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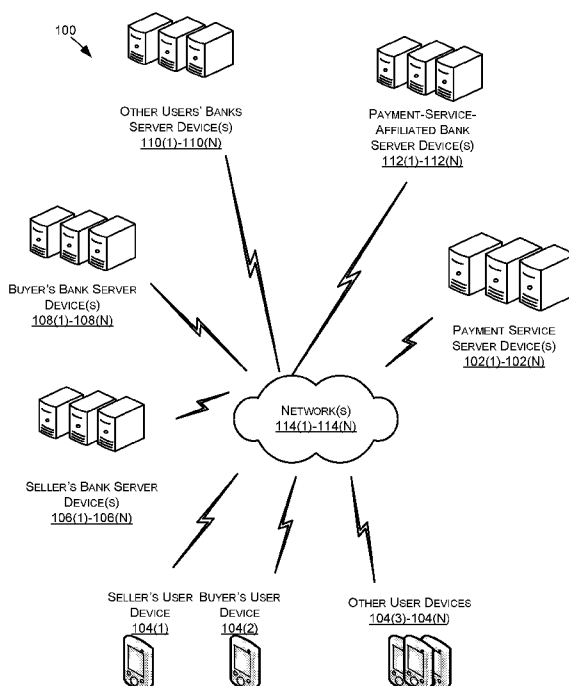


FIG. 1

(57) Abstract: Techniques are described for conducting an electronic transaction using a split-commission payment service. Techniques can include using currency-based credits, wherein credits are also provided as commissions to a referrer of the payor and a previous payee of the payor. The techniques can include one or more of a payment service providing a payment application to a user device of a user, causing a financial account to be opened on a user's behalf at a financial institution affiliated with the payment service, transferring funds from a funding source of a user to the financial account, associating a user profile of a user with credits equivalent to a balance of the financial account, receiving transaction data for a transaction, determining a payee fee for the transaction, transferring currency or credits equivalent to the transaction amount from payor to payee, splitting the payee fee between at least the payment service, referring user, and previous payee, and distributing currency or credits accordingly.



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SYSTEMS AND METHODS FOR A CREDIT-BASED SPLIT-COMMISSION ELECTRONIC PAYMENT NETWORK

RELATED APPLICATIONS

[0001] This PCT application claims priority from U.S. Provisional Patent Application No. 63/168,228, filed March 30, 2021, which is incorporated herein by reference.

BACKGROUND

[0002] Credit card and debit card transactions have traditionally come at a cost to merchants. That cost can be some combination of interchange fees, assessment fees, service fees, and a payment processor's markup. In these traditional systems, the merchant bears the cost of the convenience that the customer enjoys by paying with a payment card.

[0003] Conventionally, the merchant fee in a payment card transaction is a percentage of the transaction amount plus a flat fee, together often totaling around 2% of the transaction amount. There can be a number of components of the merchant fee, which can be paid to different entities necessary in processing and settlement of the payment. The largest percentage of the merchant fee is often the interchange fee, which is paid to the issuer of the customer's payment card, and the assessment fees, which can be paid to the payment card network. A percentage is often also paid to the payment processor. Thus, processing payment card transactions conventionally requires participation of multiple entities beyond the merchant and customer and payment of multiple fees.

[0004] Further, while digital payments can be performed using peer-to-peer technology, often at a lower cost per transaction to the payee than payment card transactions, traditional peer-to-peer payment processors limit the total amount that any one user can pay (or be paid) in a period of time. Additionally, in conventional peer-to-peer systems, it can take days for funds to be transferred to a payee's bank account. This makes digital payments an inadequate solution for many transactions.

[0005] There is a need for a payment network that minimizes the cost to payees to accept payments, minimizes the number of entities involved in processing a transaction, minimizes the time to transfer funds from payor to payee, and minimizes the number of funds transfers so as to minimize processing resources. There is also a need to incentivize participation in an electronic payment system.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The detailed description is set forth with reference to the accompanying figures. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The use of the same reference numbers in different figures indicates similar or identical items or features.

[0007] FIG. 1 illustrates an example system for conducting a split commission transaction within a community payment network, as described herein.

[0008] FIG. 2 is a flow diagram illustrating an example process for enrolling a new user with a community payment network, as described herein.

[0009] FIGS. 3A and 3B are a flow diagram illustrating an example process for conducting a split-commission transaction in the community payment network, as described herein.

[0010] FIG. 4 is a flow diagram illustrating an example process that determines payee fee and commissions for a payment transaction, as described herein.

[0011] FIG. 5 illustrates a block diagram of select components of a payment service server device(s), as described herein.

[0012] FIG. 6 illustrates a block diagram of select components of user device(s), as described herein.

DETAILED DESCRIPTION

[0013] Techniques described herein are directed, at least in part, to a community payment network that uses credits backed by currency. In the techniques described herein, a payee fee can be split and distributed to a plurality of entities (e.g., one or more of a payment service, a user that referred the payor to the community payment network, a bank, a charity, a payor, and the payee in the payor's most recent network transaction preceding the transaction in which the payee fee is being paid). Using techniques described herein, a payee that accepts payment via the community payment network pays a payee fee to the payment service, and a portion of the fee can be paid out by the payment service as commission to other entities, which can include other community payment network users such as the referring user and the previous payee. In various examples, the other entities can also or alternatively include one or more financial institutions and/or one or more non-profits.

[0014] Techniques described herein enable a more efficient electronic payment transaction by reducing the number of participants and reducing the number of communications. The unique

configuration of devices and applications implemented in the techniques described herein provide enhanced efficiency to electronic payment processing. Instead of a payment processor having to communicate with a card network and issuer for each transaction, a user of the instant payment network can pre-fund a financial account affiliated with the payment service, and credits can be adjusted as the user engages in transactions. Further, payee fees can be lower than traditional electronic transactions, at least partly because of such process and system simplification.

[0015] Further, the techniques described herein retain fees that would otherwise be paid to credit card issuers and card networks and distribute them to payment network users and/or other entities, who can be individuals, small businesses, etc.

[0016] Paying commissions to the referring user and previous payee serves an incentive to recruit members and accept the payment network form of payment. In this way, membership in the community payment network can grow exponentially or virally. Additionally or alternatively, an incentive to participate in the community payment network is the lower payee fee than is traditionally charged in a credit card transaction or other electronic transaction.

[0017] In some examples, a “payment service” is the payment service entity that processes payments or other funds transfers, including authenticating payment information for a transaction, approving a transaction, causing transfer of value between the parties to the transaction, and paying commission to a referring user and a previous payee. In examples, the payment service can offer other services such as inventory management, loyalty program administration, discount distribution, expense analysis and/or tracking, etc.

[0018] In some examples, a “user” is a member of the community payment network who uses the community payment network for receipt or provision of payment to another member of the community payment network. The user can be an end-user of a community payment network application (“payment application”) provided by the payment service. For purposes of this discussion “member” and “user” are used interchangeably. Depending on the transaction, a user can be a payor or a payee. As used herein, a “payor” is a user who is providing a payment in a transaction. As used herein, a “payee” is a user who is receiving a payment in a transaction. A user can in some transactions be a payor and in other transactions be a payee. In some examples, a merchant can be a payee when the merchant is receiving payment in a transaction. For the purpose of this discussion, a “merchant” can be any entity that offers items (e.g., goods or services) for acquisition (e.g., sale, lease, free, etc.). In some examples, the transaction can be a peer-to-peer

transaction in which the payee is a member of the community payment network who is not a merchant but an individual who is receiving funds from another individual in their personal capacities. For example, payment can be made for a loan, for a private sale, or in other peer-to-peer transactions.

[0019] In some examples, a “referring user” or “referrer” of a user is another member of the community payment network that referred the user to enroll with the community payment network. In some examples, referring users and referrals can be identified by the payment service using data submitted in association with an enrollment request from a user. For instance, an invitation from a first member to a second member can be in the form of a code (e.g., QR code, alphanumeric code, etc.) that includes data representative of the identity of the first member. The data can be transmitted to the payment service when the second member includes the code in a request to enroll in the community payment network. In other examples, a referring user can be manually identified by a user as part of an enrollment process. Additionally, a user need not have a referring user to be part of the community payment network. For example, the user can learn of the community payment network on their own and can enroll without having been referred.

[0020] In some examples, a “previous payee” is a payee with whom the payor entered a transaction that immediately preceded a pending transaction. In other words, the payee in the payor’s most recent historical transaction is referred to as a “previous payee.”

[0021] In some examples, a “payee fee” is a fee charged by the payment service to a payee for conducting a transaction via the community payment network. In other words, the payee fee is the cost to the payee for receiving payment via the community payment network. A payee fee can be a set amount, a percentage of a total transaction amount, a combination of a set amount and a percentage, etc. For example, a payee fee can be 1% of a transaction amount, up to a maximum fee. The payee fee can be set by agreement between the payment service and the payee upon payee enrollment. The payee fee can vary by particular payee, by particular payor, by location of the transaction, by merchant category of the payee or the payor, by date of transaction, by transaction history of at least one of the payor or payee, and the like. A payee fee for a particular payee can depend on the particular transaction, and a payee fee for a first payee may not be the same as the payee fee for a second payee in a transaction that is otherwise comparable. In examples, a payee fee may be paid in credits; in examples, the payee fee may be paid in currency.

[0022] In some examples, a “community payment network” is a plurality of individuals and/or entities participating in a payment system in which credits are used in transactions in place of currency and in which there is a split commission arrangement that divides a payee fee among at least a referring user of a payor, a previous merchant, and a payment service administering the community payment network. A portion of the payee fee may also be allocated to one or more of a financial institution, a non-profit organization or other charity, etc. “Community payment network” is used interchangeably with “payment network” herein.

[0023] In some examples, “bank account” is used interchangeably with “financial account” and is a financial account at a financial institution. In some examples, a “financial institution” can include, but is not limited to, one or more of a commercial bank, a retail bank, an internet bank, a credit union, a savings and loan association, or a brokerage firm.

[0024] In some examples, a “funding source” is a repository of resources associated with a user. In some examples, a funding source can be a deposit account or savings account of a user at a financial institution. In some examples a funding source can be a cryptocurrency account of a user. A funding source can additionally or alternatively be a credit card or debit card of the user. A funding source can additionally be gold or another tangible asset owned by a member. In examples, a funding source can be used as a source of a user’s funds to fund a PSAB financial account. In some examples, a “payment-service-affiliated bank financial account” or PSAB financial account is a financial account at a financial institution selected by the payment service that falls under a master account the payment service maintains at that bank. The PSAB financial account can be separate from the funding source and can be opened in association with a user enrolling with the community payment network. Funds from a funding source can be transferred to the PSAB financial account and vice versa. In examples, such transfers can be performed using ACH payments or other mechanisms.

[0025] In some examples, a “user profile” is a collection of data associated with a user’s membership in the community payment network. A user profile can be stored in a data store associated with the payment service and/or a storage device(s) associated with the payment service server device(s). In an example, a user profile can include information regarding a user’s identity, funding sources, PSAB financial account, transaction history, referring user, referrals made by the user, credit balance, etc. Stored data can be encrypted and stored on secure servers, which can protect personally identifiable information, details about financial accounts, funding sources, etc.

[0026] In some examples, “credits” are units within the community payment network to represent value. In an example, one credit can be equivalent to 1 USD, 100 USD, 1000 USD, or any other dollar amount. In an example in which one credit is equivalent to 1 USD, in a transaction in which a payor obtains goods or services from a payee valued at 100 USD, the payment service removes 100 credits from a payor’s credit balance and the payment service can distribute the 100 credits to the payee, payment service, referring user, previous payee, or others in accordance with an example of the method and system described herein.

[0027] Techniques described herein are often described as occurring in a retail merchant-customer context in which a merchant is a payee and a customer is a payor. However, techniques described herein can also be applied in other contexts. That is, techniques described herein are not limited to retail merchants, customers, etc. and can also be applied to other contexts such as peer-to-peer (“P2P”) money transfer, lending, invoice settlements, and the like.

[0028] Techniques described herein can provide a number of benefits and improvements over conventional techniques. Many of these improvements are technological improvements to the functioning of computers or to other types of technology. For example, by providing for payments via credit transfer within a community payment network, multiple intermediate financial transfers can be avoided. That is, by using credits, a digital substitute for currency, it is unnecessary to transfer funds between financial institutions (e.g., issuer, acquirer, merchant, customer, etc.) after every transaction. Instead, a balance of credits can be maintained for users. A credit balance can be represented by data in a database associated with the payment service. A transaction can simply comprise an update of data (representing a change in a credit balance) performed by a single entity (the payment service). When a user wishes to “cash out” (e.g., convert credits to currency), a credit balance of the user is converted to currency. A transfer from a PSAB financial account of the user to an original funding source of the user (e.g., a personal checking account, savings account, etc.), or to another account is made. A user can engage in a plurality of transactions before cashing out, however, for which credits, not currency, are transferred. Conventionally, a payment transaction involves credits or debits to multiple accounts (issuer, merchant’s bank, funds processor, etc.)

[0029] In techniques described herein, transactions can be consolidated because of the nature of the community payment network because individual transactions in the payment network do not require “settlement” in a traditional sense. Additionally, commission payments can accumulate without a user needing to take any action and credits need not be cashed out until requested.

Eliminating the issuer *and* eliminating the complex merchant fees *and* enabling effortless commissions *and* eliminating or reducing the need for inter-bank communications provide benefits to efficiency, memory, and processing, on the payment service device and obviates the need for other entities and their devices, such as that of card issuer, card network, etc. In at least these ways, technology is improved. Moreover, there can be benefits to the users such as reduced transaction fees, fewer bank transactions, an absence of payment amount caps, etc. Further, the community payment network allows participation by merchants and individuals as equals. In examples, users who are merchants and users who are individuals can pay the same payee fees, receive the same conversion factor, and earn the same commissions when acting as a referring user or “previous payee.” Additionally, the payment service may withhold value from commission payments to pay as taxes in amounts that may be based on the countries in which the transaction is being conducted. The taxes may be paid directly to government entities in some examples. Moreover, value from commission payments may be held back by the payment service and distributed by the payment service to other entities such as charities, non-profit corporations, etc. at the election or designation of a user.

[0030] At least for the reasons given above, techniques described herein, and systems described as implementing techniques described herein, are unconventional, non-routine, non-generic, and yield improvements to relevant technologies.

[0031] Reference to an “embodiment” in this document does not limit the described elements to a single embodiment; all described elements can be combined in any embodiment in any number of ways. Furthermore, for the purposes of interpreting this specification, the use of “or” herein means “and/or” unless stated otherwise. The use of “a” or “an” herein means “one or more” unless stated otherwise. The use of “comprise,” “comprises,” “comprising,” “include,” “includes,” and “including” are interchangeable and not intended to be limiting. Also, unless otherwise stated, the use of the terms such as “first,” “second,” “third,” “upper,” “lower,” and the like do not denote any spatial, sequential, or hierarchical order or importance, but are used to distinguish one element from another. It is to be appreciated that the use of the terms “and/or” and “at least one of”, for example, in the cases of “A and/or B” and “at least one of A and B”, is intended to encompass the selection of the first listed option (A) only, or the selection of the second listed option (B) only, or the selection of both options (A and B). As a further example, in the cases of “A, B, and/or C” and “at least one of A, B, and C”, such phrasing is intended to encompass the selection of the first

listed option (A) only, or the selection of the second listed option (B) only, or the selection of the third listed option (C) only, or the selection of the first and the second listed options (A and B) only, or the selection of the first and third listed options (A and C) only, or the selection of the second and third listed options (B and C) only, or the selection of all three options (A and B and C). This can be extended, as readily apparent by one of ordinary skill in this and related arts, for as many items listed.

[0032] It should also be appreciated by those skilled in the art that any block diagrams, steps, or sub-processes herein represent conceptual views of illustrative systems embodying the principles of the present subject matter. Similarly, it will be appreciated that any flow charts, flow diagrams, state transition diagrams, pseudo code, and the like represent various processes which can be substantially represented in computer readable medium and so executed by a computer or processor, whether or not such computer or processor is explicitly shown. The order in which the methods are described are not intended to be construed as a limitation, and any number of the described method blocks can be deleted, moved, added, subdivided, combined, and/or modified in any order to implement the methods, or an alternative combination or sub-combinations. Also, while steps, sub-processes or blocks are at times shown as being performed in series, some steps, sub-processes, or blocks can instead be performed in parallel, or can be performed at different times as will be recognized by a person of ordinary skill in the art. Further any specific numbers noted herein are only examples; alternative implementations can employ differing values or ranges. Furthermore, the methods can be implemented in any suitable hardware, software, firmware, or combination thereof.

[0033] FIG. 1 illustrates an example system 100 for conducting a split commission transaction within a community payment network, as described herein. System 100 includes payment service server device(s) 102(1)-102(N), user device(s) 104(1)-104(N) (including seller's user device 104(1) and buyer's user device 104(2), and other user devices 104(3)-104(N)), seller's bank server device(s) 106(1)-106(N), buyer's bank server device(s) 108(1)-108(N), other users' banks server device(s) 110(1)-110(N), and payment-service-affiliated bank (PSAB) server device(s) 112(1)-112(N). Server devices may be also referred to herein a "server(s)". The devices of system 100 communicate with each other via network(s) 114(1)-114(N) (e.g., the Internet, cable network(s), cellular network(s), wireless network(s) (e.g., Wi-Fi) and wired network(s), as well as close-range communications such as Bluetooth®, Bluetooth® low energy, and the like).

[0034] While a single seller's user device 104(1) and buyer's user device 104(2) are illustrated, in additional or alternate examples, system 100 can have multiple seller devices 104(1) and buyer devices 104(2). Additionally, each user of a plurality of users of the payment service can be associated with a bank, and so system 100 can include a plurality of users' banks server device(s) (106(1)-106(N), 108(1)-108(N), 110(1)-110(N)) for a plurality of users. Moreover, for simplicity of reference, components throughout this disclosure may be referred to in the singular form and in connection with a single generalized reference numeral. For example, user device(s) 104(1)-104(N) (i.e., the plural form) may be referred to as a user device 104 (i.e., the singular form). Nonetheless, it should be understood that use of the singular form may include the plural form in certain implementations.

[0035] One or more of payment service server device 102, user device 104, seller's bank server device 106, buyer's bank server device 108, other users' banks server device 110, or PSAB server device 112 can include any type of computing device that is generally configured to perform an operation. For example, one or more of the payment service server device 102, user device 104, seller's bank server device 106, buyer's bank server device 108, other users' banks server device 110, or PSAB server device 112 can be implemented as a laptop computer, a desktop computer, a server, a smart phone, an electronic reader device, a mobile handset, a personal digital assistant (PDA), a portable navigation device, a portable gaming device, a tablet computer, a watch, a portable media player, a television, a set-top box, a computer system in a car, an appliance, a camera, a robot, a hologram system, a home-based computer system (e.g., intercom system, home media system, etc.), a projector, an automated teller machine (ATM), a pair of glasses with computing capabilities, and so on.

[0036] A payment service associated with payment service server device(s) 102(1)-102(N) can constitute an online payment service that processes payments for multiple users. Payment service server device(s) 102(1)-102(N) can expose a network-based application programming interface (API) through which the payment service provides services to multiple users via user devices 104(1)-104(N). For the purpose of this discussion, the payment service and/or the payment service server device(s) 102(1)-102(N) may be any number of servers, an entity, a platform, a service provider, a service provider network, etc. The payment service may maintain a website, platform, database, etc. that is accessible by the users via user devices 104(1)-104(N). In some embodiments, the payment service may offer various network-based (or "cloud-based") services to the users to

fulfill computing needs of the users. In some embodiments, the payment service may operate payment service networks that include clusters of managed servers (or other hardware-based computing devices) stored in data centers located across different geographic regions. Payment service server device(s) 102(1)-102(N) are described further below in the discussion for FIG. 5.

[0037] A user device of user devices 104(1)-104(N) can be a point-of-sale (POS) device and can execute a payment application that can be provided by the payment service server device(s) 102(1)-102(N) to perform activities associated with the payment network. User devices 104(1)-104(N) are described further below in the discussion for FIG. 5.

[0038] Seller's bank server device(s) 106(1)-106(N) and buyer's bank server device(s) 108(1)-108(N) can be associated with banks or other financial institutions at which seller and buyer, respectively, have financial accounts.

[0039] PSAB server device(s) 112(1)-112(N) can be associated with a PSAB bank designated by the payment service to open and hold payment network-related financial accounts. PSAB server device(s) 112(1)-112(N) maintain PSAB financial accounts for users of the community payment network. The payment service can hold a master account at the PSAB, to which the users' financial accounts can be associated. Payment service server device(s) 102(1)-102(N) can cause PSAB server device(s) 112(1)-112(N) to open a PSAB financial account for a user upon the user's enrollment with the community payment network. Payment service server device(s) 102(1)-102(N) can provide the PSAB bank information about users (e.g., name, social security number, address, citizenship, etc.), which can be obtained via an enrollment process or through queries to users, to open a PSAB financial account on the users' behalf. In examples, an alternative financial institution to the PSAB can be used (if a user is not qualified to open a U.S. bank account, for example).

[0040] In embodiments, no PSAB device 112(1)-112(N) is included in system 100. In such embodiments, users can use their own funding sources (e.g., financial accounts held at their own financial institutions (e.g., 106(1)-106(N), 108(1)-108(N), or 110(1)-110(N))) as financial backing for the credits used in the community payment network.

