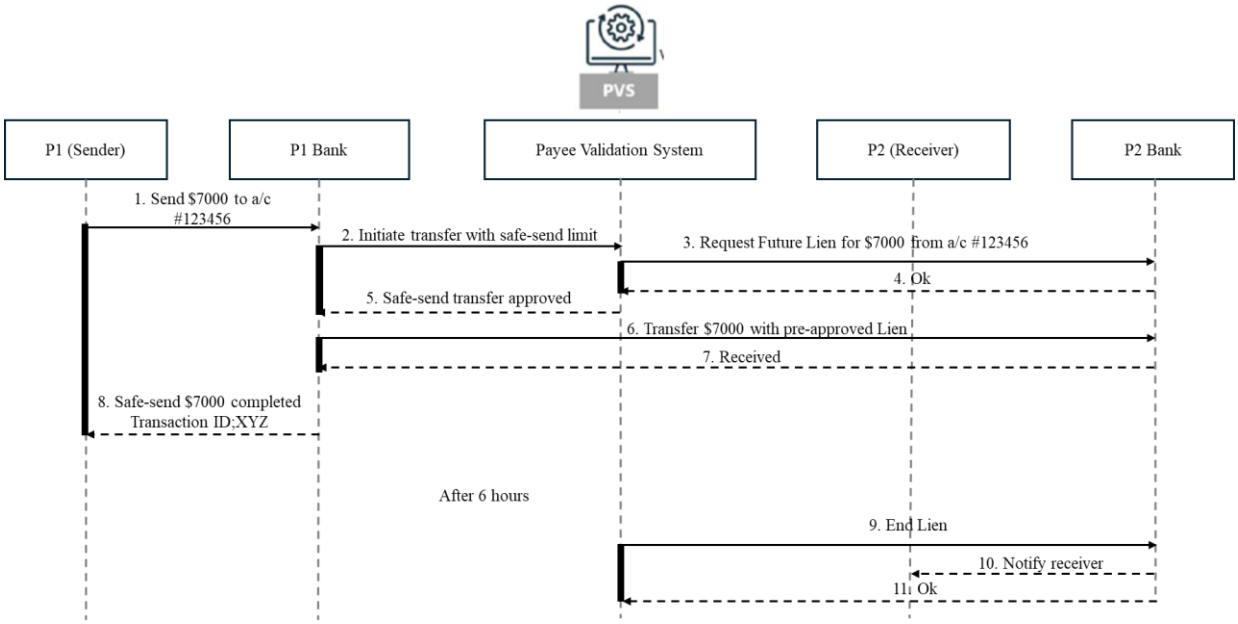

Figure 3B

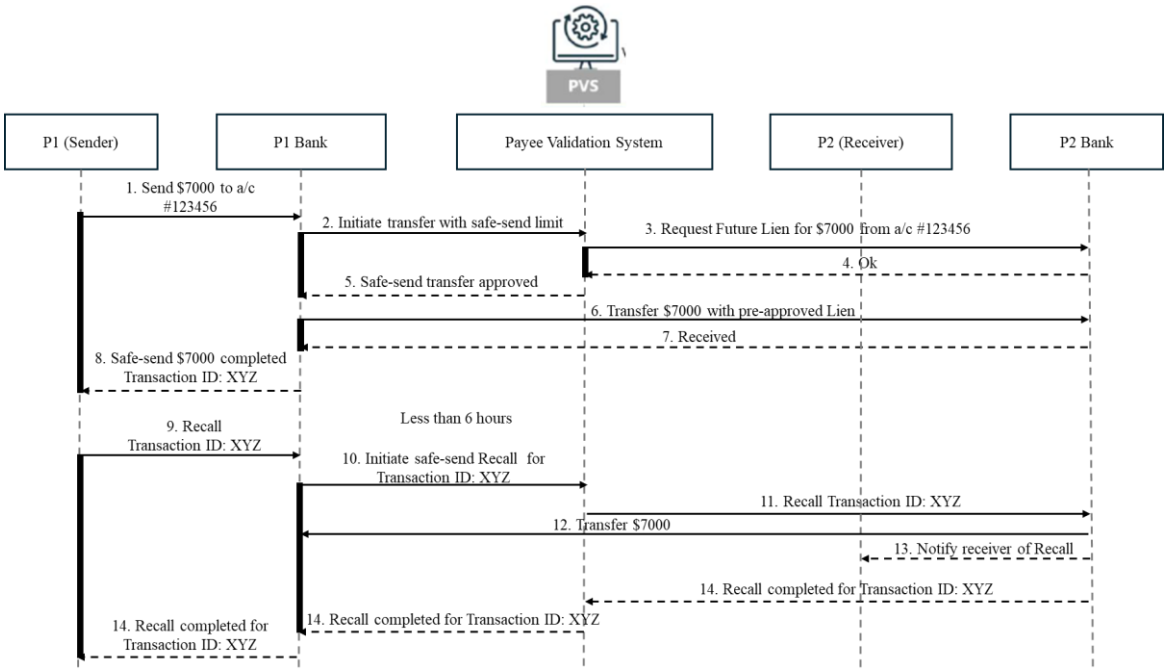
PVS
P1 (Sender)
P1 Bank
Payee Validation System
P2 (Receiver)
P2 Bank
1. Send $7000 to a/c #123456
2. Initiate transfer with safe-send limit
3. Request Future Lien for $7000 from a/c #123456
4. Ok
5. Safe-send transfer approved
6. Transfer $7000 with pre-approved Lien
7. Received
8. Safe-send $7000 completed Transaction ID: XYZ
Less than 6 hours
9. Recall Transaction ID: XYZ
10. Initiate safe-send Recall for Transaction ID: XYZ
11. Recall Transaction ID: XYZ
12. Transfer $7000
13. Notify receiver of Recall
14. Recall completed for Transaction ID: XYZ
14. Recall completed for Transaction ID: XYZ
14. Recall completed for Transaction ID: XYZ

Figure 3C