[0041] At least some additional components and functions of, and interactions between, devices in example system 100 are described below (at least with respect to FIGS. 4 and 5).

[0042] FIG. 2 is a flow diagram illustrating an example process 200 for enrolling a new user with a community payment network, as described herein.

[0043] Block 202 illustrates receiving a request from a user to enroll with a community payment network. Payment service server device(s) can receive the request from a user device, via web form, email, direct message, application notification, etc. In examples, the request can include or be associated with referring user information. Referring user information identifies an existing member of the payment network who referred the user to the payment service. Referring user information can be embedded as data in an enrollment request. In an example, a user can scan a QR code presented by a merchant user or activate a URL provided by the merchant that directs the user to an enrollment interface. In an example, scanning a QR code with a user device can cause a browser window to open on the user device, from which payment service server device(s) can obtain enrollment information input by the user. In examples, for a user to qualify as a referring user in the payment network, the referee must enroll within a threshold time of the user providing the referee the QR code or URL. For instance, the payment service can timestamp the QR code upon its generation and compare that timestamp with an enrolling user's first contact with the payment service. Additionally or alternatively, a user can provide an enrolling user a code. When the enrolling user provides the code to the payment service during enrollment, the user that provided the code to the enrolling user is acknowledged by the payment service as the referring user. Additionally or alternatively, referring user information can be obtained by payment service server device(s) separately from an enrollment request. An identifier for a referring user can be stored by the payment service in association with a new user profile for the user, which can be stored in a data store associated with payment service server device(s).

[0044] In examples, a user can enroll at a time of a transaction with a referring user. Transaction data, an enrollment link, and a referring user identifier can be obtained by a user device of the user (e.g., by scanning a QR code presented to the user by a merchant via a merchant device). In examples, the user can enroll before performing any transaction in the community payment network. In an example, a user device can scan a QR code displayed by a merchant device or posted at a merchant location, such that the merchant associated with the merchant device can be qualified as the referring user though no transaction has yet occurred. In other examples, a user can enroll by visiting a webpage of the community payment network without having been directly referred, such that, in examples, commissions from the user's transactions do not get split three or more ways (e.g., payment network, previous merchant, referring user), but at most two ways (payment network, previous merchant). In a first transaction within the payment network by a user

with a user profile for whom no referring user has been associated, the payment network retains the full payee fee (or equivalent credits) because there is neither a previous merchant nor a referring user. Once the user is enrolled, the user can conduct transactions within the payment network.

[0045] As part of the enrollment process, payment service server device(s) can request identifying information regarding a funding source of a user. This funding source (e.g., checking account, etc.) can be used to fund a user's PSAB financial account or can be used for provision of direct backing of credits exchanged in the community payment network. Credits can be backed by U.S. dollars or by another currency, cryptocurrency, or other value mechanism. Different users' credits can be backed by different currencies or value mechanisms.

[0046] Block 204 illustrates sending a request on behalf of a user to PSAB server device(s) to open a PSAB financial account for a user. A bank can be selected by the payment service to be the PSAB, and the payment service can maintain a master or umbrella account at the PSAB for all accounts opened for users of the payment service. The payment service can store an association between the user's new PSAB financial account and the user's user profile in the community payment network. An association between the user's funding source and the user profile can also be stored, thereby allowing a determination of a user's PSAB financial account and funding source given the user's identifier. In some examples, the payment service or the PSAB can communicate with the user (via email, direct message, application notification, etc.) to obtain additional information from the user after initial enrollment in order to open the PSAB financial account (e.g., to obtain direct authorization from the user to open the PSAB financial account). In some examples, no PSAB financial account is opened, but instead, transfers occur directly between the payee and payor funding sources (e.g., checking account, etc.), or the funding source of one user and a PSAB financial account of a second user. In an example in which a user does not use or have a PSAB financial account, a user can agree that the user's funding source may be debited in order to add credits to the user's credit balance associated with the user's user profile. A user can agree that if the credit balance falls below a minimum threshold, additional funds can be transferred to the payment service to increase the credits associated with the user. When a user wishes to "cash out," funds can be transferred from the payment service to the user's funding source. Similarly, in examples in which a PSAB financial account is present, a user can agree to automatic replenishment of the PSAB financial account from the user's funding source if the balance of the PSAB financial account falls below a minimum threshold.

[0047] Block 206 illustrates causing funds to be transferred from a funding source of the user to the PSAB financial account of the user to initially fund the PSAB financial account of the user. For example, the payment service can initiate an ACH transfer between a funding source and a PSAB financial account. In some examples, a user authorizes a particular amount for the transfer via an input to a payment application executing on a user device of the user, a direct message, email, a web form entry, etc. In some examples, the payment service can suggest an amount for the transfer or require a minimum amount as an initial funding of the PSAB financial account. The user can authorize automatic transfers from the funding source to the PSAB financial account. In examples, an automatic transfer occurs when the PSAB financial account balance falls below a minimum threshold amount.

[0048] Block 208 illustrates determining a number of credits equivalent to the PSAB financial account balance. As described below, a conversion factor of credits to currency can be used both in determining how many credits a certain currency amount is worth, and in determining a currency amount a number of credits is worth (e.g., such as when “cashing out” credits, as discussed below).

[0049] Block 210 illustrates associating determined the number of credits with a user profile of the user as a credit balance of the user.

[0050] A user can “cash out” credits at any time. In examples, to do so, a user submits a request to the payment service. The request can include an amount of credits the user wishes to cash out and can identify an account to which the funds should be transferred. The identified account can be the funding source that originally funded the PSAB financial account or can be another disbursement method. Responsive to receiving the request, the payment service causes a transfer of funds from the PSAB financial account back to the identified account (or alternative type of disbursement). The amount of credits that can be cashed out can be limited by a minimum credit balance that must be maintained as part of the terms of the community payment network. However, if a user intends to disenroll in the community payment network, all credits can be cashed out. In examples, when a user disenrolls, the complete cash-out occurs automatically.

[0051] If a transaction causes a credit balance of a user to fall below what is equivalent to a currency amount in the user’s PSAB financial account, (e.g., the user conducts a transaction that causes the credit balance to fall below the credit-equivalent of the \$10 in the user’s PSAB financial account), the payment service can request authorization of a transfer from the user’s funding source (e.g., by an ACH transfer, etc.). Alternatively, in an example, no authorization is required when

the user profile allows automatic replenishments of the PSAB financial account. For instance, given a 1:1 credits to dollars conversion factor, a \$100 balance in the user's PSAB financial account, a pending transaction for \$50, and a minimum balance for the PSAB financial account of \$75, the payment service can cause transfer of \$25 at or about the time of the transaction.

[0052] FIG. 3A and 3B are a flow diagram illustrating an example process 300 for conducting a split-commission transaction in the community payment network, as described herein.

[0053] Block 302 illustrates receiving transaction data from a payment application executing on a user device for a pending transaction between a payor and a payee in a payment network. In examples, the payment application is a mobile payment application. In examples, the transaction data may be received by the payment service from a payment application executing on a user device of a payor (such as buyer's user device 104(2)) for a transaction between a payor and a payee. In examples, transaction data may be received by the payment service from a POS device. In examples, the payor can be a customer of the payee, who can be a merchant. The transaction data can include conventional information (e.g., transaction amount, transaction location, items or services purchased, identity of the merchant, etc.). The transaction data can also include a payor identifier, which, in some examples, can be appended to the conventional transaction data by the particular instance of the payment application executing on the user device of the payor. The transaction data can be obtained by the payment application instance executing on the user device of the payor, either from the user device of the payee, via manual entry, etc. Alternatively, transaction data can be received from an instance of the payment application executing on a user device of a payee (such as seller's user device 104(1)) for a transaction between a payor and a payee. In an example, the user device of the payee obtains and appends a payor identifier via manual entry by the payor or the payee (e.g., entry of a phone number on a user interface of the user device of the payee, scanning an identifier with an image capturing component of the user device of the payee wherein the identifier can be displayed on a display of user device of the payor, etc.).

[0054] In some examples, transaction data can be generated in the first instance by a point-of-sale (POS) application that is separate from the payment application. In some examples, the transaction data can be generated in the first instance by a POS device that can be communicatively coupled to a user device of the payee. In examples, the user device of the payee can be a POS device.

[0055] Payment service server device(s) can cause one or more user interfaces to be presented on a user device via a payment application executing on a user device. The one or more user interfaces can display controls to allow a user to cause a transfer of funds between financial accounts associated with the user's user profile, to indicate an intent to make a purchase or transfer value to another user, to indicate an intent to accept value (e.g., credits) being transferred to the user from another user, to check a credit balance, to modify a user profile, to review a transaction history, to search a transaction history, to search for participating users of the community payment network (e.g., search by name, location, or other criterion), to view a conversion factor, to determine an exchange rate between different currencies, to communicate with other users or the payment service, to participate in a social network provided by the payment service, to initiate a scan by the user device of a barcode, QR code, or other graphic that can, for example, represent transaction data for a pending transaction or include an identifier of another user with which the user wishes to enter a transaction, etc.

[0056] Block 304 illustrates identifying user profiles of the payor and the payee based at least in part on the transaction data. As described above, the payment service server device(s) can receive the transaction data in any of a variety of ways, including those described above relative to Block 302. The transaction data can include identifiers for the payor and payee. The payment service server device(s) can map the payor identifier to the user profile of the payor and maps the payee identifier to the user profile of the payee, wherein the user profiles can be stored by the payment service.

[0057] Block 306 illustrates determining a payee fee associated with the transaction based at least in part on the transaction data and terms of service between the payee and the payment service. In some examples, the payee fee can be calculated as a percentage of the transaction amount (e.g., 0.5%, 1.0%, 1.5%, etc.). For instance, if the payor is purchasing shoes from the payee that cost \$50.00, and the payee fee agreed to by the seller is 1.0%, then the payee fee is \$0.50. Agreement to the payee fee can be made at the time of enrollment of a user and the payee fee can be adjusted by the payment service, with agreement of the user. In some examples, the payee fee can be calculated as a flat fee plus a percentage of the transaction amount. For instance, in the example above in which the transaction amount is \$50, if the payee fee is 1.0% plus \$1.00, then payee fee would be \$1.50. In some examples, the total payee fee is capped (e.g., at \$10.00, \$15.00, \$20.00, etc.).

[0058] Block 308 illustrates determining a previous payee that the payor paid in a most recent historical transaction conducted in the payment network. Determining a most recent payee can be based on transaction records stored by the payment service server device(s). In examples, the payment service server device(s) and user devices can be coupled across the network to a storage device (not shown) that stores the transaction records, user profiles, etc. Additionally or alternatively, the storage device can reside locally with respect to the payment service server device(s), the user device(s), or both. In certain implementations, the storage device(s) can include one or a combination of computer readable media. The payment service server device(s) analyzes the payor's purchase history based at least in part on the payor's user profile and determine the identifier of the payee in the transaction conducted by the payor immediately preceding the pending transaction.

[0059] Block 310 illustrates determining an identity of a referring user who initially referred the payor to the payment network. The identity of the referring user can be stored in the user profile of the payor.

[0060] Block 312 illustrates deducting credits from the payor's credit balance. A user's credit balance (here, the payor's credit balance) can be stored in association with a user profile of the user. The number of credits deducted from the credit balance is calculated by multiplying the transaction amount by a conversion factor of credits per unit of currency. In an example in which the transaction amount is 100 USD, and the conversion factor for credits to USD is 1:1, 100 credits can be deducted from the payor's user profile. The conversion factor of credits to currency can vary by date, location, user, type of goods/services, transaction history, etc. and can be set by the payment service. The payment service can disclose the conversion factor(s) to users as part of initial terms and conditions of community payment network participation. Similarly, the payment service can provide notice of changes to the conversion factor during the user's enrollment in the payment service. Agreement to the use of a conversion factor(s) by a user can be implied based on the user's continued use of the community payment network. In a cross-border transaction (e.g., when a payor is in Mexico and a payee is in the United States), the credit calculations can be performed by using a conversion factor applicable to the currency used in the transaction. Alternatively or additionally, currency may be deducted from a payor's PSAB account for the transaction amount.

[0061] Block 314 illustrates adding credits to the payee's credit balance equivalent to the transaction amount less the payee fee. The credits can be calculated by determining the transaction amount less the payee fee, multiplied by an applicable conversion factor. The number of credits can be calculated with the equation

$$C = (T - F) * R,$$

wherein C = credits to payee, T = transaction amount in currency of transaction, F = fee amount in currency of transaction, and R = conversion factor of credits per unit of currency. For instance, if a transaction amount is 100 USD, a payee fee is 1 USD, and credits per USD are 0.05, $C = 99 \text{ USD} * 0.05 \text{ credits/USD} = 4.95 \text{ credits}$. In another example, if a transaction amount is 100 €, a payee fee is 5 €, and credits per € are 0.08, $C = 95 \text{ €} * 0.04 \text{ credits/€} = 3.8 \text{ credits}$. Alternatively or additionally, currency may be added to a payor's PSAB account or other financial account for the transaction amount.

[0062] Block 316 illustrates causing a transfer of the payee fee from a PSAB financial account of the payee to an account of the payment service. The payment service can maintain a financial account and/or can store a credit balance for credits associated with the payment service. The payment service can receive a payee fee in credits or the equivalent amount of currency or some combination of credits and currency. Credits can be transferred from the payee's credit balance; currency can be transferred from the payee's PSAB financial account.

[0063] Block 318 illustrates adding credits to the previous payee's credit balance. The added credits can be some portion of the credits equivalent to the payee fee. In at least one example, the portion ranges from at least about 0.1% to at most about 75.0%, or from at least about 10% to at most about 50%, and/or from at least about 25% to at most about 60%. However, the percentage need not be limited to this range and can be set by the payment service (and agreed to by users) at any amount. When no previous payee is identified (for example, if this is the first payment by this payor), these credits can simply not be disbursed.

[0064] Block 320 illustrates adding credits to the referring user's credit balance. The referring user's credit balance can be stored in association with a user profile of the referring user. The added credits can be some portion of the credits equivalent to the payee fee. In at least one example, the portion ranges from at least about 0.1% to at most about 75.0%, or from at least about 10% to at most about 50%, and/or from at least about 25% to at most about 60%, but the percentage need not be limited to this range and can be set by the payment service (and agreed to by users) at any

amount. The previous payee portion and the referring user's portion can be the same percentage or different percentages. When no referring user is identified (for example, if the payor enrolled without a referral), these credits can simply not be disbursed. Thus, when there are both a previous payee and a referring user, in effect, the payee fee paid by the payee can be split between at least the payment service, the referring user, and the previous payee. In various examples, the payee fee can be split between the payment service, the referring user, the previous payee, and one or more other entities that can include one or more financial institutions and/or one or more non-profits. The percentage of the payee fee retained by the payment service can be equivalent to the percentage allotted to the previous payee and/or referring user and can also be greater to or less than the percentage allotted to the previous payee and/or referring user. The payor may receive a portion of the commission (e.g., as "cash back") in some examples, which may reduce the portions distributed to at least the previous merchant and/or referring user.

[0065] Block 322 illustrates performing post-transaction activities. The payment service can provide additional services after the transaction such as storing details of the transaction, providing a receipt to the buyer, presenting transaction data on a user interface of a display of a user device, updating loyalty rewards, etc. The payment service server device(s) can send the buyer device a receipt via email, message, etc., can send a link, can cause the payment application on the buyer device to do a notification, or can enable access to the receipt in the payment application.

[0066] FIG. 4 is a flow diagram illustrating an example process 400 that determines a payee fee and commissions for a payment transaction, as described herein.

[0067] Block 402 illustrates receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount. Transaction data can be relayed to the payment service by at least either participant in a transaction. Transaction data can include at least one of transaction amount, desired date and time of transfer, payor identity, payee identity, free-form notes of a user(s), location(s), item(s) or service(s) being purchased, etc.

[0068] Block 404 illustrates determining a payee fee associated with the transaction, wherein the payee fee is based on the transaction amount. In examples, the payee fee is a flat fee or a combination of a flat fee and a percentage of the transaction amount. The payee fee is not limited to these amounts and can be set by the payment service.

[0069] Block 406 illustrates determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee. The first number of credits and second number of credits can be calculated using a conversion factor of credits to currency unit.

[0070] Block 408 illustrates transferring the first number of credits from a user profile associated with the first user to a user profile associated with the second user. The payment service can deduct credits from a payor user. Although the term “transfer” is used in this specification, the changes to credit balances can be seen as deductions or additions without reference to a “transfer” from or to another user. That is, a “transfer” from payor to payee can be described instead as the payor being debited credits and the payee being provided credits. Alternatively or additionally, the transaction amount can be transferred from a first user account to a second user account.

[0071] Block 410 illustrates transferring the second number of credits from the user profile associated with the second user to the payment service. In examples, the payee fee can be paid to the payment service in credits deducted from the payee’s credit balance. In other examples, the payee fee can be paid to the payment service in currency deducted from the payee’s PSAB financial account (or, in the absence of a PSAB financial account, from the payee’s funding source).

[0072] Block 412 illustrates transferring a third number of credits from the payment service to a user profile of a referrer of the first user, wherein the third number of credits is a portion of the second number of credits. In some embodiments, the transfer of credits to the third user can be described as a transfer directly from payee to third user without first being assigned to the payment service. In examples, a fourth number of credits can be transferred from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits. In some embodiments, the transfer of credits to the fourth user can be described as a transfer directly from payee to fourth user without first being assigned to the payment service. However, in examples in which there is no prior payee or no referring user, the allotment of credits to the prior payee or referring user can be assigned to the payment service rather than remaining with the payee.

[0073] Additionally, in some examples, the payer may receive a portion of the payee fee (e.g., as “cash back” for a transaction). The payer may pay the payee with credits or currency and receive

credits or currency back for the transaction. The payer's portion of the payee fee may be associated with a user profile of the payer in credits or currency.

[0074] FIGS. 2, 3A, 3B, and 4 are flow diagrams illustrating example processes according to some implementations. The processes of FIGS. 2, 3A, 3B, and 4 are illustrated as collections of blocks in logical flow diagrams, which represent a sequence of operations, some or all of which can be implemented in hardware, software, or a combination thereof. In the context of software, the blocks can represent computer-executable instructions stored on one or more computer-readable media that, when executed by one or more processors, program the processors to perform the recited operations. Generally, computer-executable instructions include routines, programs, objects, components, data structures and the like that perform particular functions or implement particular data types. The order in which the blocks are described should not be construed as a limitation. Any number of the described blocks can be combined in any order and/or in parallel to implement the process, or alternative processes, and not all of the blocks need be executed. Further, in some examples, some or all of the operations illustrated in one or more of FIGS. 2, 3A, 3B, and 4 can be combined with some or all of the operations illustrated in others of FIGS. 2, 3A, 3B, and 4. For discussion purposes, the processes are described with reference to the environments, architectures and devices described in the examples herein, although the processes can be implemented in a wide variety of other environments, architectures, and devices.

[0075] FIG. 5 illustrates a block diagram 500 of select components of a payment service server device(s) 502, as described herein.

[0076] Payment service server device(s) 502 can include one or more servers or other types of computing devices that can be embodied in any number of ways. For example, in the example of a server, the modules, other functional components, and data can be implemented on a single server, a cluster of servers, a server farm or data center, a cloud-hosted computing service, a cloud-hosted storage service, and so forth, although other computer architectures can additionally or alternatively be used.

[0077] Further, while the figures illustrate the components and data of payment service server device(s) 502 as being present in a single location, these components and data can alternatively be distributed across different computing devices and different locations in any manner. Multiple payment service server device(s) 502 can be located together or separately, and organized, for example, as virtual servers, server banks, and/or server farms. The described functionality can be

provided by the servers of a single entity or enterprise, or can be provided by the servers and/or services of multiple different customers or enterprises.

[0078] In the illustrated example, payment service server device(s) 502 can include one or more processors 504, one or more computer-readable media 506, one or more communication interfaces 508, and one or more input/output devices 510. Each of the processor(s) 504 can be a single processing unit or a number of processing units, and can include single or multiple computing units or multiple processing cores. The processor(s) 504 can be implemented as one or more microprocessors, microcomputers, microcontrollers, digital signal processors, central processing units, state machines, logic circuitries, and/or any devices that manipulate signals based on operational instructions. For example, processor(s) 504 can be one or more hardware processors and/or logic circuits of any suitable type specifically programmed or configured to execute the algorithms and processes described herein. Processor(s) 504 can be configured to fetch and execute computer-readable instructions stored in computer-readable media 506, which can program processor(s) 504 to perform the functions described herein.

[0079] Computer readable media 506 includes computer storage media and computer-readable signals. Computer storage media includes volatile and non-volatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer readable instructions, data structures, program modules, or other data. Computer storage media includes, but is not limited to, solid-state memory, phase change memory (PRAM), static random-access memory (SRAM), dynamic random-access memory (DRAM), other types of random access memory (RAM), read-only memory (ROM), electrically erasable programmable read-only memory (EEPROM), flash memory or other memory technology, compact disk read-only memory (CD-ROM), digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other non-transmission medium that can be used to store information for access by a computing device. In addition, in some examples the computer readable media can be associated with transitory computer-readable signals (in compressed or uncompressed form). Examples of computer-readable signals, whether modulated using a carrier or not, include, but are not limited to, signals that a computer system hosting or running a computer program can be configured to access, including signals downloaded through the internet or other networks.

[0080] Depending on the configuration of payment service server device(s) 502, computer-readable media 506 can be an example of tangible non-transitory computer storage media. Further, in some examples, payment service server device(s) 502 can access external storage, such as RAID storage systems, storage arrays, network attached storage, storage area networks, cloud storage, or any other medium that can be used to store information and that can be accessed by the one or more processors directly or through another computing device or network. Accordingly, computer-readable media 506 can be computer storage media able to store instructions, modules, or components that can be executed by the processor(s) 504.

[0081] Computer-readable media 506 can be used to store any number of functional components that are executable by processor(s) 504. In many implementations, these functional components comprise instructions or programs that are executable by processor(s) 504. Functional components stored in computer-readable media 506 can include payment module 514, enrollment module 516, funding module 518, additional services module 520, user interface module 522, and social network module 524, which can comprise at least a portion of community payment network application (“payment application”) 512. Payment application 512 can be provided by the payment service server device(s) 502 and can be configured to allow a user to perform the functions associated with the community network payment.

[0082] The term “module” is intended to represent example divisions of the software for purposes of discussion and is not intended to represent any type of requirement or required method, manner or necessary organization. Accordingly, while various “modules” are discussed, their functionality, similar functionality, or both, could be arranged differently (e.g., combined into a fewer number of modules, broken into a larger number of modules, etc.). The modules can include computer instructions/code that can be stored in the computer-readable media 506 and can be executable by processor(s) 504.

[0083] The payment module 514 can be configured to create, receive, and/or transmit transaction data for an electronic transaction conducted within the community payment network. In some examples, either user in a transaction can submit the transaction data to the payment service via an instance of a payment application provided by the payment service that is executing on a user device. For instance, if a payee is submitting the transaction, the payee can obtain authorization of the payor before doing so, either via a control on the user device of the payor or by a control on the user device of the payee. Additionally or alternatively, based at least in part on

transaction data, the payment module 514 can deduct credits from a credit balance of the payor equivalent to the transaction amount, determine a payee fee for the transaction, add credits to the credit balance of the payee equivalent to the transaction amount less the payee fee, add a portion of the payee fee (e.g., in credits equivalent to the payee fee) to a credit balance of the previous payee, add a portion (the same or different from the portion for the previous payee) of the payee fee to a credit balance of the referring user, and retain the remaining payee fee for the payment service. Additionally or alternatively, the payment module 514 can access a conversion factor or exchange rate between credits and currency in order to perform the transfers described above. The conversion factor can be set by agreement between the payment service and one or more users participating in the community payment network.

[0084] The enrollment module 516 can be configured to enable receipt of enrollment information from a user. In some examples, a user downloads the payment application before enrollment and uses the payment application to submit enrollment information. The enrollment module 516 and user interface module 522 can cause a form to be displayed to the user for entry of enrollment information. The enrollment module can be configured to confirm with the payment service that a user is not already enrolled (e.g., by requesting at least one of the user's email address, phone number, name, etc.) before requesting enrollment information. The enrollment module can detect receipt of referring information from a referring user and associate the user's enrollment information with the referring user (by the payment service server device(s) at the time the enrollment information is received, or by the user device before the enrollment information is sent) so that the referring user receives credit for future transactions of the enrolling user.

[0085] The funding module 518 can be configured to transfer funds from a user's personal funding source to the user's PSAB financial account. In examples, the funding module 518 can determine the funding source based at least in part on information provided by a user. Based at least on permission from the user, the funding module can cause a transfer of funds between the funding source and the financial account. The financial account can be used to back credits assigned to the user by the payment service. In some examples, the payment service retains some or all control over the financial account so that as a user's credit balance decreases, the funding module 518 can withdraw a proportional amount of funds from the financial account. Upon a user leaving the community payment network or upon request of a user, the funding module 518 can cause a transfer of the financial account's balance to the user's funding source or to another account

of the user's choosing. Additionally or alternatively, the funding module can manage credit balance adjustments corresponding to payment network transactions, including commissions.

[0086] The additional services module 520 can be configured to provide additional services of the payment service to the user. For example, the additional services module 520 can cause a storage device to store details of the transaction, provide a receipt to the users involved in the transaction, cause transaction data to be displayed (in cooperation with the user interface module 522) on a user interface of a display of a user device, update loyalty rewards that can be administered by the payment service, cause transaction information to be displayed via an external social network or a social network associated with the community payment network, etc. In examples, the additional services module 420 can send a user device a receipt via email, message, etc., can send a URL link to a user device, can cause a payment application on a user device to display a notification associated with a receipt, or otherwise enable access to a receipt via the payment application. Additionally or alternatively, the payment service can offer other additional services such as inventory management, discount distribution, etc.

[0087] User interface module 522 can be configured to perform acts that can include causing a user interface to be provided to a user via a display of a user device. In examples, the user interface module 522 can cause a user interface to be displayed that allows a user to at least one of select a payee or payor for a transaction, input a transaction amount, request a credit balance, request a balance of a PSAB financial account, transmit a message to the payment service or to another user of the payment network, request a transaction history of the user, request a map of nearby users of the payment network, request of a list of other users that the user has referred to the payment network, request an identity of the referring user of the user, request a summary view of a user profile or dashboard of the user's participation in the payment network or aggregation of information from a plurality of transactions that are determined to be associated with the user profile. Additionally or alternatively, the acts can include generating a user interface that allows a user to perform actions including one or more of view, sort, filter, or any combination thereof, at least a portion of information at varying levels of granularity. Additionally or alternatively, user interface module 522 can cause a user interface to be provided to a user to prompt entry of user credentials for, for example, a user profile and/or a PSAB financial account. Additionally or alternatively, the acts can include linking a financial account and/or funding source to the user's user profile.

[0088] In certain instances, user interface module 522 can be configured to provide a user interface corresponding to the user device being used. For example, information can be presented to the user in a different manner when presented on a mobile phone than when presented on a personal computer.

[0089] In some examples, the user interface can be provided to a user via a web browser (e.g., software as a service (SaaS)), via a downloadable client application, or both.

[0090] The social network module 524 can be configured to enable a user to interact regarding transaction activity within the community payment network, in a social forum. For example, the social network module 524 can provide for integration of one or more social networks within the payment network. A social network can be provided by the social network module 524 such that a user can interact with other users of the payment network. Further, external social networks can be integrated within the payment network via third-party applications, thereby allowing a user of the payment network to engage with users of the external social networks.

[0091] Additional functional components stored in computer-readable media 406 can include operating system 530 for controlling and managing various functions of payment service server device(s) 502. In at least one example, computer-readable media 506 can additionally include or maintain other functional components and data, such as other modules and data 532, which can include programs, drivers, etc., and the data used or generated by the functional components. Further, payment service server device(s) 502 can include many other logical, programmatic, and physical components, of which those described above are merely examples that are related to the discussion herein.

[0092] Communication interface(s) 508 can include one or more interfaces and hardware components for enabling communication with various other devices, such as over network(s) or directly. For example, communication interface(s) 508 can enable communication through one or more networks, which can include, but are not limited to any type of network known in the art such as a local area network or a wide area network, such as the Internet, and can include a wireless network, such as a cellular network, a local wireless network, such as Wi-Fi and/or close-range wireless communications, such as Bluetooth®, BLE, NFC, RFID, a wired network, or any other such network, or any combination thereof. A network can include both wired and/or wireless communication technologies, including Bluetooth®, BLE, Wi-Fi and cellular communication technologies, as well as wired or fiber optic technologies. Components used for such

communications can depend at least in part upon the type of network, the environment selected, or both. Protocols for communicating over such networks are well known and will not be discussed herein in detail.

[0001] Payment service server device(s) 502 can further be equipped with various input/output (I/O) devices 510. I/O device(s) 510 can be configured to allow a user to interface with the payment service server device(s) 502 via one or more I/O devices. The I/O device(s) 510 can provide an interface for such devices as a display (not shown), audio speakers (not shown), a microphone (not shown), a camera (not shown), connection ports (not shown), an optical reader (not shown), a touchpad (not shown), a haptic output device (not shown), various user interface controls (e.g., buttons, joystick, keyboard, mouse, touch screen, etc.) (not shown), or any combination thereof.

[0093] Those of ordinary skill in the art will appreciate that the hardware components and various functional modules depicted in FIGS. 5, 6, and elsewhere can vary. The illustrative components are not intended to be exhaustive, but rather are representative to highlight components that are utilized to implement the subject matter disclosed in the present application. For example, other devices/components can be used in addition to or in place of the hardware depicted. In addition, the various components illustrated in storage and memory can be alternatively located in any storage or memory across the network(s) 114(1)-114(N). The depicted example is not meant to imply architectural or other limitations with respect to the subject matter of this disclosure.

[0094] FIG. 6 illustrates a block diagram 600 of select components of user device(s) 602, as described herein.

[0095] In at least one example, user device(s) 602 can be any suitable type of mobile device, e.g., portable, semi-portable, or semi-stationary. Some examples of user device(s) 602 can include tablet computing devices; smart phones and mobile communication devices; laptops, netbooks and other portable computers or semi-portable computers; wearable computing devices, or other body-mounted computing devices; augmented reality devices; or other computing devices capable of sending communications and performing the functions according to the techniques described herein.

[0096] In the illustrated example, user device(s) 602 can include one or more processors 504, one or more computer-readable media 606, one or more communication interface(s) 608, and one or more input/output (I/O) device(s) 610. Each processor 604 can itself include one or more

processors or processing cores. For example, processor(s) 604 can be implemented as one or more microprocessors, microcomputers, microcontrollers, digital signal processors, central processing units, state machines, logic circuitries, and/or any devices that manipulate signals based on operational instructions. In some examples, the processor(s) 604 can be one or more hardware processors and/or logic circuits of any suitable type specifically programmed or configured to execute the algorithms and processes described herein. The processor(s) 604 can be configured to fetch and execute computer-readable processor-executable instructions stored in computer-readable media 606, which can program processor(s) 604 to perform the functions described herein.

[0097] Computer readable media 606 includes computer storage media and computer-readable signals. Computer storage media includes volatile and non-volatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer readable instructions, data structures, program modules, or other data. Computer storage media includes, but is not limited to, solid-state memory, phase change memory (PRAM), static random-access memory (SRAM), dynamic random-access memory (DRAM), other types of random access memory (RAM), read-only memory (ROM), electrically erasable programmable read-only memory (EEPROM), flash memory or other memory technology, compact disk read-only memory (CD-ROM), digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other non-transmission medium that can be used to store information for access by a computing device. In addition, in some examples the computer readable media can be associated with transitory computer-readable signals (in compressed or uncompressed form). Examples of computer-readable signals, whether modulated using a carrier or not, include, but are not limited to, signals that a computer system hosting or running a computer program can be configured to access, including signals downloaded through the internet or other networks.

[0098] Depending on the configuration of user device(s) 602, computer-readable media 606 can be an example of tangible non-transitory computer storage media. Further, in some examples, user device(s) 602 can access external storage, such as RAID storage systems, storage arrays, network attached storage, storage area networks, cloud storage, or any other medium that can be used to store information and that can be accessed by the one or more processors directly or through another computing device or network. Accordingly, computer-readable media 606 can be

computer storage media able to store instructions, modules, or components that can be executed by the processor(s) 604.

[0099] Computer-readable media 606 can be used to store and maintain any number of functional components that are executable by the processor(s) 604. In some implementations, these functional components comprise instructions or programs that are executable by the one or more processors and that, when executed, implement operational logic for performing the actions and services attributed above to user device(s) 602. Functional components stored in computer-readable media 606 can include enrollment module 614, payment module 616, user interface module 618 and social network module 620 which can comprise at least a portion of a community payment network application (“payment application”) 612. Enrollment module 614, payment module 616, user interface module 618, social network module 620, and community payment network application 612 (“payment application”) can correspond to enrollment module 516, payment module 514, user interface module 522, and social network module 524 of payment application 512, as described above with reference to FIG. 5.

[00100] The term “module” is intended to represent example divisions of the software for purposes of discussion and is not intended to represent any type of requirement or required method, manner or necessary organization. Accordingly, while various “modules” are discussed, their functionality, similar functionality, or both, could be arranged differently (e.g., combined into a fewer number of modules, broken into a larger number of modules, etc.). The modules can include computer instructions/code that can be stored in the computer-readable media 606 and can be executable by processor(s) 604.

[00101] The enrollment module 614 can be configured to prompt a user for enrollment information (e.g., name, address, phone, funding source identification, social security number, amount of funds to initially transfer to the financial account, referring user identity, etc.) The enrollment module can transmit enrollment information to the payment service server device(s). The enrollment module 614 can operate together with the user interface module 618 in gathering and transmitting the enrollment information via payment application 612. The enrollment module can communicate with another user device in identifying a referring user. For example, the enrollment module 614 can receive data from a scan by the user device of a QR code or other code from a referring user. The code can be displayed on a user device of the referring user or can be otherwise displayed (e.g., via email, U.S. hard copy mail, a hard copy display at a user’s business,

etc.). The enrollment module 614 can detect receipt of referring information from a referring user and associate a user's enrollment information with the referring user (by the payment service server device(s) at the time the enrollment information is received, or by the user device before the enrollment information is sent) so that the referring user receives credit for future transactions of the enrolling user.

[00102] The payment module 616 can be configured to create or receive transaction data for processing by the payment service. In examples, the transaction data can be manually entered by the user and can include transaction amount, item or service purchased, location, date or time the user wishes the transaction to be processed, etc. In examples, the transaction data can be created at a point-of-sale, either by a user device that is a POS device or that communicates with a POS device. The payment module 616 can be configured to submit the transaction data to the payment service server device(s). In examples, the transaction data may be uploaded but the transaction may not be processed until consent of the other user to the transaction is received via an indication transmitted from the user device of the other user or by a code submitted by the user device that indicates to the payment service that the other user has consented to the transaction.

[00103] The user interface module 618 can be configured to cause a user interface to be provided to a user on display(s) 630 of user device(s) 602. In examples, the user interface module 618 can cause a user interface to be provided that allows a user to perform actions associated with payment application 612 or with the community payment network more generally. User interface module 618 of user device(s) 602 can perform actions corresponding to user interface module 522 of the payment service server device(s) 502. In certain instances, user interface module 618 can be configured to provide a user interface corresponding to the user device being used. For example, information can be presented to the user in a different manner when presented on a mobile phone than when presented on a personal computer. In some examples, the user interface can be provided to a user via a web browser (e.g., software as a service (SaaS)), via a downloadable client application, or both.

[0002] The social network module 620 can be configured to enable a user to interact regarding transaction activity within the community payment network, in a social forum. For example, the social network module 620 can provide for the participation in one or more social networks with the payment network. A social network can be provided by the social network module 620 such that a user can interact with other users of the payment network. Further, external social networks

can be integrated within the payment network via third-party applications, thereby allowing a user of the payment network to engage with users of the external social networks.

[00104] Furthermore, computer-readable media 606 can include additional functional components, such as operating system(s) 626 for controlling and managing various functions of user device(s) 602 and for enabling basic user interactions. In addition, computer-readable media 606 can also store data, data structures and the like, that are used by the functional components.

[00105] Depending on the type of user device(s) 602, computer-readable media 606 can also optionally include other functional components and data, such as other modules and data 628, which can include programs, drivers, etc., and the data used or generated by the functional components. For instance, computer-readable media 606 of a user device associated with a merchant user can optionally include a point-of-sale (POS) module. Further, user device(s) 602 can include many other logical, programmatic, and physical components, of which those described are merely examples that are related to the discussion herein.

[00106] Communication interface(s) 608 can include one or more interfaces and hardware components for enabling communication with various other devices, such as over network(s) or directly. For example, communication interface(s) 608 can enable communication through one or more network, which can include, but are not limited to any type of network known in the art such as a local area network or a wide area network, such as the Internet, and can include a wireless network, such as a cellular network, a local wireless network, such as Wi-Fi and/or close-range wireless communications, such as Bluetooth®, BLE, NFC, RFID, a wired network, or any other such network, or any combination thereof. A network can include both wired and/or wireless communication technologies, including Bluetooth®, BLE, Wi-Fi and cellular communication technologies, as well as wired or fiber optic technologies. Components used for such communications can depend at least in part upon the type of network, the environment selected, or both. Protocols for communicating over such networks are well known and will not be discussed herein in detail.

[00107] User device(s) 602 can further be equipped with various input/output (I/O) device(s) 610. I/O device(s) 510 can be configured to allow a user to interface with the user device(s) 602 via one or more I/O devices. The I/O device(s) 610 can provide an interface for such devices as display(s) 630, audio speakers (not shown), a microphone (not shown), a camera (not shown), connection ports (not shown), an optical reader (not shown), a touchpad (not shown), a haptic

output device (not shown), various user interface controls (e.g., buttons, joystick, keyboard, mouse, touch screen, etc.) (not shown), or any combination thereof.

[00108] In at least one example, user device(s) 602 can include display(s) 630. Depending on the type of computing device(s) used as user device(s) 602, display(s) 630 can employ any suitable display technology. For example, display(s) 630 can be a liquid crystal display, a plasma display, a light emitting diode display, an OLED (organic light-emitting diode) display, an electronic paper display, or any other suitable type of display able to present digital content thereon. In some examples, display(s) 630 can have a touch sensor associated with display(s) 630 to provide a touchscreen display configured to receive touch inputs for enabling interaction with a graphic interface presented on display(s) 630. Accordingly, implementations herein are not limited to any particular display technology. Alternatively, in some examples, user device(s) 602 may not include display(s) 630, and information can be presented by other means, such as aurally.

[00109] In addition, user device(s) 602 can optionally include or can be connectable to card reader(s) 632. In some examples, card reader(s) 632 can plug in to a port in user device(s) 602, such as a microphone/headphone port, a data port, or other suitable port. Card reader(s) 632 can include a read head for reading a magnetic strip of a payment card, and further can include encryption technology for encrypting the information read from the magnetic strip. Alternatively, numerous other types of card readers can be employed with user device(s) 602 herein, depending on the type and configuration of user device(s) 602.

[00110] Other components included in user device(s) 602 can include GPS device(s) 634 that can indicate location information. Further, user device(s) 602 can include one or more sensors 636 such as an accelerometer, gyroscope, compass, proximity sensor, camera, microphone, and/or a switch, as discussed above. Additionally, user device(s) 602 can include various other components that are not shown, examples of which include removable storage, a power source, such as a battery and power control unit, a barcode scanner, a printer, a cash drawer, and so forth.

[00111] The present subject matter proposes the integration of at least the aforementioned features into a seamless and convenient mechanism for requesting and receiving manager approvals. With relation to the problems identified previously with conventional systems and methods, the software applications themselves become an active and cooperative component of the process, rather than the subject of it. Further, the aforementioned description is directed to devices and applications that are related to payment technology. However, it will be understood,

that the technology can be extended to any device and application. Moreover, techniques described herein can be configured to operate irrespective of the kind of user device, mobile applications, POS topologies, payment service server device, computer networks, and environments. Techniques described herein can be configured to operate in both real-time/online and offline modes.

[00112] While the aforementioned disclosure makes reference to user interactions via a UI presented via a display of a device, the UI can be presented via any input/output device. As an example, the UI can be output via a speaker, and augmented reality projector, etc. Further, while the aforementioned disclosure makes reference to a user interacting with the UI via a selectable control, in additional or alternative examples, the user can indicate a selection via a spoken input or other type of input.

[00113] The foregoing is merely illustrative of the principles of this disclosure and various modifications can be made by those skilled in the art without departing from the scope of this disclosure. The above described examples are presented for purposes of illustration and not of limitation. The present disclosure also can take many forms other than those explicitly described herein. Accordingly, it is emphasized that this disclosure is not limited to the explicitly disclosed methods, systems, and apparatuses, but is intended to include variations to and modifications thereof, which are within the spirit of the following claims.

[00114] As a further example, variations of apparatus or process limitations (e.g., dimensions, configurations, components, process step order, etc.) can be made to further optimize the provided structures, devices, and methods, as shown and described herein. In any event, the structures, and devices, as well as the associated methods, described herein have many applications. Therefore, the disclosed subject matter should not be limited to any single example described herein, but rather should be construed in breadth and scope in accordance with the appended claims.

[00115] Various instructions, methods, and techniques described herein can be considered in the general context of computer-executable instructions, such as program modules stored on computer-readable media, and executed by the processor(s) herein. Generally, program modules include routines, programs, objects, components, data structures, etc., for performing particular tasks or implementing particular abstract data types. These program modules, and the like, can be executed as native code or can be downloaded and executed, such as in a virtual machine or other just-in-time compilation execution environment. Typically, the functionality of the program

modules can be combined or distributed as desired in various implementations. An implementation of these modules and techniques can be stored on computer storage media or transmitted across some form of communication media.

Example Clauses

Clause 1. A method comprising:

receiving, by one or more servers associated with a payment service and from a first computing device associated with a first user of a plurality of users of the payment service, via a first instance of a payment application, enrollment data associated with enrollment of the first user with the payment service;

at least partly in response to receiving the enrollment data, determining, by the one or more servers associated with the payment service, that the first user is eligible to enroll with the payment service;

storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with the first user;

based at least in part on the enrollment data, identifying, by the one or more servers associated with the payment service, a funding source indicated by the first user;

sending, by the one or more servers associated with the payment service to a device associated with a financial institution, a request on behalf of the first user to open a financial account for the first user at the financial institution;

causing, by the one or more servers associated with the payment service and on a display of the first computing device, presentation of an indication of the financial account and a request for authorization to transfer funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service, the authorization;

at least partly in response to receiving the authorization, causing, by the one or more servers associated with the payment service, a transfer of funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a second computing device associated with a second user, first

transaction data associated with a first transaction between the first user and the second user, wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a third computing device of a third user via a respective instance of the payment application executing on the first computing device or the third computing device, second transaction data associated with a second transaction between the first user and the third user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor for the second transaction and the third user comprises a payee for the second transaction;

responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the second transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the third user;

- a transfer of the second number of credits from the user profile associated with the third user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile associated with the first user;
- and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

Clause 2. The method as clause 1 recites, further comprising sending, by the one or more servers associated with the payment service, a transaction record for the second transaction to at least one of the first computing device or the third computing device.

Clause 3. The method as either clause 1 or clause 2 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request for a summary of transactions of the first user; and
causing, by the one or more servers associated with the payment service, presentation of the summary of transactions on a display of the first computing device.

Clause 4. The method as any of clauses 1-3 recites, wherein terms of an agreement between the payment service and one or more users of the plurality of users includes a term requiring that the payee fee be less than a minimum threshold payee fee.

Clause 5. The method as any of clauses 1-4 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request to convert one or more credits associated with the user profile associated with the first user to a currency of the funding source;
causing, by the one or more servers associated with the payment service, transfer of an amount of currency from the financial institution to the funding source of the first user, wherein the amount of currency comprises a number of the one or more credits multiplied by a ratio of currency units per credit; and
reducing a credit balance associated with the user profile associated with the first user by the one or more credits.

Clause 6. The method as any of clauses 1-5 recites, further comprising:
sending, by the one or more servers associated with the payment service to the first computing device associated with the first user, a request for additional information associated with opening the financial account for the first user at the financial institution; and
receiving, by the one or more servers associated with the payment service and from the first computing device associated with the first user, the additional information,

wherein sending the request on behalf of the first user to open the financial account for the first user at the financial institution is at least partly responsive to receiving the additional information.

Clause 7. The method as any of clauses 1-6 recites, wherein the enrollment data includes at least one of an identifier of the referring user of the first user, an identifier of the funding source, an a funding amount to transfer to the financial institution from the funding source, or personally identifying information.

Clause 8. The method as any of clauses 1-7 recites, wherein the payment application is provided to the first computing device by the one or more servers associated with the payment service.

Clause 9. The method as any of clauses 1-8 recites, wherein determining that the first user is eligible to enroll with the payment service comprises determining that the first user has not previously enrolled with the payment service.

Clause 10. The method as any of clauses 1-9 recites, wherein the funding source comprises a bank, a credit union, a savings and loan association, or a brokerage firm.

Clause 11. A method, implemented by one or more servers of a payment service, the method comprising:

receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount;

determining a payee fee associated with the transaction, wherein the payee fee is based at least in part on the transaction amount;

determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee;

transferring the first number of credits or the transaction amount from a user profile associated with the first user to a user profile associated with the second user;

transferring the second number of credits or the payee fee from the user profile associated with the second user to the payment service; and

transferring a third number of credits from the payment service to a user profile associated with a third user, wherein the third user referred the first user to the community payment network, and wherein the third number of credits comprises a first portion of the second number of credits.

Clause 12. The method as clause 11 recites, further comprising:

transferring a fourth number of credits from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits.

Clause 13. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either clause 11 or clause 12 recites.

Clause 14. A system comprising:

one or more processors; and

one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either clause 11 or clause 12 recites.

Clause 15. The method as any of clauses 1-10, 11, or 12 recites, wherein the payee fee comprises a flat fee, a percentage of the transaction amount, or a combination of a flat fee and a percentage of the transaction amount.

Clause 16. The method as any of clauses 1-10 or 15 recites, wherein at least one of the payee fee, the first percentage, or the second percentage is a term of an agreement between the payment service and the one or more users.

Clause 17. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as any of clauses 1-10, 15, or 16 recite.

Clause 18. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as any of clauses 5-16 recite.

Clause 19. A method comprising:
storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with a user of a plurality of users of a payment service, wherein the user profile includes information identifying a funding source of the first user;
receiving, by the one or more servers associated with the payment service and from the funding source, an amount of currency;
updating, by the one or more servers of the payment service, the user profile associated with the first user to add a number of credits equivalent to the amount of currency, based at least in part on a ratio of credits to currency;
receiving, by the one or more servers associated with the payment service and from at least one of a first computing device associated with the first user or a second computing device associated with a second user via a respective instance of the payment application executing on the first computing device or the second computing device, transaction data associated with a transaction between the first user and the second user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor and the third user comprises a payee in the transaction;
responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the second user;

- a transfer of the second number of credits from the user profile associated with the second user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile of the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

Clause 20. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as clause 19 recites.

Clause 21. A system comprising:

- one or more processors; and

- one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as clause 19 recites.

CLAIMS

WHAT IS CLAIMED IS:

1. A method comprising:
 - receiving, by one or more servers associated with a payment service and from a first computing device associated with a first user of a plurality of users of the payment service, via a first instance of a payment application, enrollment data associated with enrollment of the first user with the payment service;
 - at least partly in response to receiving the enrollment data, determining, by the one or more servers associated with the payment service, that the first user is eligible to enroll with the payment service;
 - storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with the first user;
 - based at least in part on the enrollment data, identifying, by the one or more servers associated with the payment service, a funding source indicated by the first user;
 - sending, by the one or more servers associated with the payment service to a device associated with a financial institution, a request on behalf of the first user to open a financial account for the first user at the financial institution;
 - causing, by the one or more servers associated with the payment service and on a display of the first computing device, presentation of an indication of the financial account and a request for authorization to transfer funds from the funding source to the financial account;
 - receiving, by the one or more servers associated with the payment service, the authorization;
 - at least partly in response to receiving the authorization, causing, by the one or more servers associated with the payment service, a transfer of funds from the funding source to the financial account;
 - receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a second computing device associated with a second user, first transaction data associated with a first transaction between the first user and the second user,

wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a third computing device of a third user via a respective instance of the payment application executing on the first computing device or the third computing device, second transaction data associated with a second transaction between the first user and the third user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor for the second transaction and the third user comprises a payee for the second transaction;

responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the second transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the third user;

- a transfer of the second number of credits from the user profile associated with the third user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile associated with the first user;
- and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

2. The method as claim 1 recites, further comprising sending, by the one or more servers associated with the payment service, a transaction record for the second transaction to at least one of the first computing device or the third computing device.

3. The method as either claim 1 or claim 2 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request for a summary of transactions of the first user; and
causing, by the one or more servers associated with the payment service, presentation of the summary of transactions on a display of the first computing device.

4. The method as any of claims 1-3 recites, wherein terms of an agreement between the payment service and one or more users of the plurality of users includes a term requiring that the payee fee be less than a minimum threshold payee fee.

5. The method as any of claims 1-4 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request to convert one or more credits associated with the user profile associated with the first user to a currency of the funding source;
causing, by the one or more servers associated with the payment service, transfer of an amount of currency from the financial institution to the funding source of the first user, wherein the amount of currency comprises a number of the one or more credits multiplied by a ratio of currency units per credit; and
reducing a credit balance associated with the user profile associated with the first user by the one or more credits.

6. The method as any of claims 1-5 recites, further comprising:
sending, by the one or more servers associated with the payment service to the first computing device associated with the first user, a request for additional information associated with opening the financial account for the first user at the financial institution; and
receiving, by the one or more servers associated with the payment service and from the first computing device associated with the first user, the additional information,

wherein sending the request on behalf of the first user to open the financial account for the first user at the financial institution is at least partly responsive to receiving the additional information.

7. The method as any of claims 1-6 recites, wherein the enrollment data includes at least one of an identifier of the referring user of the first user, an identifier of the funding source, an a funding amount to transfer to the financial institution from the funding source, or personally identifying information.

8. The method as any of claims 1-7 recites, wherein the payment application is provided to the first computing device by the one or more servers associated with the payment service.

9. The method as any of claims 1-8 recites, wherein determining that the first user is eligible to enroll with the payment service comprises determining that the first user has not previously enrolled with the payment service.

10. The method as any of claims 1-9 recites, wherein the funding source comprises a bank, a credit union, a savings and loan association, or a brokerage firm.

11. A method, implemented by one or more servers of a payment service, the method comprising:

receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount;

determining a payee fee associated with the transaction, wherein the payee fee is based at least in part on the transaction amount;

determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee;

transferring the first number of credits or the transaction amount from a user profile associated with the first user to a user profile associated with the second user;

transferring the second number of credits or the payee fee from the user profile associated with the second user to the payment service; and

transferring a third number of credits from the payment service to a user profile associated with a third user, wherein the third user referred the first user to the community payment network, and wherein the third number of credits comprises a first portion of the second number of credits.

12. The method as claim 11 recites, further comprising:

transferring a fourth number of credits from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits.

13. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either claim 11 or claim 12 recites.

14. A system comprising:

one or more processors; and

one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either claim 11 or claim 12 recites.

15. The method as any of claims 1-10, 11, or 12 recites, wherein the payee fee comprises a flat fee, a percentage of the transaction amount, or a combination of a flat fee and a percentage of the transaction amount.

16. The method as any of claims 1-10 or 15 recites, wherein at least one of the payee fee, the first percentage, or the second percentage is a term of an agreement between the payment service and the one or more users.

17. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as any of claims 1-10, 15, or 16 recite.

18. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as any of claims 1-10, 15, or 16 recite.

19. A method comprising:
storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with a user of a plurality of users of a payment service, wherein the user profile includes information identifying a funding source of the first user;
receiving, by the one or more servers associated with the payment service and from the funding source, an amount of currency;
updating, by the one or more servers of the payment service, the user profile associated with the first user to add a number of credits equivalent to the amount of currency, based at least in part on a ratio of credits to currency;
receiving, by the one or more servers associated with the payment service and from at least one of a first computing device associated with the first user or a second computing device associated with a second user via a respective instance of the payment application executing on the first computing device or the second computing device, transaction data associated with a transaction between the first user and the second user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor and the third user comprises a payee in the transaction;
responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;
determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the second user;

- a transfer of the second number of credits from the user profile associated with the second user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile of the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

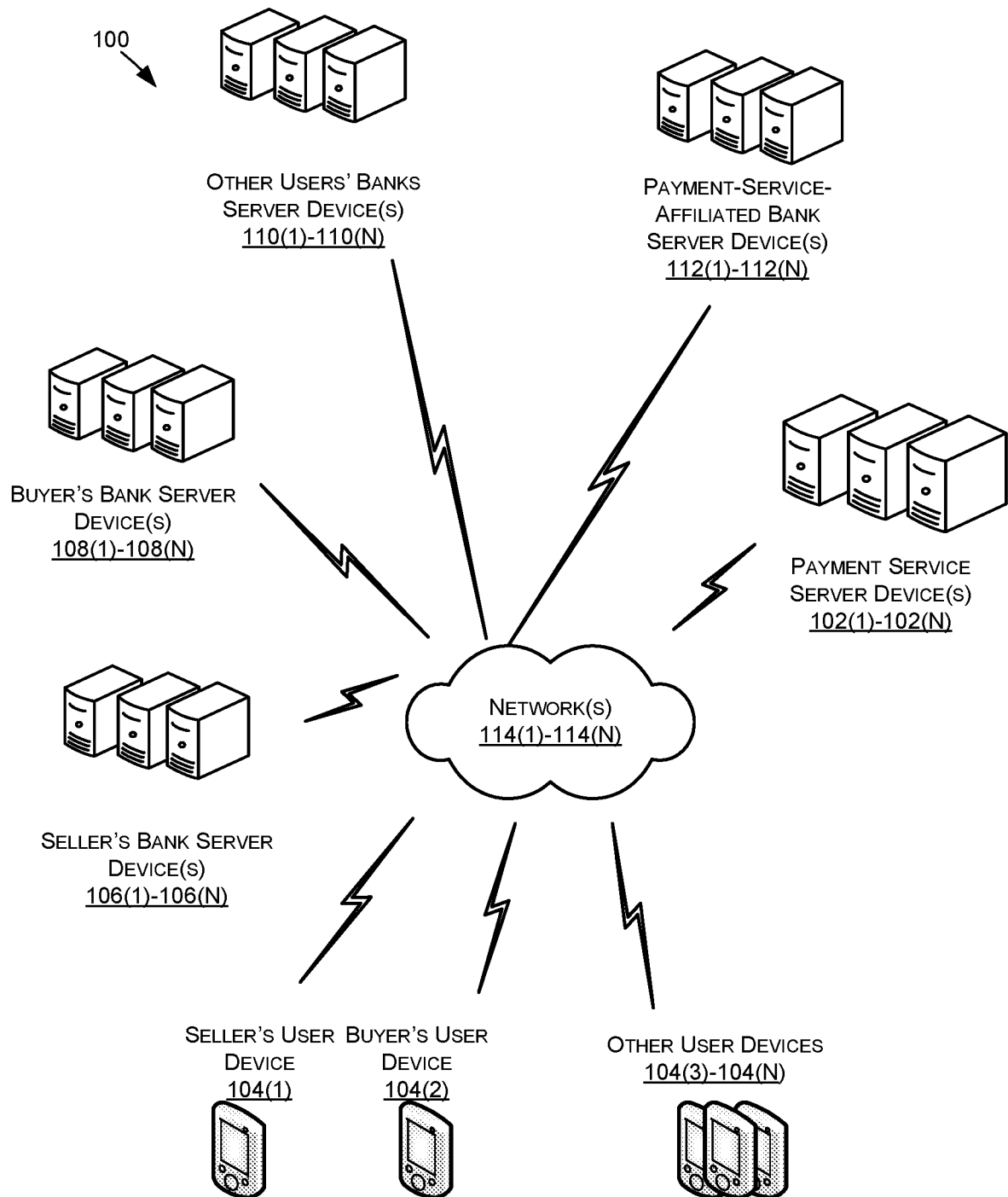
20. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as claim 19 recites.

21. A system comprising:

- one or more processors; and

- one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as claim 19 recites.

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**FIG. 1**

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200

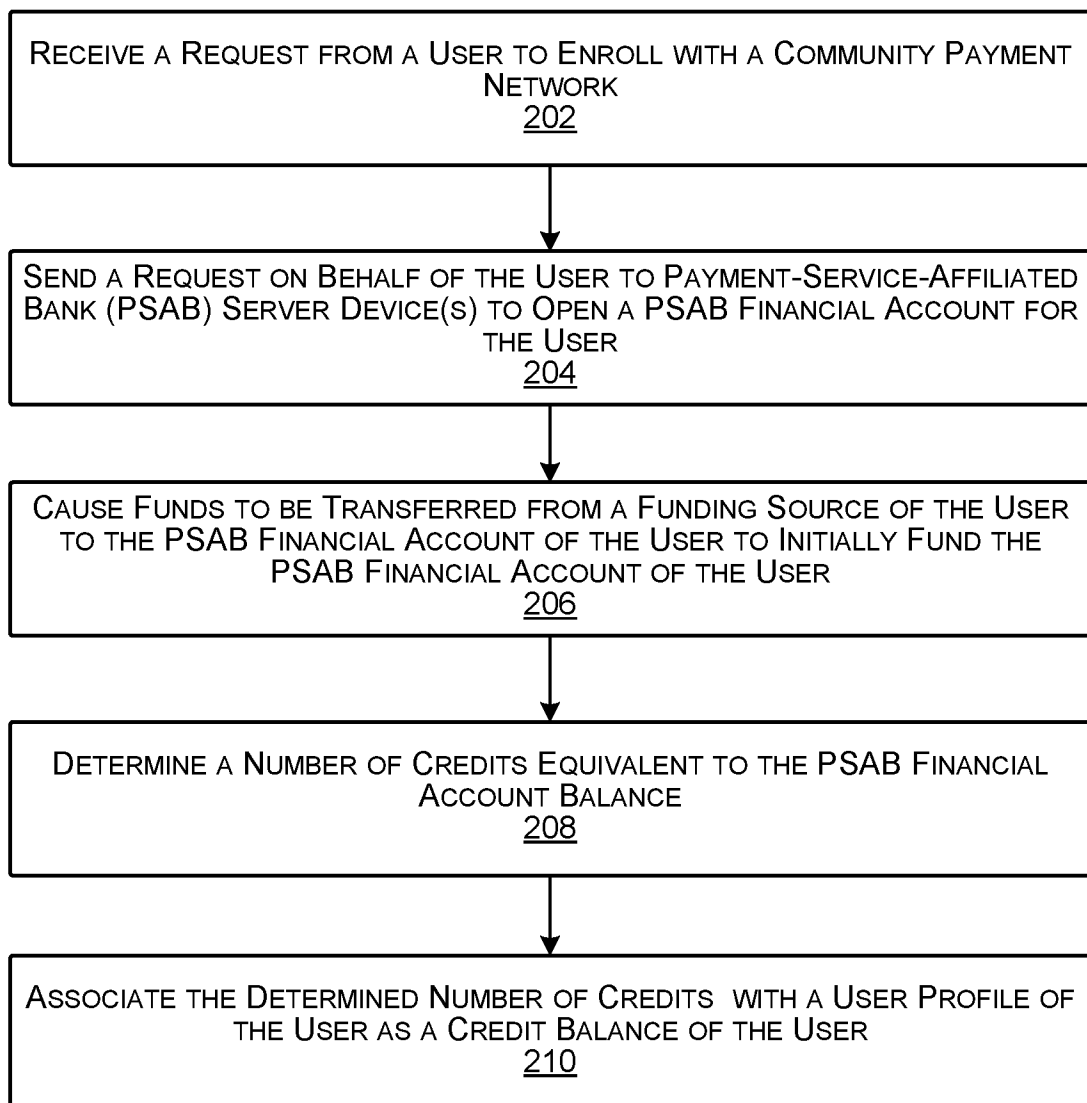
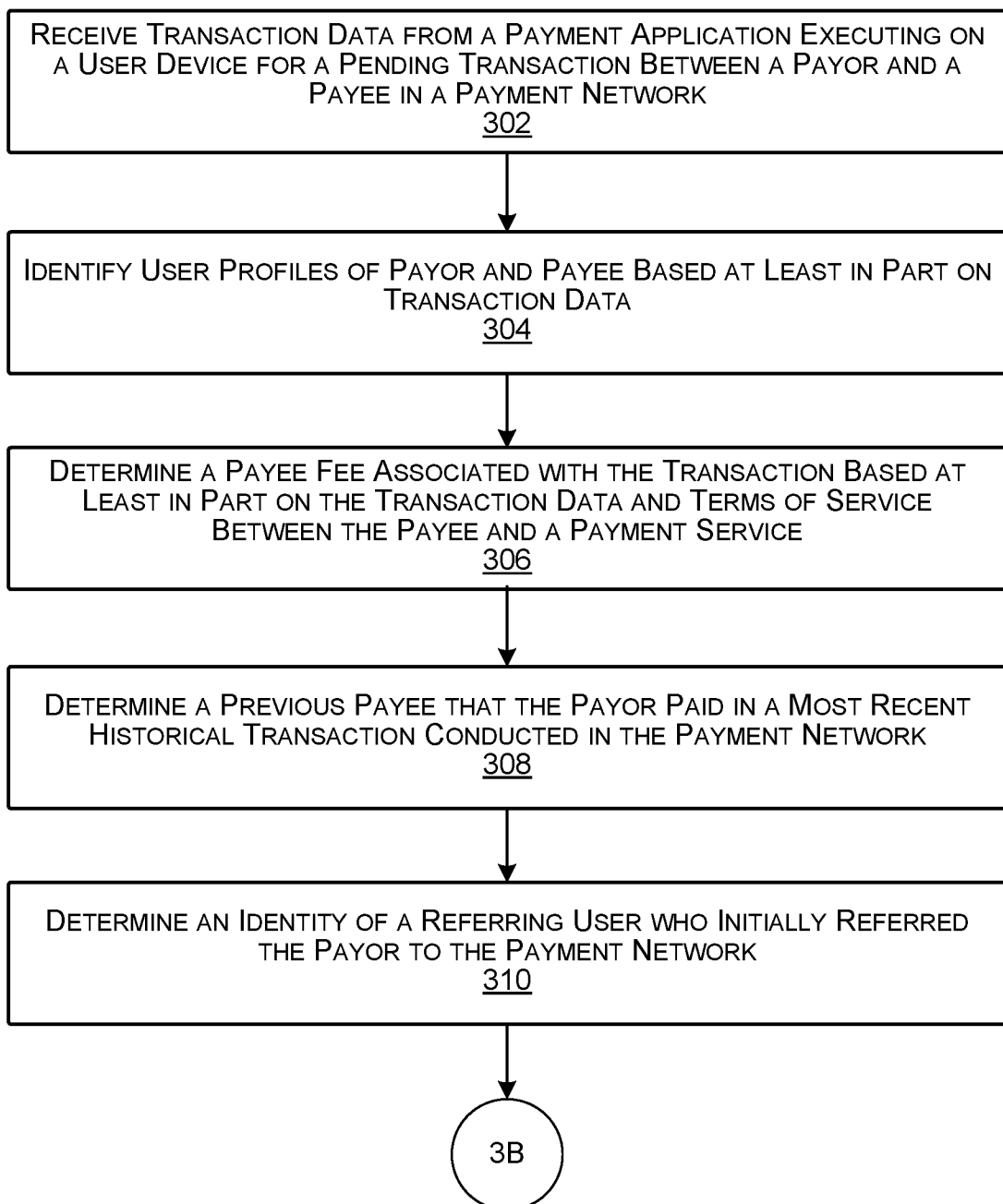


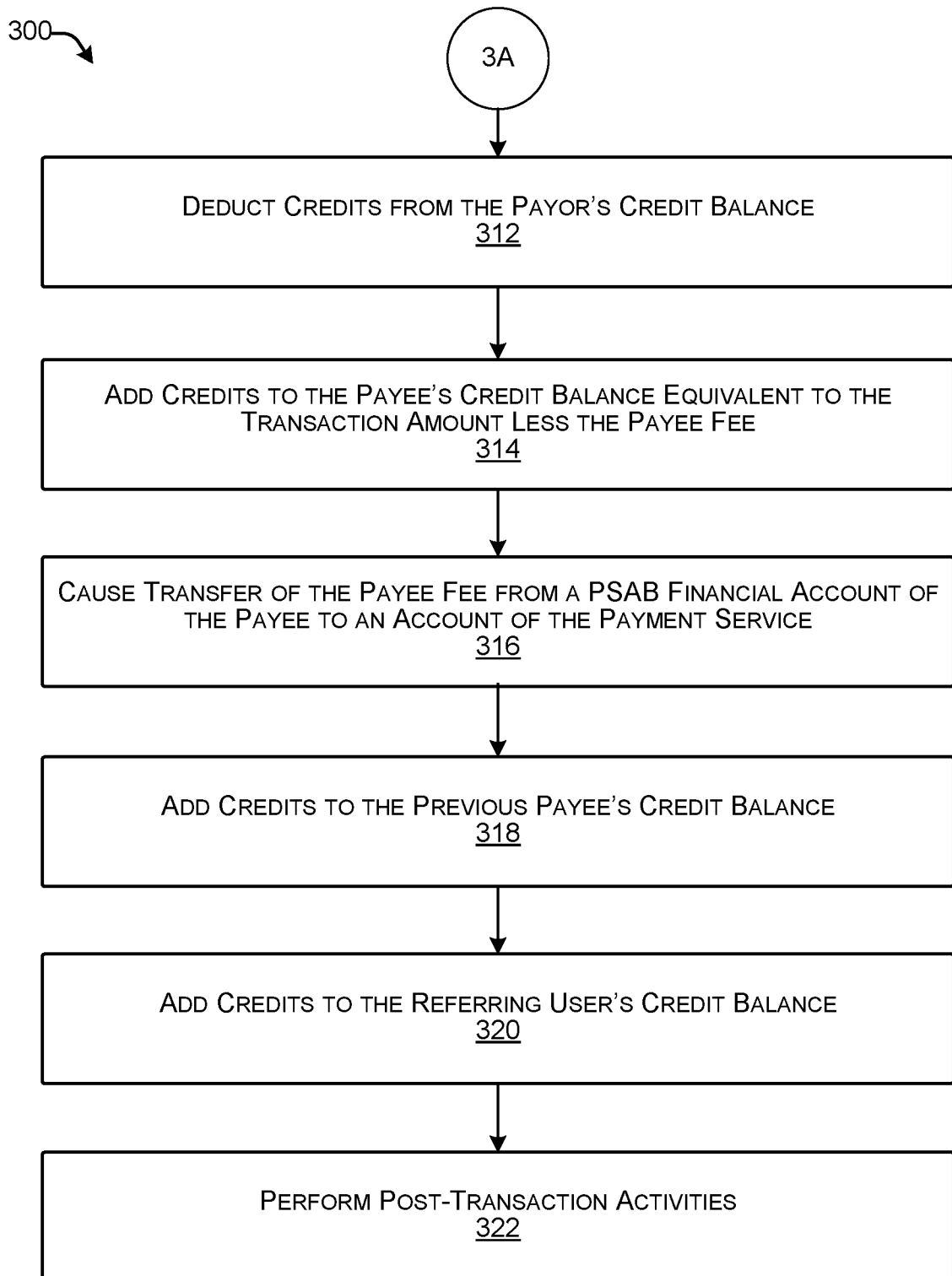
FIG. 2

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300

**FIG. 3A**

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**FIG. 3B**

400

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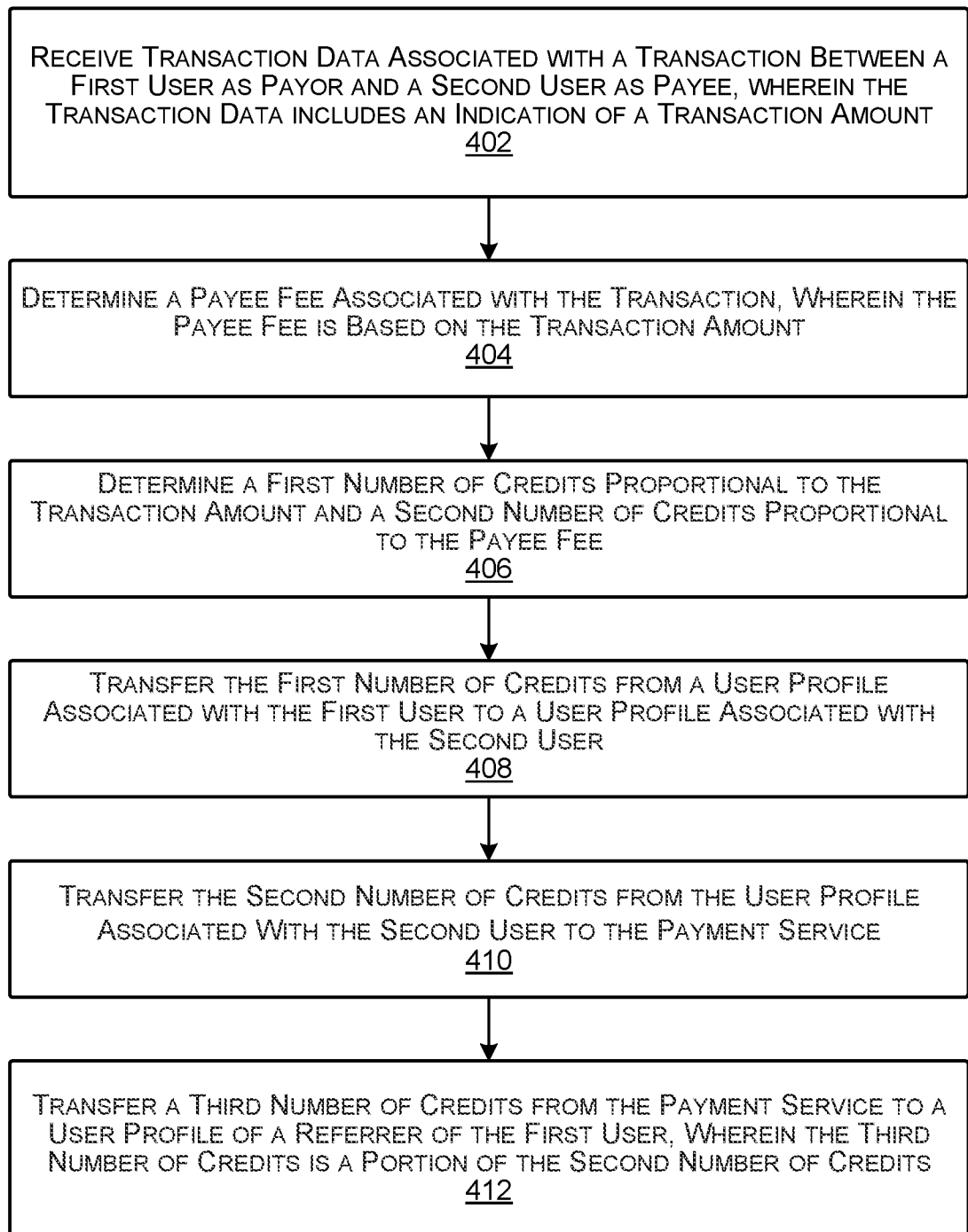


FIG. 4

500

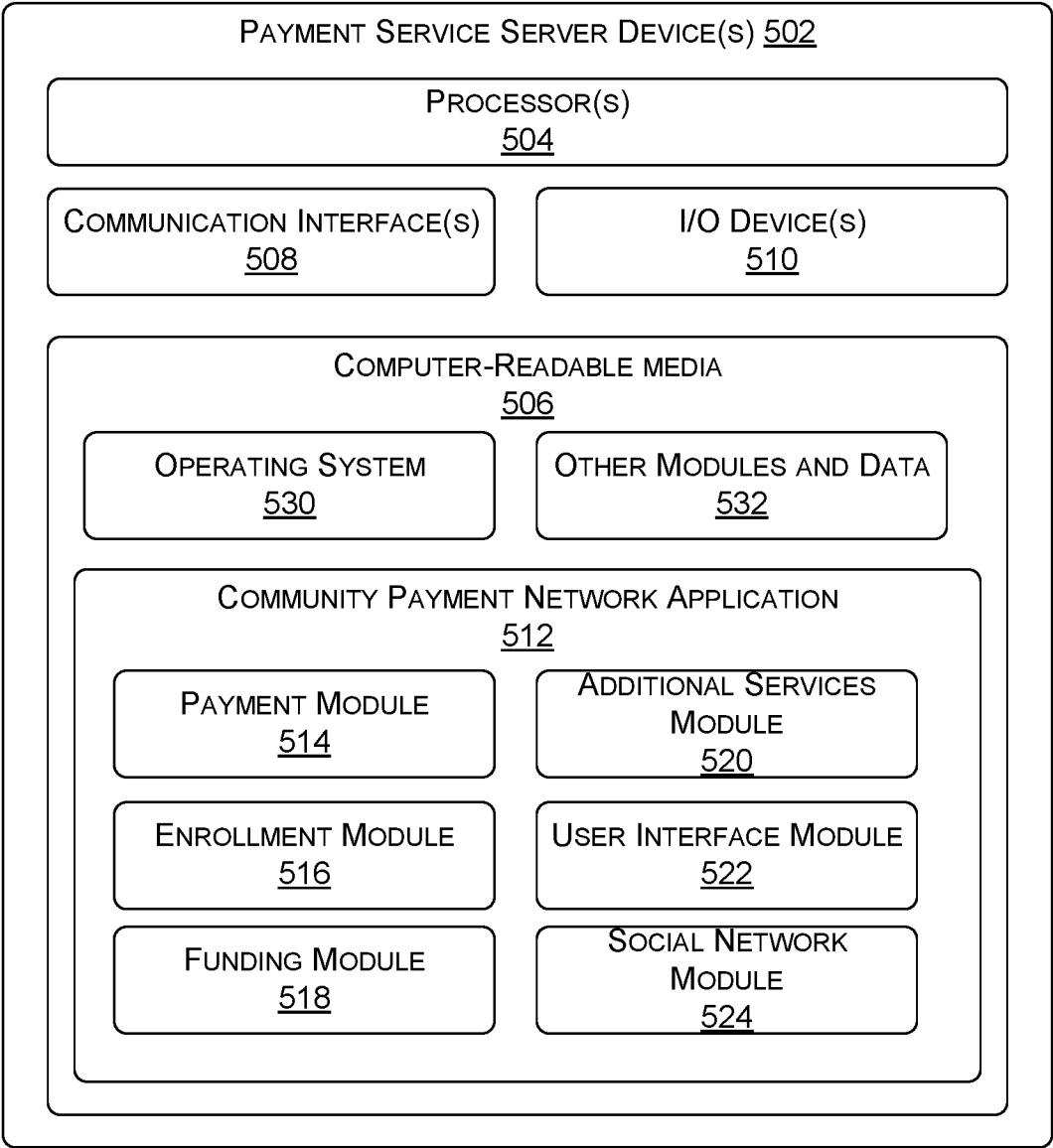
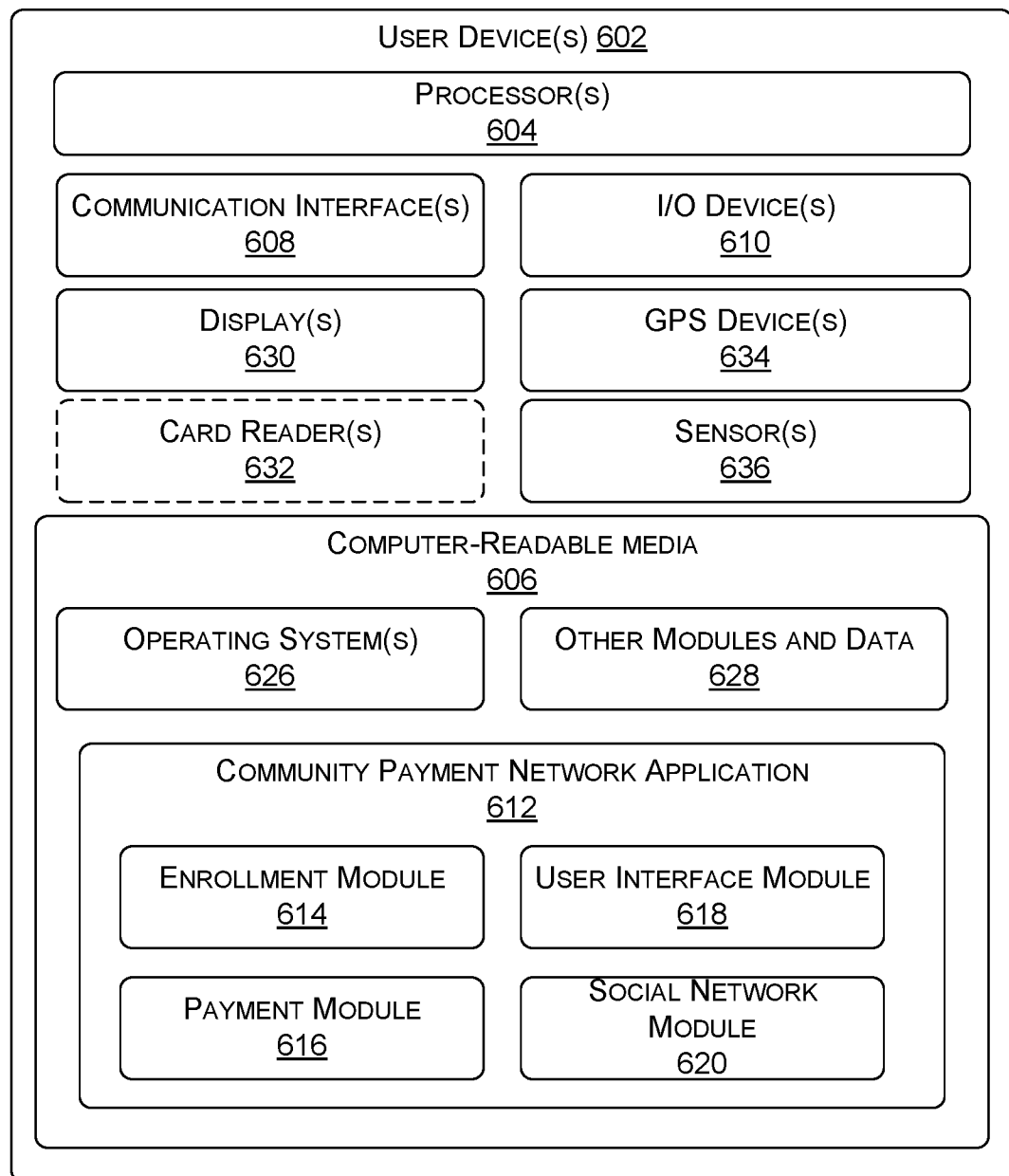


FIG. 5

600

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**FIG. 6**

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US21/46356

A. CLASSIFICATION OF SUBJECT MATTER

IPC - G06Q 20/10; G06Q 20/40; G06Q 20/04 (2021.01)

CPC - G06Q 20/40; G06Q 20/102; G06Q 20/04; G06Q 40/02; G06Q 30/06; G06Q 40/12; G06Q 30/0279; G06Q 50/01; G06Q 20/10; G06Q 20/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0152163 A1 (BEZOS, J ET AL.) 17 October 2002; abstract; figures 2, 4; paragraphs [0009], [0012], [0017], [0018], [0023], [0036], [0076], [0089], [0097], [0257], [0391]; claims 1, 6, 15	1-3
A	US 2009/0234771 A1 (LEDBETTER, P ET AL.) 17 September 2009; entire document	1-3
A	US 2004/0098313 A1 (AGRAWAL, A ET AL.) 20 May 2004; entire document	1-3

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"D" document cited by the applicant in the international application

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

12 October 2021 (12.10.2021)

Date of mailing of the international search report

DEC 29 2021

Name and mailing address of the ISA/US

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Facsimile No. 571-273-8300

Authorized officer

Shane Thomas

Telephone No. PCT Helpdesk: 571-272-4300

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US21/46356

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☒ Claims Nos.: 4-10, 15-18
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
-***-Please See Supplemental Page-***-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-3

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US21/46356

-Continued From Box No. III: Observations where unity of invention is lacking-

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-3 are directed towards determining user eligibility based on enrollment data to request authorization of fund transfers.
 Group II: Claims 11-14 are directed towards transferring a third number of credits comprising a first portion of a second number to a third user.
 Group III: Claims 19-21 are directed towards adding a number of credits equivalent to an amount of currency based on a ratio of credits to currency.

The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical features of Group I include at least partly in response to receiving the enrollment data, determining, by the one or more servers associated with the payment service, that the first user is eligible to enroll with the payment service; sending a device associated with a financial institution, a request on behalf of the first user to open a financial account for the first user at the financial institution; causing and on a display of the first computing device, presentation of an indication of the financial account and a request for authorization to transfer funds from the funding source to the financial account, which are not present in Groups II-III.

The special technical features of Group II include at least transferring a third number of credits from the payment service to a user profile associated with a third user, wherein the third user referred the first user to the community payment network, and wherein the third number of credits comprises a first portion of the second number of credits, which are not present in Groups I and III.

The special technical features of Group III include at least updating the user profile associated with the first user to add a number of credits equivalent to the amount of currency, based at least in part on a ratio of credits to currency, which are not present in Groups I-II.

The common technical features shared by Groups I & II and Groups II & III are a method, implemented by one or more servers of a payment service, the method comprising: receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount; determining a payee fee associated with the transaction, wherein the payee fee is based at least in part on the transaction amount; determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee; transferring the first number of credits or the transaction amount from a user profile associated with the first user to a user profile associated with the second user; transferring the second number of credits or the payee fee from the user profile associated with the second user to the payment service.

The additional common technical features shared by Groups I & III are a method comprising: receiving, by one or more servers associated with a payment service and from at least one of a first computing device or a second computing device associated with a second user, first transaction data associated with a first transaction between the first user and the second user, wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction; storing in a data store associated with the payment service, a user profile associated with the first user; identifying a funding source indicated by the first user; responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation; determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the second transaction amount and a second number of credits equivalent to the payee fee; causing transfers of value comprising: a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with a third user; a transfer of the second number of credits from the user profile associated with the third user to the payment service; a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile associated with the first user; and a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

However, these common features are previously disclosed by US 2002/0152163 A1 to BEZOS, J et al. (hereinafter "BEZOS"). BEZOS discloses a method comprising: receiving, by one or more servers associated with a payment service and from at least one of a first computing device or a second computing device associated with a second user (a server system providing a network-based user-to-user payment service between user accounts (associated with a second user) on a computing device; fig 2; para [0009], [0036]; claim 1 of BEZOS), first transaction data associated with a first transaction between the first user and the second user, wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction (transaction data including amount of payment (transaction data) for visitor completing a payment process (first user/payor) and payee (second user); para [0012], [0017], [0018], [0301]); storing in a data store associated with the payment service, a user profile associated with the first user (user accounts database 72 (data store) including user profiles (associated with the first user); fig 2; para [0089], [0097]); identifying a funding source indicated by the first user (user (first user) enters account information including credit card number or bank routing number (funding source); para [0076], [0077], [0087]); responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation (when users receive payments (data associated with the second transaction) associates receive commissions (payee fee) on resulting payments (based in part on the second transaction amount), the commission dependent upon an amount of the payment (predetermined calculation); abstract; para [0069]; claims 6 & 15 of BEZOS); determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the second transaction amount and a second number of credits equivalent to the payee fee (crediting, by the server system providing a network-based user-to-user payment service, the account to charge from the credit card (a first number of credits equivalent to the second transaction amount) and the commission (second number of credits equivalent to the payee fee); abstract; para [0104], [0105], [0253]); causing transfers of value comprising: a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with a third user (transfer of funds capabilities (transfer the first number of credits) between the two accounts having

-Continued Within the Next Supplemental Box-

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US21/46356

-***-Continued from previous Supplemental Box-***-

user profiles, such as between Lisa Smith and John Schaefer (transfer from the user profile associated with the first user to a user profile associated with a third user); fig 4; para [0077], [0087], [0101], [0102]; claim 35 of BEZOS); a transfer of the second number of credits from the user profile associated with the third user to the payment service (completing the payment process for the commission (transfer of the second number of credits from the user profile associated with the third user) to a location and address displayed in the pay page of the service provider (payment service); abstract; para [0117]; claim 35 of BEZOS); a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile associated with the first user (paying a commission percentage (transfer of credits equivalent to a first percentage of the payee fee) from the payment service to a user (profile associated) for paid referrals (user based in part on determining a referring user) for paying associates in the user profile database (associated with the first user); para [0117], [0127], [0131]; claim 35 of BEZOS); and a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee (when multiple commission percentages are offered (credits equivalent to a second percentage of the payee fee from the payment service), specifying the referring commission for paying associates (a transfer to a user profile associated with an immediately previous payee); para [0127], [0131], [0318], [0348]; claim 30 of BEZOS), based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user (where the visitor (immediately previous payee) immediately sees the paybox (based in part on the first transaction data) for the funds to be transferred from the visitor to the payee when the visitor subsequently selects the paybox upon following a single-action payment link (immediately previous payee comprises the second user); para [0020], [0165], [0318]).

Since the common technical features are previously disclosed by BEZOS, these common features are not special and so Groups I-III lack unity.

ARTICLE 34 CLAIM AMENDMENTS FOR CH II DEMAND**CLAIMS**

We claim:

1. A method comprising:

receiving, by one or more servers associated with a payment service and from a first computing device associated with a first user of a plurality of users of the payment service, via a first instance of a payment application, enrollment data associated with enrollment of the first user with the payment service;

at least partly in response to receiving the enrollment data, determining, by the one or more servers associated with the payment service, that the first user is eligible to enroll with the payment service;

storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with the first user;

based at least in part on the enrollment data, identifying, by the one or more servers associated with the payment service, a funding source indicated by the first user;

sending, by the one or more servers associated with the payment service to a device associated with a financial institution, a request on behalf of the first user to open a financial account for the first user at the financial institution;

causing, by the one or more servers associated with the payment service and on a display of the first computing device, presentation of an indication of the financial account and a request for authorization to transfer funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service, the authorization;

at least partly in response to receiving the authorization, causing, by the one or more servers associated with the payment service, a transfer of funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a second computing device associated with a second user, first transaction data associated with a first transaction between the first user and the second user, wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a third computing device of a third user via a respective instance of the payment application executing on the first computing device or the third computing device, second transaction data associated with a second transaction between the first user and the third user, wherein the second transaction data includes an indication of a transaction amount associated with the second transaction, wherein the first user comprises a payor for the second transaction and the third user comprises a payee for the second transaction;

responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee; and

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the third user;

- a transfer of the second number of credits from the user profile associated with the third user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining that the referring user referred the first user to enroll with the payment service, wherein determining that the referring user referred the first user to enroll is based at least in part on the user profile associated with the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

2. The method as claim 1 recites, further comprising sending, by the one or more servers associated with the payment service, a transaction record for the second transaction to at least one of the first computing device or the third computing device.

3. The method as either claim 1 or claim 2 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request for a summary of transactions of the first user; and
causing, by the one or more servers associated with the payment service, presentation of the summary of transactions on a display of the first computing device.

4. The method as either claim 1 or claim 2 recites, wherein terms of an agreement between the payment service and one or more users of the plurality of users includes a term requiring that the payee fee be less than a minimum threshold payee fee.

5. The method as either claim 1 or claim 2 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request to convert one or more credits associated with the user profile associated with the first user to a currency of the funding source;
causing, by the one or more servers associated with the payment service, transfer of an amount of currency from the financial institution to the funding source of the first user, wherein the amount of currency comprises a number of the one or more credits multiplied by a ratio of currency units per credit; and
reducing a credit balance associated with the user profile associated with the first user by the one or more credits.

6. The method as either claim 1 or claim 2 recites, further comprising:
sending, by the one or more servers associated with the payment service to the first computing device associated with the first user, a request for additional information associated with opening the financial account for the first user at the financial institution; and
receiving, by the one or more servers associated with the payment service and from the first computing device associated with the first user, the additional information,
wherein sending the request on behalf of the first user to open the financial account for the first user at the financial institution is at least partly responsive to receiving the additional information.

7. The method as either claim 1 or claim 2 recites, wherein the enrollment data includes at least one of an identifier of the referring user of the first user, an identifier of the funding

source, an a funding amount to transfer to the financial institution from the funding source, or personally identifying information.

8. The method as either claim 1 or claim 2 recites, wherein the payment application is provided to the first computing device by the one or more servers associated with the payment service.

9. The method as either claim 1 or claim 2 recites, wherein determining that the first user is eligible to enroll with the payment service comprises determining that the first user has not previously enrolled with the payment service.

10. The method as either claim 1 or claim 2 recites, wherein the funding source comprises a bank, a credit union, a savings and loan association, or a brokerage firm.

11. A method, implemented by one or more servers of a payment service associated with a community payment network, the method comprising:

receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount;

determining a payee fee associated with the transaction, wherein the payee fee is based at least in part on the transaction amount;

determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee;

transferring the first number of credits or the transaction amount from a user profile associated with the first user to a user profile associated with the second user;

transferring the second number of credits or the payee fee from the user profile associated with the second user to the payment service; and

transferring a third number of credits from the payment service to a user profile associated with a third user, wherein the third user referred the first user to the community payment network, and wherein the third number of credits comprises a first portion of the second number of credits.

12. The method as claim 11 recites, further comprising:

transferring a fourth number of credits from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits.

13. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either claim 11 or claim 12 recites.

14. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either claim 11 or claim 12 recites.

15. The method as either of claim 1 or claim 2 recites, wherein the payee fee comprises a flat fee, a percentage of the transaction amount, or a combination of a flat fee and a percentage of the transaction amount.

16. The method as either of claim 1 or claim 2 recites, wherein at least one of the payee fee, the first percentage, or the second percentage is a term of an agreement between the payment service and one or more users of the plurality of users.

17. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either of claim 1 or claim 2 recites.

18. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either of claim 1 or claim 2 recites.

19. A method comprising:

storing, by one or more servers associated with a payment service and in a data store associated with the payment service, a user profile associated with a first user of a plurality of users of a payment service, wherein the user profile includes information identifying a funding source of the first user;

receiving, by the one or more servers associated with the payment service and from the funding source, an amount of currency;

updating, by the one or more servers of the payment service, the user profile associated with the first user to add a number of credits equivalent to the amount of currency, based at least in part on a ratio of credits to currency;

receiving, by the one or more servers associated with the payment service and from at least one of a first computing device associated with the first user or a second computing device associated with a second user via a respective instance of a payment application executing on the first computing device or the second computing device, transaction data associated with a transaction between the first user and the second user, wherein the transaction data includes an indication of a transaction amount associated with the transaction, wherein the first user comprises a payor and the second user comprises a payee in the transaction;

responsive at least in part to receiving the transaction data associated with the transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee; and

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the second user;

- a transfer of the second number of credits from the user profile associated with the second user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with the referring user is based at least in part on determining a referring user associated with the user profile of the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based

at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

20. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as claim 19 recites.

21. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as claim 19 recites.

22. The method as either claim 1 or claim 2 recites, wherein the transfers of value further comprise a transfer of credits equivalent to a third percentage of the payee fee from the payment service to a fourth user.

23. The method as either claim 1 or claim 2 recites, wherein the transfers of value further comprise a transfer of a third percentage of the payee fee to an entity.

24. The method as claim 23 recites, wherein the other entity comprises at least one of a financial institution, a non-profit organization, a charitable organization, an individual, a small business, or a government entity.

25. The method as either claim 1 or claim 2 recites, wherein the enrollment data includes an identifier of the referring user, and wherein the identifier comprises a QR code or URL associated with the referring user.

ARTICLE 34 CLAIM AMENDMENTS FOR CH II DEMAND**CLAIMS**

We claim:

1. A method comprising:

receiving, by one or more servers associated with a payment service and from a first computing device associated with a first user of a plurality of users of the payment service, via a first instance of a payment application, enrollment data associated with enrollment of the first user with the payment service;

at least partly in response to receiving the enrollment data, determining, by the one or more servers associated with the payment service, that the first user is eligible to enroll with the payment service;

storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with the first user;

based at least in part on the enrollment data, identifying, by the one or more servers associated with the payment service, a funding source indicated by the first user;

sending, by the one or more servers associated with the payment service to a device associated with a financial institution, a request on behalf of the first user to open a financial account for the first user at the financial institution;

causing, by the one or more servers associated with the payment service and on a display of the first computing device, presentation of an indication of the financial account and a request for authorization to transfer funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service, the authorization;

at least partly in response to receiving the authorization, causing, by the one or more servers associated with the payment service, a transfer of funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a second computing device associated with a second user, first transaction data associated with a first transaction between the first user and the second user, wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a third computing device of a third user via a respective instance of the payment application executing on the first computing device or the third computing device, second transaction data associated with a second transaction between the first user and the third user, wherein the second transaction data includes an indication of a transaction amount associated with the second transaction, wherein the first user comprises a payor for the second transaction and the third user comprises a payee for the second transaction;

responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee; and

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the third user;

- a transfer of the second number of credits from the user profile associated with the third user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining that the referring user referred the first user to enroll with the payment service, wherein determining that the referring user referred the first user to enroll is based at least in part on the user profile associated with the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

2. The method as claim 1 recites, further comprising sending, by the one or more servers associated with the payment service, a transaction record for the second transaction to at least one of the first computing device or the third computing device.

3. The method as either claim 1 or claim 2 recites, further comprising:

receiving, by the one or more servers associated with the payment service and from the first computing device, a request for a summary of transactions of the first user; and

causing, by the one or more servers associated with the payment service, presentation of the summary of transactions on a display of the first computing device.

4. The method as either claim 1 or claim 2 recites, wherein terms of an agreement between the payment service and one or more users of the plurality of users includes a term requiring that the payee fee be less than a minimum threshold payee fee.

5. The method as either claim 1 or claim 2 recites, further comprising:

receiving, by the one or more servers associated with the payment service and from the first computing device, a request to convert one or more credits associated with the user profile associated with the first user to a currency of the funding source;

causing, by the one or more servers associated with the payment service, transfer of an amount of currency from the financial institution to the funding source of the first user, wherein the amount of currency comprises a number of the one or more credits multiplied by a ratio of currency units per credit; and

reducing a credit balance associated with the user profile associated with the first user by the one or more credits.

6. The method as either claim 1 or claim 2 recites, further comprising:

sending, by the one or more servers associated with the payment service to the first computing device associated with the first user, a request for additional information associated with opening the financial account for the first user at the financial institution; and

receiving, by the one or more servers associated with the payment service and from the first computing device associated with the first user, the additional information,

wherein sending the request on behalf of the first user to open the financial account for the first user at the financial institution is at least partly responsive to receiving the additional information.

7. The method as either claim 1 or claim 2 recites, wherein the enrollment data includes at least one of an identifier of the referring user of the first user, an identifier of the funding

source, an a funding amount to transfer to the financial institution from the funding source, or personally identifying information.

8. The method as either claim 1 or claim 2 recites, wherein the payment application is provided to the first computing device by the one or more servers associated with the payment service.

9. The method as either claim 1 or claim 2 recites, wherein determining that the first user is eligible to enroll with the payment service comprises determining that the first user has not previously enrolled with the payment service.

10. The method as either claim 1 or claim 2 recites, wherein the funding source comprises a bank, a credit union, a savings and loan association, or a brokerage firm.

11. A method, implemented by one or more servers of a payment service associated with a community payment network, the method comprising:

receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount;

determining a payee fee associated with the transaction, wherein the payee fee is based at least in part on the transaction amount;

determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee;

transferring the first number of credits or the transaction amount from a user profile associated with the first user to a user profile associated with the second user;

transferring the second number of credits or the payee fee from the user profile associated with the second user to the payment service; and

transferring a third number of credits from the payment service to a user profile associated with a third user, wherein the third user referred the first user to the community payment network, and wherein the third number of credits comprises a first portion of the second number of credits.

12. The method as claim 11 recites, further comprising:

transferring a fourth number of credits from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits.

13. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either claim 11 or claim 12 recites.

14. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either claim 11 or claim 12 recites.

15. The method as either of claim 1 or claim 2 recites, wherein the payee fee comprises a flat fee, a percentage of the transaction amount, or a combination of a flat fee and a percentage of the transaction amount.

16. The method as either of claim 1 or claim 2 recites, wherein at least one of the payee fee, the first percentage, or the second percentage is a term of an agreement between the payment service and one or more users of the plurality of users.

17. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either of claim 1 or claim 2 recites.

18. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either of claim 1 or claim 2 recites.

19. A method comprising:

storing, by one or more servers associated with a payment service and in a data store associated with the payment service, a user profile associated with a first user of a plurality of users of a payment service, wherein the user profile includes information identifying a funding source of the first user;

receiving, by the one or more servers associated with the payment service and from the funding source, an amount of currency;

updating, by the one or more servers of the payment service, the user profile associated with the first user to add a number of credits equivalent to the amount of currency, based at least in part on a ratio of credits to currency;

receiving, by the one or more servers associated with the payment service and from at least one of a first computing device associated with the first user or a second computing device associated with a second user via a respective instance of a payment application executing on the first computing device or the second computing device, transaction data associated with a transaction between the first user and the second user, wherein the transaction data includes an indication of a transaction amount associated with the transaction, wherein the first user comprises a payor and the second user comprises a payee in the transaction;

responsive at least in part to receiving the transaction data associated with the transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee; and

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the second user;

- a transfer of the second number of credits from the user profile associated with the second user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with the referring user is based at least in part on determining a referring user associated with the user profile of the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based

at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

20. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as claim 19 recites.

21. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as claim 19 recites.

22. The method as either claim 1 or claim 2 recites, wherein the transfers of value further comprise a transfer of credits equivalent to a third percentage of the payee fee from the payment service to a fourth user.

23. The method as either claim 1 or claim 2 recites, wherein the transfers of value further comprise a transfer of a third percentage of the payee fee to an entity.

24. The method as claim 23 recites, wherein the other entity comprises at least one of a financial institution, a non-profit organization, a charitable organization, an individual, a small business, or a government entity.

25. The method as either claim 1 or claim 2 recites, wherein the enrollment data includes an identifier of the referring user, and wherein the identifier comprises a QR code or URL associated with the referring user.

SYSTEMS AND METHODS FOR A CREDIT-BASED SPLIT-COMMISSION ELECTRONIC PAYMENT NETWORK

RELATED APPLICATIONS

[0001] This PCT application claims priority from U.S. Provisional Patent Application No. 63/168,228, filed March 30, 2021, which is incorporated herein by reference.

BACKGROUND

[0002] Credit card and debit card transactions have traditionally come at a cost to merchants. That cost can be some combination of interchange fees, assessment fees, service fees, and a payment processor's markup. In these traditional systems, the merchant bears the cost of the convenience that the customer enjoys by paying with a payment card.

[0003] Conventionally, the merchant fee in a payment card transaction is a percentage of the transaction amount plus a flat fee, together often totaling around 2% of the transaction amount. There can be a number of components of the merchant fee, which can be paid to different entities necessary in processing and settlement of the payment. The largest percentage of the merchant fee is often the interchange fee, which is paid to the issuer of the customer's payment card, and the assessment fees, which can be paid to the payment card network. A percentage is often also paid to the payment processor. Thus, processing payment card transactions conventionally requires participation of multiple entities beyond the merchant and customer and payment of multiple fees.

[0004] Further, while digital payments can be performed using peer-to-peer technology, often at a lower cost per transaction to the payee than payment card transactions, traditional peer-to-peer payment processors limit the total amount that any one user can pay (or be paid) in a period of time. Additionally, in conventional peer-to-peer systems, it can take days for funds to be transferred to a payee's bank account. This makes digital payments an inadequate solution for many transactions.

[0005] There is a need for a payment network that minimizes the cost to payees to accept payments, minimizes the number of entities involved in processing a transaction, minimizes the time to transfer funds from payor to payee, and minimizes the number of funds transfers so as to minimize processing resources. There is also a need to incentivize participation in an electronic payment system.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The detailed description is set forth with reference to the accompanying figures. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The use of the same reference numbers in different figures indicates similar or identical items or features.

[0007] FIG. 1 illustrates an example system for conducting a split commission transaction within a community payment network, as described herein.

[0008] FIG. 2 is a flow diagram illustrating an example process for enrolling a new user with a community payment network, as described herein.

[0009] FIGS. 3A and 3B are a flow diagram illustrating an example process for conducting a split-commission transaction in the community payment network, as described herein.

[0010] FIG. 4 is a flow diagram illustrating an example process that determines payee fee and commissions for a payment transaction, as described herein.

[0011] FIG. 5 illustrates a block diagram of select components of a payment service server device(s), as described herein.

[0012] FIG. 6 illustrates a block diagram of select components of user device(s), as described herein.

DETAILED DESCRIPTION

[0013] Techniques described herein are directed, at least in part, to a community payment network that uses credits backed by currency. In the techniques described herein, a payee fee can be split and distributed to a plurality of entities (e.g., one or more of a payment service, a user that referred the payor to the community payment network, a bank, a charity, a payor, and the payee in the payor's most recent network transaction preceding the transaction in which the payee fee is being paid). Using techniques described herein, a payee that accepts payment via the community payment network pays a payee fee to the payment service, and a portion of the fee can be paid out by the payment service as commission to other entities, which can include other community payment network users such as the referring user and the previous payee. In various examples, the other entities can also or alternatively include one or more financial institutions and/or one or more non-profits.

[0014] Techniques described herein enable a more efficient electronic payment transaction by reducing the number of participants and reducing the number of communications. The unique

configuration of devices and applications implemented in the techniques described herein provide enhanced efficiency to electronic payment processing. Instead of a payment processor having to communicate with a card network and issuer for each transaction, a user of the instant payment network can pre-fund a financial account affiliated with the payment service, and credits can be adjusted as the user engages in transactions. Further, payee fees can be lower than traditional electronic transactions, at least partly because of such process and system simplification.

[0015] Further, the techniques described herein retain fees that would otherwise be paid to credit card issuers and card networks and distribute them to payment network users and/or other entities, who can be individuals, small businesses, etc.

[0016] Paying commissions to the referring user and previous payee serves an incentive to recruit members and accept the payment network form of payment. In this way, membership in the community payment network can grow exponentially or virally. Additionally or alternatively, an incentive to participate in the community payment network is the lower payee fee than is traditionally charged in a credit card transaction or other electronic transaction.

[0017] In some examples, a “payment service” is the payment service entity that processes payments or other funds transfers, including authenticating payment information for a transaction, approving a transaction, causing transfer of value between the parties to the transaction, and paying commission to a referring user and a previous payee. In examples, the payment service can offer other services such as inventory management, loyalty program administration, discount distribution, expense analysis and/or tracking, etc.

[0018] In some examples, a “user” is a member of the community payment network who uses the community payment network for receipt or provision of payment to another member of the community payment network. The user can be an end-user of a community payment network application (“payment application”) provided by the payment service. For purposes of this discussion “member” and “user” are used interchangeably. Depending on the transaction, a user can be a payor or a payee. As used herein, a “payor” is a user who is providing a payment in a transaction. As used herein, a “payee” is a user who is receiving a payment in a transaction. A user can in some transactions be a payor and in other transactions be a payee. In some examples, a merchant can be a payee when the merchant is receiving payment in a transaction. For the purpose of this discussion, a “merchant” can be any entity that offers items (e.g., goods or services) for acquisition (e.g., sale, lease, free, etc.). In some examples, the transaction can be a peer-to-peer

transaction in which the payee is a member of the community payment network who is not a merchant but an individual who is receiving funds from another individual in their personal capacities. For example, payment can be made for a loan, for a private sale, or in other peer-to-peer transactions.

[0019] In some examples, a “referring user” or “referrer” of a user is another member of the community payment network that referred the user to enroll with the community payment network. In some examples, referring users and referrals can be identified by the payment service using data submitted in association with an enrollment request from a user. For instance, an invitation from a first member to a second member can be in the form of a code (e.g., QR code, alphanumeric code, etc.) that includes data representative of the identity of the first member. The data can be transmitted to the payment service when the second member includes the code in a request to enroll in the community payment network. In other examples, a referring user can be manually identified by a user as part of an enrollment process. Additionally, a user need not have a referring user to be part of the community payment network. For example, the user can learn of the community payment network on their own and can enroll without having been referred.

[0020] In some examples, a “previous payee” is a payee with whom the payor entered a transaction that immediately preceded a pending transaction. In other words, the payee in the payor’s most recent historical transaction is referred to as a “previous payee.”

[0021] In some examples, a “payee fee” is a fee charged by the payment service to a payee for conducting a transaction via the community payment network. In other words, the payee fee is the cost to the payee for receiving payment via the community payment network. A payee fee can be a set amount, a percentage of a total transaction amount, a combination of a set amount and a percentage, etc. For example, a payee fee can be 1% of a transaction amount, up to a maximum fee. The payee fee can be set by agreement between the payment service and the payee upon payee enrollment. The payee fee can vary by particular payee, by particular payor, by location of the transaction, by merchant category of the payee or the payor, by date of transaction, by transaction history of at least one of the payor or payee, and the like. A payee fee for a particular payee can depend on the particular transaction, and a payee fee for a first payee may not be the same as the payee fee for a second payee in a transaction that is otherwise comparable. In examples, a payee fee may be paid in credits; in examples, the payee fee may be paid in currency.

[0022] In some examples, a “community payment network” is a plurality of individuals and/or entities participating in a payment system in which credits are used in transactions in place of currency and in which there is a split commission arrangement that divides a payee fee among at least a referring user of a payor, a previous merchant, and a payment service administering the community payment network. A portion of the payee fee may also be allocated to one or more of a financial institution, a non-profit organization or other charity, etc. “Community payment network” is used interchangeably with “payment network” herein.

[0023] In some examples, “bank account” is used interchangeably with “financial account” and is a financial account at a financial institution. In some examples, a “financial institution” can include, but is not limited to, one or more of a commercial bank, a retail bank, an internet bank, a credit union, a savings and loan association, or a brokerage firm.

[0024] In some examples, a “funding source” is a repository of resources associated with a user. In some examples, a funding source can be a deposit account or savings account of a user at a financial institution. In some examples a funding source can be a cryptocurrency account of a user. A funding source can additionally or alternatively be a credit card or debit card of the user. A funding source can additionally be gold or another tangible asset owned by a member. In examples, a funding source can be used as a source of a user’s funds to fund a PSAB financial account. In some examples, a “payment-service-affiliated bank financial account” or PSAB financial account is a financial account at a financial institution selected by the payment service that falls under a master account the payment service maintains at that bank. The PSAB financial account can be separate from the funding source and can be opened in association with a user enrolling with the community payment network. Funds from a funding source can be transferred to the PSAB financial account and vice versa. In examples, such transfers can be performed using ACH payments or other mechanisms.

[0025] In some examples, a “user profile” is a collection of data associated with a user’s membership in the community payment network. A user profile can be stored in a data store associated with the payment service and/or a storage device(s) associated with the payment service server device(s). In an example, a user profile can include information regarding a user’s identity, funding sources, PSAB financial account, transaction history, referring user, referrals made by the user, credit balance, etc. Stored data can be encrypted and stored on secure servers, which can protect personally identifiable information, details about financial accounts, funding sources, etc.

[0026] In some examples, “credits” are units within the community payment network to represent value. In an example, one credit can be equivalent to 1 USD, 100 USD, 1000 USD, or any other dollar amount. In an example in which one credit is equivalent to 1 USD, in a transaction in which a payor obtains goods or services from a payee valued at 100 USD, the payment service removes 100 credits from a payor’s credit balance and the payment service can distribute the 100 credits to the payee, payment service, referring user, previous payee, or others in accordance with an example of the method and system described herein.

[0027] Techniques described herein are often described as occurring in a retail merchant-customer context in which a merchant is a payee and a customer is a payor. However, techniques described herein can also be applied in other contexts. That is, techniques described herein are not limited to retail merchants, customers, etc. and can also be applied to other contexts such as peer-to-peer (“P2P”) money transfer, lending, invoice settlements, and the like.

[0028] Techniques described herein can provide a number of benefits and improvements over conventional techniques. Many of these improvements are technological improvements to the functioning of computers or to other types of technology. For example, by providing for payments via credit transfer within a community payment network, multiple intermediate financial transfers can be avoided. That is, by using credits, a digital substitute for currency, it is unnecessary to transfer funds between financial institutions (e.g., issuer, acquirer, merchant, customer, etc.) after every transaction. Instead, a balance of credits can be maintained for users. A credit balance can be represented by data in a database associated with the payment service. A transaction can simply comprise an update of data (representing a change in a credit balance) performed by a single entity (the payment service). When a user wishes to “cash out” (e.g., convert credits to currency), a credit balance of the user is converted to currency. A transfer from a PSAB financial account of the user to an original funding source of the user (e.g., a personal checking account, savings account, etc.), or to another account is made. A user can engage in a plurality of transactions before cashing out, however, for which credits, not currency, are transferred. Conventionally, a payment transaction involves credits or debits to multiple accounts (issuer, merchant’s bank, funds processor, etc.)

[0029] In techniques described herein, transactions can be consolidated because of the nature of the community payment network because individual transactions in the payment network do not require “settlement” in a traditional sense. Additionally, commission payments can accumulate without a user needing to take any action and credits need not be cashed out until requested.

Eliminating the issuer *and* eliminating the complex merchant fees *and* enabling effortless commissions *and* eliminating or reducing the need for inter-bank communications provide benefits to efficiency, memory, and processing, on the payment service device and obviates the need for other entities and their devices, such as that of card issuer, card network, etc. In at least these ways, technology is improved. Moreover, there can be benefits to the users such as reduced transaction fees, fewer bank transactions, an absence of payment amount caps, etc. Further, the community payment network allows participation by merchants and individuals as equals. In examples, users who are merchants and users who are individuals can pay the same payee fees, receive the same conversion factor, and earn the same commissions when acting as a referring user or “previous payee.” Additionally, the payment service may withhold value from commission payments to pay as taxes in amounts that may be based on the countries in which the transaction is being conducted. The taxes may be paid directly to government entities in some examples. Moreover, value from commission payments may be held back by the payment service and distributed by the payment service to other entities such as charities, non-profit corporations, etc. at the election or designation of a user.

[0030] At least for the reasons given above, techniques described herein, and systems described as implementing techniques described herein, are unconventional, non-routine, non-generic, and yield improvements to relevant technologies.

[0031] Reference to an “embodiment” in this document does not limit the described elements to a single embodiment; all described elements can be combined in any embodiment in any number of ways. Furthermore, for the purposes of interpreting this specification, the use of “or” herein means “and/or” unless stated otherwise. The use of “a” or “an” herein means “one or more” unless stated otherwise. The use of “comprise,” “comprises,” “comprising,” “include,” “includes,” and “including” are interchangeable and not intended to be limiting. Also, unless otherwise stated, the use of the terms such as “first,” “second,” “third,” “upper,” “lower,” and the like do not denote any spatial, sequential, or hierarchical order or importance, but are used to distinguish one element from another. It is to be appreciated that the use of the terms “and/or” and “at least one of”, for example, in the cases of “A and/or B” and “at least one of A and B”, is intended to encompass the selection of the first listed option (A) only, or the selection of the second listed option (B) only, or the selection of both options (A and B). As a further example, in the cases of “A, B, and/or C” and “at least one of A, B, and C”, such phrasing is intended to encompass the selection of the first

listed option (A) only, or the selection of the second listed option (B) only, or the selection of the third listed option (C) only, or the selection of the first and the second listed options (A and B) only, or the selection of the first and third listed options (A and C) only, or the selection of the second and third listed options (B and C) only, or the selection of all three options (A and B and C). This can be extended, as readily apparent by one of ordinary skill in this and related arts, for as many items listed.

[0032] It should also be appreciated by those skilled in the art that any block diagrams, steps, or sub-processes herein represent conceptual views of illustrative systems embodying the principles of the present subject matter. Similarly, it will be appreciated that any flow charts, flow diagrams, state transition diagrams, pseudo code, and the like represent various processes which can be substantially represented in computer readable medium and so executed by a computer or processor, whether or not such computer or processor is explicitly shown. The order in which the methods are described are not intended to be construed as a limitation, and any number of the described method blocks can be deleted, moved, added, subdivided, combined, and/or modified in any order to implement the methods, or an alternative combination or sub-combinations. Also, while steps, sub-processes or blocks are at times shown as being performed in series, some steps, sub-processes, or blocks can instead be performed in parallel, or can be performed at different times as will be recognized by a person of ordinary skill in the art. Further any specific numbers noted herein are only examples; alternative implementations can employ differing values or ranges. Furthermore, the methods can be implemented in any suitable hardware, software, firmware, or combination thereof.

[0033] FIG. 1 illustrates an example system 100 for conducting a split commission transaction within a community payment network, as described herein. System 100 includes payment service server device(s) 102(1)-102(N), user device(s) 104(1)-104(N) (including seller's user device 104(1) and buyer's user device 104(2), and other user devices 104(3)-104(N)), seller's bank server device(s) 106(1)-106(N), buyer's bank server device(s) 108(1)-108(N), other users' banks server device(s) 110(1)-110(N), and payment-service-affiliated bank (PSAB) server device(s) 112(1)-112(N). Server devices may be also referred to herein a "server(s)". The devices of system 100 communicate with each other via network(s) 114(1)-114(N) (e.g., the Internet, cable network(s), cellular network(s), wireless network(s) (e.g., Wi-Fi) and wired network(s), as well as close-range communications such as Bluetooth®, Bluetooth® low energy, and the like).

[0034] While a single seller's user device 104(1) and buyer's user device 104(2) are illustrated, in additional or alternate examples, system 100 can have multiple seller devices 104(1) and buyer devices 104(2). Additionally, each user of a plurality of users of the payment service can be associated with a bank, and so system 100 can include a plurality of users' banks server device(s) (106(1)-106(N), 108(1)-108(N), 110(1)-110(N)) for a plurality of users. Moreover, for simplicity of reference, components throughout this disclosure may be referred to in the singular form and in connection with a single generalized reference numeral. For example, user device(s) 104(1)-104(N) (i.e., the plural form) may be referred to as a user device 104 (i.e., the singular form). Nonetheless, it should be understood that use of the singular form may include the plural form in certain implementations.

[0035] One or more of payment service server device 102, user device 104, seller's bank server device 106, buyer's bank server device 108, other users' banks server device 110, or PSAB server device 112 can include any type of computing device that is generally configured to perform an operation. For example, one or more of the payment service server device 102, user device 104, seller's bank server device 106, buyer's bank server device 108, other users' banks server device 110, or PSAB server device 112 can be implemented as a laptop computer, a desktop computer, a server, a smart phone, an electronic reader device, a mobile handset, a personal digital assistant (PDA), a portable navigation device, a portable gaming device, a tablet computer, a watch, a portable media player, a television, a set-top box, a computer system in a car, an appliance, a camera, a robot, a hologram system, a home-based computer system (e.g., intercom system, home media system, etc.), a projector, an automated teller machine (ATM), a pair of glasses with computing capabilities, and so on.

[0036] A payment service associated with payment service server device(s) 102(1)-102(N) can constitute an online payment service that processes payments for multiple users. Payment service server device(s) 102(1)-102(N) can expose a network-based application programming interface (API) through which the payment service provides services to multiple users via user devices 104(1)-104(N). For the purpose of this discussion, the payment service and/or the payment service server device(s) 102(1)-102(N) may be any number of servers, an entity, a platform, a service provider, a service provider network, etc. The payment service may maintain a website, platform, database, etc. that is accessible by the users via user devices 104(1)-104(N). In some embodiments, the payment service may offer various network-based (or "cloud-based") services to the users to

fulfill computing needs of the users. In some embodiments, the payment service may operate payment service networks that include clusters of managed servers (or other hardware-based computing devices) stored in data centers located across different geographic regions. Payment service server device(s) 102(1)-102(N) are described further below in the discussion for FIG. 5.

[0037] A user device of user devices 104(1)-104(N) can be a point-of-sale (POS) device and can execute a payment application that can be provided by the payment service server device(s) 102(1)-102(N) to perform activities associated with the payment network. User devices 104(1)-104(N) are described further below in the discussion for FIG. 5.

[0038] Seller's bank server device(s) 106(1)-106(N) and buyer's bank server device(s) 108(1)-108(N) can be associated with banks or other financial institutions at which seller and buyer, respectively, have financial accounts.

[0039] PSAB server device(s) 112(1)-112(N) can be associated with a PSAB bank designated by the payment service to open and hold payment network-related financial accounts. PSAB server device(s) 112(1)-112(N) maintain PSAB financial accounts for users of the community payment network. The payment service can hold a master account at the PSAB, to which the users' financial accounts can be associated. Payment service server device(s) 102(1)-102(N) can cause PSAB server device(s) 112(1)-112(N) to open a PSAB financial account for a user upon the user's enrollment with the community payment network. Payment service server device(s) 102(1)-102(N) can provide the PSAB bank information about users (e.g., name, social security number, address, citizenship, etc.), which can be obtained via an enrollment process or through queries to users, to open a PSAB financial account on the users' behalf. In examples, an alternative financial institution to the PSAB can be used (if a user is not qualified to open a U.S. bank account, for example).

[0040] In embodiments, no PSAB device 112(1)-112(N) is included in system 100. In such embodiments, users can use their own funding sources (e.g., financial accounts held at their own financial institutions (e.g., 106(1)-106(N), 108(1)-108(N), or 110(1)-110(N))) as financial backing for the credits used in the community payment network.

[0041] At least some additional components and functions of, and interactions between, devices in example system 100 are described below (at least with respect to FIGS. 4 and 5).

[0042] FIG. 2 is a flow diagram illustrating an example process 200 for enrolling a new user with a community payment network, as described herein.

[0043] Block 202 illustrates receiving a request from a user to enroll with a community payment network. Payment service server device(s) can receive the request from a user device, via web form, email, direct message, application notification, etc. In examples, the request can include or be associated with referring user information. Referring user information identifies an existing member of the payment network who referred the user to the payment service. Referring user information can be embedded as data in an enrollment request. In an example, a user can scan a QR code presented by a merchant user or activate a URL provided by the merchant that directs the user to an enrollment interface. In an example, scanning a QR code with a user device can cause a browser window to open on the user device, from which payment service server device(s) can obtain enrollment information input by the user. In examples, for a user to qualify as a referring user in the payment network, the referee must enroll within a threshold time of the user providing the referee the QR code or URL. For instance, the payment service can timestamp the QR code upon its generation and compare that timestamp with an enrolling user's first contact with the payment service. Additionally or alternatively, a user can provide an enrolling user a code. When the enrolling user provides the code to the payment service during enrollment, the user that provided the code to the enrolling user is acknowledged by the payment service as the referring user. Additionally or alternatively, referring user information can be obtained by payment service server device(s) separately from an enrollment request. An identifier for a referring user can be stored by the payment service in association with a new user profile for the user, which can be stored in a data store associated with payment service server device(s).

[0044] In examples, a user can enroll at a time of a transaction with a referring user. Transaction data, an enrollment link, and a referring user identifier can be obtained by a user device of the user (e.g., by scanning a QR code presented to the user by a merchant via a merchant device). In examples, the user can enroll before performing any transaction in the community payment network. In an example, a user device can scan a QR code displayed by a merchant device or posted at a merchant location, such that the merchant associated with the merchant device can be qualified as the referring user though no transaction has yet occurred. In other examples, a user can enroll by visiting a webpage of the community payment network without having been directly referred, such that, in examples, commissions from the user's transactions do not get split three or more ways (e.g., payment network, previous merchant, referring user), but at most two ways (payment network, previous merchant). In a first transaction within the payment network by a user

with a user profile for whom no referring user has been associated, the payment network retains the full payee fee (or equivalent credits) because there is neither a previous merchant nor a referring user. Once the user is enrolled, the user can conduct transactions within the payment network.

[0045] As part of the enrollment process, payment service server device(s) can request identifying information regarding a funding source of a user. This funding source (e.g., checking account, etc.) can be used to fund a user's PSAB financial account or can be used for provision of direct backing of credits exchanged in the community payment network. Credits can be backed by U.S. dollars or by another currency, cryptocurrency, or other value mechanism. Different users' credits can be backed by different currencies or value mechanisms.

[0046] Block 204 illustrates sending a request on behalf of a user to PSAB server device(s) to open a PSAB financial account for a user. A bank can be selected by the payment service to be the PSAB, and the payment service can maintain a master or umbrella account at the PSAB for all accounts opened for users of the payment service. The payment service can store an association between the user's new PSAB financial account and the user's user profile in the community payment network. An association between the user's funding source and the user profile can also be stored, thereby allowing a determination of a user's PSAB financial account and funding source given the user's identifier. In some examples, the payment service or the PSAB can communicate with the user (via email, direct message, application notification, etc.) to obtain additional information from the user after initial enrollment in order to open the PSAB financial account (e.g., to obtain direct authorization from the user to open the PSAB financial account). In some examples, no PSAB financial account is opened, but instead, transfers occur directly between the payee and payor funding sources (e.g., checking account, etc.), or the funding source of one user and a PSAB financial account of a second user. In an example in which a user does not use or have a PSAB financial account, a user can agree that the user's funding source may be debited in order to add credits to the user's credit balance associated with the user's user profile. A user can agree that if the credit balance falls below a minimum threshold, additional funds can be transferred to the payment service to increase the credits associated with the user. When a user wishes to "cash out," funds can be transferred from the payment service to the user's funding source. Similarly, in examples in which a PSAB financial account is present, a user can agree to automatic replenishment of the PSAB financial account from the user's funding source if the balance of the PSAB financial account falls below a minimum threshold.

[0047] Block 206 illustrates causing funds to be transferred from a funding source of the user to the PSAB financial account of the user to initially fund the PSAB financial account of the user. For example, the payment service can initiate an ACH transfer between a funding source and a PSAB financial account. In some examples, a user authorizes a particular amount for the transfer via an input to a payment application executing on a user device of the user, a direct message, email, a web form entry, etc. In some examples, the payment service can suggest an amount for the transfer or require a minimum amount as an initial funding of the PSAB financial account. The user can authorize automatic transfers from the funding source to the PSAB financial account. In examples, an automatic transfer occurs when the PSAB financial account balance falls below a minimum threshold amount.

[0048] Block 208 illustrates determining a number of credits equivalent to the PSAB financial account balance. As described below, a conversion factor of credits to currency can be used both in determining how many credits a certain currency amount is worth, and in determining a currency amount a number of credits is worth (e.g., such as when “cashing out” credits, as discussed below).

[0049] Block 210 illustrates associating determined the number of credits with a user profile of the user as a credit balance of the user.

[0050] A user can “cash out” credits at any time. In examples, to do so, a user submits a request to the payment service. The request can include an amount of credits the user wishes to cash out and can identify an account to which the funds should be transferred. The identified account can be the funding source that originally funded the PSAB financial account or can be another disbursement method. Responsive to receiving the request, the payment service causes a transfer of funds from the PSAB financial account back to the identified account (or alternative type of disbursement). The amount of credits that can be cashed out can be limited by a minimum credit balance that must be maintained as part of the terms of the community payment network. However, if a user intends to disenroll in the community payment network, all credits can be cashed out. In examples, when a user disenrolls, the complete cash-out occurs automatically.

[0051] If a transaction causes a credit balance of a user to fall below what is equivalent to a currency amount in the user’s PSAB financial account, (e.g., the user conducts a transaction that causes the credit balance to fall below the credit-equivalent of the \$10 in the user’s PSAB financial account), the payment service can request authorization of a transfer from the user’s funding source (e.g., by an ACH transfer, etc.). Alternatively, in an example, no authorization is required when

the user profile allows automatic replenishments of the PSAB financial account. For instance, given a 1:1 credits to dollars conversion factor, a \$100 balance in the user's PSAB financial account, a pending transaction for \$50, and a minimum balance for the PSAB financial account of \$75, the payment service can cause transfer of \$25 at or about the time of the transaction.

[0052] FIG. 3A and 3B are a flow diagram illustrating an example process 300 for conducting a split-commission transaction in the community payment network, as described herein.

[0053] Block 302 illustrates receiving transaction data from a payment application executing on a user device for a pending transaction between a payor and a payee in a payment network. In examples, the payment application is a mobile payment application. In examples, the transaction data may be received by the payment service from a payment application executing on a user device of a payor (such as buyer's user device 104(2)) for a transaction between a payor and a payee. In examples, transaction data may be received by the payment service from a POS device. In examples, the payor can be a customer of the payee, who can be a merchant. The transaction data can include conventional information (e.g., transaction amount, transaction location, items or services purchased, identity of the merchant, etc.). The transaction data can also include a payor identifier, which, in some examples, can be appended to the conventional transaction data by the particular instance of the payment application executing on the user device of the payor. The transaction data can be obtained by the payment application instance executing on the user device of the payor, either from the user device of the payee, via manual entry, etc. Alternatively, transaction data can be received from an instance of the payment application executing on a user device of a payee (such as seller's user device 104(1)) for a transaction between a payor and a payee. In an example, the user device of the payee obtains and appends a payor identifier via manual entry by the payor or the payee (e.g., entry of a phone number on a user interface of the user device of the payee, scanning an identifier with an image capturing component of the user device of the payee wherein the identifier can be displayed on a display of user device of the payor, etc.).

[0054] In some examples, transaction data can be generated in the first instance by a point-of-sale (POS) application that is separate from the payment application. In some examples, the transaction data can be generated in the first instance by a POS device that can be communicatively coupled to a user device of the payee. In examples, the user device of the payee can be a POS device.

[0055] Payment service server device(s) can cause one or more user interfaces to be presented on a user device via a payment application executing on a user device. The one or more user interfaces can display controls to allow a user to cause a transfer of funds between financial accounts associated with the user's user profile, to indicate an intent to make a purchase or transfer value to another user, to indicate an intent to accept value (e.g., credits) being transferred to the user from another user, to check a credit balance, to modify a user profile, to review a transaction history, to search a transaction history, to search for participating users of the community payment network (e.g., search by name, location, or other criterion), to view a conversion factor, to determine an exchange rate between different currencies, to communicate with other users or the payment service, to participate in a social network provided by the payment service, to initiate a scan by the user device of a barcode, QR code, or other graphic that can, for example, represent transaction data for a pending transaction or include an identifier of another user with which the user wishes to enter a transaction, etc.

[0056] Block 304 illustrates identifying user profiles of the payor and the payee based at least in part on the transaction data. As described above, the payment service server device(s) can receive the transaction data in any of a variety of ways, including those described above relative to Block 302. The transaction data can include identifiers for the payor and payee. The payment service server device(s) can map the payor identifier to the user profile of the payor and maps the payee identifier to the user profile of the payee, wherein the user profiles can be stored by the payment service.

[0057] Block 306 illustrates determining a payee fee associated with the transaction based at least in part on the transaction data and terms of service between the payee and the payment service. In some examples, the payee fee can be calculated as a percentage of the transaction amount (e.g., 0.5%, 1.0%, 1.5%, etc.). For instance, if the payor is purchasing shoes from the payee that cost \$50.00, and the payee fee agreed to by the seller is 1.0%, then the payee fee is \$0.50. Agreement to the payee fee can be made at the time of enrollment of a user and the payee fee can be adjusted by the payment service, with agreement of the user. In some examples, the payee fee can be calculated as a flat fee plus a percentage of the transaction amount. For instance, in the example above in which the transaction amount is \$50, if the payee fee is 1.0% plus \$1.00, then payee fee would be \$1.50. In some examples, the total payee fee is capped (e.g., at \$10.00, \$15.00, \$20.00, etc.).

[0058] Block 308 illustrates determining a previous payee that the payor paid in a most recent historical transaction conducted in the payment network. Determining a most recent payee can be based on transaction records stored by the payment service server device(s). In examples, the payment service server device(s) and user devices can be coupled across the network to a storage device (not shown) that stores the transaction records, user profiles, etc. Additionally or alternatively, the storage device can reside locally with respect to the payment service server device(s), the user device(s), or both. In certain implementations, the storage device(s) can include one or a combination of computer readable media. The payment service server device(s) analyzes the payor's purchase history based at least in part on the payor's user profile and determine the identifier of the payee in the transaction conducted by the payor immediately preceding the pending transaction.

[0059] Block 310 illustrates determining an identity of a referring user who initially referred the payor to the payment network. The identity of the referring user can be stored in the user profile of the payor.

[0060] Block 312 illustrates deducting credits from the payor's credit balance. A user's credit balance (here, the payor's credit balance) can be stored in association with a user profile of the user. The number of credits deducted from the credit balance is calculated by multiplying the transaction amount by a conversion factor of credits per unit of currency. In an example in which the transaction amount is 100 USD, and the conversion factor for credits to USD is 1:1, 100 credits can be deducted from the payor's user profile. The conversion factor of credits to currency can vary by date, location, user, type of goods/services, transaction history, etc. and can be set by the payment service. The payment service can disclose the conversion factor(s) to users as part of initial terms and conditions of community payment network participation. Similarly, the payment service can provide notice of changes to the conversion factor during the user's enrollment in the payment service. Agreement to the use of a conversion factor(s) by a user can be implied based on the user's continued use of the community payment network. In a cross-border transaction (e.g., when a payor is in Mexico and a payee is in the United States), the credit calculations can be performed by using a conversion factor applicable to the currency used in the transaction. Alternatively or additionally, currency may be deducted from a payor's PSAB account for the transaction amount.

[0061] Block 314 illustrates adding credits to the payee's credit balance equivalent to the transaction amount less the payee fee. The credits can be calculated by determining the transaction amount less the payee fee, multiplied by an applicable conversion factor. The number of credits can be calculated with the equation

$$C = (T - F) * R,$$

wherein C = credits to payee, T = transaction amount in currency of transaction, F = fee amount in currency of transaction, and R = conversion factor of credits per unit of currency. For instance, if a transaction amount is 100 USD, a payee fee is 1 USD, and credits per USD are 0.05, $C = 99 \text{ USD} * 0.05 \text{ credits/USD} = 4.95 \text{ credits}$. In another example, if a transaction amount is 100 €, a payee fee is 5 €, and credits per € are 0.08, $C = 95 \text{ €} * 0.04 \text{ credits/€} = 3.8 \text{ credits}$. Alternatively or additionally, currency may be added to a payor's PSAB account or other financial account for the transaction amount.

[0062] Block 316 illustrates causing a transfer of the payee fee from a PSAB financial account of the payee to an account of the payment service. The payment service can maintain a financial account and/or can store a credit balance for credits associated with the payment service. The payment service can receive a payee fee in credits or the equivalent amount of currency or some combination of credits and currency. Credits can be transferred from the payee's credit balance; currency can be transferred from the payee's PSAB financial account.

[0063] Block 318 illustrates adding credits to the previous payee's credit balance. The added credits can be some portion of the credits equivalent to the payee fee. In at least one example, the portion ranges from at least about 0.1% to at most about 75.0%, or from at least about 10% to at most about 50%, and/or from at least about 25% to at most about 60%. However, the percentage need not be limited to this range and can be set by the payment service (and agreed to by users) at any amount. When no previous payee is identified (for example, if this is the first payment by this payor), these credits can simply not be disbursed.

[0064] Block 320 illustrates adding credits to the referring user's credit balance. The referring user's credit balance can be stored in association with a user profile of the referring user. The added credits can be some portion of the credits equivalent to the payee fee. In at least one example, the portion ranges from at least about 0.1% to at most about 75.0%, or from at least about 10% to at most about 50%, and/or from at least about 25% to at most about 60%, but the percentage need not be limited to this range and can be set by the payment service (and agreed to by users) at any

amount. The previous payee portion and the referring user's portion can be the same percentage or different percentages. When no referring user is identified (for example, if the payor enrolled without a referral), these credits can simply not be disbursed. Thus, when there are both a previous payee and a referring user, in effect, the payee fee paid by the payee can be split between at least the payment service, the referring user, and the previous payee. In various examples, the payee fee can be split between the payment service, the referring user, the previous payee, and one or more other entities that can include one or more financial institutions and/or one or more non-profits. The percentage of the payee fee retained by the payment service can be equivalent to the percentage allotted to the previous payee and/or referring user and can also be greater to or less than the percentage allotted to the previous payee and/or referring user. The payor may receive a portion of the commission (e.g., as "cash back") in some examples, which may reduce the portions distributed to at least the previous merchant and/or referring user.

[0065] Block 322 illustrates performing post-transaction activities. The payment service can provide additional services after the transaction such as storing details of the transaction, providing a receipt to the buyer, presenting transaction data on a user interface of a display of a user device, updating loyalty rewards, etc. The payment service server device(s) can send the buyer device a receipt via email, message, etc., can send a link, can cause the payment application on the buyer device to do a notification, or can enable access to the receipt in the payment application.

[0066] FIG. 4 is a flow diagram illustrating an example process 400 that determines a payee fee and commissions for a payment transaction, as described herein.

[0067] Block 402 illustrates receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount. Transaction data can be relayed to the payment service by at least either participant in a transaction. Transaction data can include at least one of transaction amount, desired date and time of transfer, payor identity, payee identity, free-form notes of a user(s), location(s), item(s) or service(s) being purchased, etc.

[0068] Block 404 illustrates determining a payee fee associated with the transaction, wherein the payee fee is based on the transaction amount. In examples, the payee fee is a flat fee or a combination of a flat fee and a percentage of the transaction amount. The payee fee is not limited to these amounts and can be set by the payment service.

[0069] Block 406 illustrates determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee. The first number of credits and second number of credits can be calculated using a conversion factor of credits to currency unit.

[0070] Block 408 illustrates transferring the first number of credits from a user profile associated with the first user to a user profile associated with the second user. The payment service can deduct credits from a payor user. Although the term “transfer” is used in this specification, the changes to credit balances can be seen as deductions or additions without reference to a “transfer” from or to another user. That is, a “transfer” from payor to payee can be described instead as the payor being debited credits and the payee being provided credits. Alternatively or additionally, the transaction amount can be transferred from a first user account to a second user account.

[0071] Block 410 illustrates transferring the second number of credits from the user profile associated with the second user to the payment service. In examples, the payee fee can be paid to the payment service in credits deducted from the payee’s credit balance. In other examples, the payee fee can be paid to the payment service in currency deducted from the payee’s PSAB financial account (or, in the absence of a PSAB financial account, from the payee’s funding source).

[0072] Block 412 illustrates transferring a third number of credits from the payment service to a user profile of a referrer of the first user, wherein the third number of credits is a portion of the second number of credits. In some embodiments, the transfer of credits to the third user can be described as a transfer directly from payee to third user without first being assigned to the payment service. In examples, a fourth number of credits can be transferred from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits. In some embodiments, the transfer of credits to the fourth user can be described as a transfer directly from payee to fourth user without first being assigned to the payment service. However, in examples in which there is no prior payee or no referring user, the allotment of credits to the prior payee or referring user can be assigned to the payment service rather than remaining with the payee.

[0073] Additionally, in some examples, the payer may receive a portion of the payee fee (e.g., as “cash back” for a transaction). The payer may pay the payee with credits or currency and receive

credits or currency back for the transaction. The payer's portion of the payee fee may be associated with a user profile of the payer in credits or currency.

[0074] FIGS. 2, 3A, 3B, and 4 are flow diagrams illustrating example processes according to some implementations. The processes of FIGS. 2, 3A, 3B, and 4 are illustrated as collections of blocks in logical flow diagrams, which represent a sequence of operations, some or all of which can be implemented in hardware, software, or a combination thereof. In the context of software, the blocks can represent computer-executable instructions stored on one or more computer-readable media that, when executed by one or more processors, program the processors to perform the recited operations. Generally, computer-executable instructions include routines, programs, objects, components, data structures and the like that perform particular functions or implement particular data types. The order in which the blocks are described should not be construed as a limitation. Any number of the described blocks can be combined in any order and/or in parallel to implement the process, or alternative processes, and not all of the blocks need be executed. Further, in some examples, some or all of the operations illustrated in one or more of FIGS. 2, 3A, 3B, and 4 can be combined with some or all of the operations illustrated in others of FIGS. 2, 3A, 3B, and 4. For discussion purposes, the processes are described with reference to the environments, architectures and devices described in the examples herein, although the processes can be implemented in a wide variety of other environments, architectures, and devices.

[0075] FIG. 5 illustrates a block diagram 500 of select components of a payment service server device(s) 502, as described herein.

[0076] Payment service server device(s) 502 can include one or more servers or other types of computing devices that can be embodied in any number of ways. For example, in the example of a server, the modules, other functional components, and data can be implemented on a single server, a cluster of servers, a server farm or data center, a cloud-hosted computing service, a cloud-hosted storage service, and so forth, although other computer architectures can additionally or alternatively be used.

[0077] Further, while the figures illustrate the components and data of payment service server device(s) 502 as being present in a single location, these components and data can alternatively be distributed across different computing devices and different locations in any manner. Multiple payment service server device(s) 502 can be located together or separately, and organized, for example, as virtual servers, server banks, and/or server farms. The described functionality can be

provided by the servers of a single entity or enterprise, or can be provided by the servers and/or services of multiple different customers or enterprises.

[0078] In the illustrated example, payment service server device(s) 502 can include one or more processors 504, one or more computer-readable media 506, one or more communication interfaces 508, and one or more input/output devices 510. Each of the processor(s) 504 can be a single processing unit or a number of processing units, and can include single or multiple computing units or multiple processing cores. The processor(s) 504 can be implemented as one or more microprocessors, microcomputers, microcontrollers, digital signal processors, central processing units, state machines, logic circuitries, and/or any devices that manipulate signals based on operational instructions. For example, processor(s) 504 can be one or more hardware processors and/or logic circuits of any suitable type specifically programmed or configured to execute the algorithms and processes described herein. Processor(s) 504 can be configured to fetch and execute computer-readable instructions stored in computer-readable media 506, which can program processor(s) 504 to perform the functions described herein.

[0079] Computer readable media 506 includes computer storage media and computer-readable signals. Computer storage media includes volatile and non-volatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer readable instructions, data structures, program modules, or other data. Computer storage media includes, but is not limited to, solid-state memory, phase change memory (PRAM), static random-access memory (SRAM), dynamic random-access memory (DRAM), other types of random access memory (RAM), read-only memory (ROM), electrically erasable programmable read-only memory (EEPROM), flash memory or other memory technology, compact disk read-only memory (CD-ROM), digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other non-transmission medium that can be used to store information for access by a computing device. In addition, in some examples the computer readable media can be associated with transitory computer-readable signals (in compressed or uncompressed form). Examples of computer-readable signals, whether modulated using a carrier or not, include, but are not limited to, signals that a computer system hosting or running a computer program can be configured to access, including signals downloaded through the internet or other networks.

[0080] Depending on the configuration of payment service server device(s) 502, computer-readable media 506 can be an example of tangible non-transitory computer storage media. Further, in some examples, payment service server device(s) 502 can access external storage, such as RAID storage systems, storage arrays, network attached storage, storage area networks, cloud storage, or any other medium that can be used to store information and that can be accessed by the one or more processors directly or through another computing device or network. Accordingly, computer-readable media 506 can be computer storage media able to store instructions, modules, or components that can be executed by the processor(s) 504.

[0081] Computer-readable media 506 can be used to store any number of functional components that are executable by processor(s) 504. In many implementations, these functional components comprise instructions or programs that are executable by processor(s) 504. Functional components stored in computer-readable media 506 can include payment module 514, enrollment module 516, funding module 518, additional services module 520, user interface module 522, and social network module 524, which can comprise at least a portion of community payment network application (“payment application”) 512. Payment application 512 can be provided by the payment service server device(s) 502 and can be configured to allow a user to perform the functions associated with the community network payment.

[0082] The term “module” is intended to represent example divisions of the software for purposes of discussion and is not intended to represent any type of requirement or required method, manner or necessary organization. Accordingly, while various “modules” are discussed, their functionality, similar functionality, or both, could be arranged differently (e.g., combined into a fewer number of modules, broken into a larger number of modules, etc.). The modules can include computer instructions/code that can be stored in the computer-readable media 506 and can be executable by processor(s) 504.

[0083] The payment module 514 can be configured to create, receive, and/or transmit transaction data for an electronic transaction conducted within the community payment network. In some examples, either user in a transaction can submit the transaction data to the payment service via an instance of a payment application provided by the payment service that is executing on a user device. For instance, if a payee is submitting the transaction, the payee can obtain authorization of the payor before doing so, either via a control on the user device of the payor or by a control on the user device of the payee. Additionally or alternatively, based at least in part on

transaction data, the payment module 514 can deduct credits from a credit balance of the payor equivalent to the transaction amount, determine a payee fee for the transaction, add credits to the credit balance of the payee equivalent to the transaction amount less the payee fee, add a portion of the payee fee (e.g., in credits equivalent to the payee fee) to a credit balance of the previous payee, add a portion (the same or different from the portion for the previous payee) of the payee fee to a credit balance of the referring user, and retain the remaining payee fee for the payment service. Additionally or alternatively, the payment module 514 can access a conversion factor or exchange rate between credits and currency in order to perform the transfers described above. The conversion factor can be set by agreement between the payment service and one or more users participating in the community payment network.

[0084] The enrollment module 516 can be configured to enable receipt of enrollment information from a user. In some examples, a user downloads the payment application before enrollment and uses the payment application to submit enrollment information. The enrollment module 516 and user interface module 522 can cause a form to be displayed to the user for entry of enrollment information. The enrollment module can be configured to confirm with the payment service that a user is not already enrolled (e.g., by requesting at least one of the user's email address, phone number, name, etc.) before requesting enrollment information. The enrollment module can detect receipt of referring information from a referring user and associate the user's enrollment information with the referring user (by the payment service server device(s) at the time the enrollment information is received, or by the user device before the enrollment information is sent) so that the referring user receives credit for future transactions of the enrolling user.

[0085] The funding module 518 can be configured to transfer funds from a user's personal funding source to the user's PSAB financial account. In examples, the funding module 518 can determine the funding source based at least in part on information provided by a user. Based at least on permission from the user, the funding module can cause a transfer of funds between the funding source and the financial account. The financial account can be used to back credits assigned to the user by the payment service. In some examples, the payment service retains some or all control over the financial account so that as a user's credit balance decreases, the funding module 518 can withdraw a proportional amount of funds from the financial account. Upon a user leaving the community payment network or upon request of a user, the funding module 518 can cause a transfer of the financial account's balance to the user's funding source or to another account

of the user's choosing. Additionally or alternatively, the funding module can manage credit balance adjustments corresponding to payment network transactions, including commissions.

[0086] The additional services module 520 can be configured to provide additional services of the payment service to the user. For example, the additional services module 520 can cause a storage device to store details of the transaction, provide a receipt to the users involved in the transaction, cause transaction data to be displayed (in cooperation with the user interface module 522) on a user interface of a display of a user device, update loyalty rewards that can be administered by the payment service, cause transaction information to be displayed via an external social network or a social network associated with the community payment network, etc. In examples, the additional services module 420 can send a user device a receipt via email, message, etc., can send a URL link to a user device, can cause a payment application on a user device to display a notification associated with a receipt, or otherwise enable access to a receipt via the payment application. Additionally or alternatively, the payment service can offer other additional services such as inventory management, discount distribution, etc.

[0087] User interface module 522 can be configured to perform acts that can include causing a user interface to be provided to a user via a display of a user device. In examples, the user interface module 522 can cause a user interface to be displayed that allows a user to at least one of select a payee or payor for a transaction, input a transaction amount, request a credit balance, request a balance of a PSAB financial account, transmit a message to the payment service or to another user of the payment network, request a transaction history of the user, request a map of nearby users of the payment network, request of a list of other users that the user has referred to the payment network, request an identity of the referring user of the user, request a summary view of a user profile or dashboard of the user's participation in the payment network or aggregation of information from a plurality of transactions that are determined to be associated with the user profile. Additionally or alternatively, the acts can include generating a user interface that allows a user to perform actions including one or more of view, sort, filter, or any combination thereof, at least a portion of information at varying levels of granularity. Additionally or alternatively, user interface module 522 can cause a user interface to be provided to a user to prompt entry of user credentials for, for example, a user profile and/or a PSAB financial account. Additionally or alternatively, the acts can include linking a financial account and/or funding source to the user's user profile.

[0088] In certain instances, user interface module 522 can be configured to provide a user interface corresponding to the user device being used. For example, information can be presented to the user in a different manner when presented on a mobile phone than when presented on a personal computer.

[0089] In some examples, the user interface can be provided to a user via a web browser (e.g., software as a service (SaaS)), via a downloadable client application, or both.

[0090] The social network module 524 can be configured to enable a user to interact regarding transaction activity within the community payment network, in a social forum. For example, the social network module 524 can provide for integration of one or more social networks within the payment network. A social network can be provided by the social network module 524 such that a user can interact with other users of the payment network. Further, external social networks can be integrated within the payment network via third-party applications, thereby allowing a user of the payment network to engage with users of the external social networks.

[0091] Additional functional components stored in computer-readable media 406 can include operating system 530 for controlling and managing various functions of payment service server device(s) 502. In at least one example, computer-readable media 506 can additionally include or maintain other functional components and data, such as other modules and data 532, which can include programs, drivers, etc., and the data used or generated by the functional components. Further, payment service server device(s) 502 can include many other logical, programmatic, and physical components, of which those described above are merely examples that are related to the discussion herein.

[0092] Communication interface(s) 508 can include one or more interfaces and hardware components for enabling communication with various other devices, such as over network(s) or directly. For example, communication interface(s) 508 can enable communication through one or more networks, which can include, but are not limited to any type of network known in the art such as a local area network or a wide area network, such as the Internet, and can include a wireless network, such as a cellular network, a local wireless network, such as Wi-Fi and/or close-range wireless communications, such as Bluetooth®, BLE, NFC, RFID, a wired network, or any other such network, or any combination thereof. A network can include both wired and/or wireless communication technologies, including Bluetooth®, BLE, Wi-Fi and cellular communication technologies, as well as wired or fiber optic technologies. Components used for such

communications can depend at least in part upon the type of network, the environment selected, or both. Protocols for communicating over such networks are well known and will not be discussed herein in detail.

[0001] Payment service server device(s) 502 can further be equipped with various input/output (I/O) devices 510. I/O device(s) 510 can be configured to allow a user to interface with the payment service server device(s) 502 via one or more I/O devices. The I/O device(s) 510 can provide an interface for such devices as a display (not shown), audio speakers (not shown), a microphone (not shown), a camera (not shown), connection ports (not shown), an optical reader (not shown), a touchpad (not shown), a haptic output device (not shown), various user interface controls (e.g., buttons, joystick, keyboard, mouse, touch screen, etc.) (not shown), or any combination thereof.

[0093] Those of ordinary skill in the art will appreciate that the hardware components and various functional modules depicted in FIGS. 5, 6, and elsewhere can vary. The illustrative components are not intended to be exhaustive, but rather are representative to highlight components that are utilized to implement the subject matter disclosed in the present application. For example, other devices/components can be used in addition to or in place of the hardware depicted. In addition, the various components illustrated in storage and memory can be alternatively located in any storage or memory across the network(s) 114(1)-114(N). The depicted example is not meant to imply architectural or other limitations with respect to the subject matter of this disclosure.

[0094] FIG. 6 illustrates a block diagram 600 of select components of user device(s) 602, as described herein.

[0095] In at least one example, user device(s) 602 can be any suitable type of mobile device, e.g., portable, semi-portable, or semi-stationary. Some examples of user device(s) 602 can include tablet computing devices; smart phones and mobile communication devices; laptops, netbooks and other portable computers or semi-portable computers; wearable computing devices, or other body-mounted computing devices; augmented reality devices; or other computing devices capable of sending communications and performing the functions according to the techniques described herein.

[0096] In the illustrated example, user device(s) 602 can include one or more processors 504, one or more computer-readable media 606, one or more communication interface(s) 608, and one or more input/output (I/O) device(s) 610. Each processor 604 can itself include one or more

processors or processing cores. For example, processor(s) 604 can be implemented as one or more microprocessors, microcomputers, microcontrollers, digital signal processors, central processing units, state machines, logic circuitries, and/or any devices that manipulate signals based on operational instructions. In some examples, the processor(s) 604 can be one or more hardware processors and/or logic circuits of any suitable type specifically programmed or configured to execute the algorithms and processes described herein. The processor(s) 604 can be configured to fetch and execute computer-readable processor-executable instructions stored in computer-readable media 606, which can program processor(s) 604 to perform the functions described herein.

[0097] Computer readable media 606 includes computer storage media and computer-readable signals. Computer storage media includes volatile and non-volatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer readable instructions, data structures, program modules, or other data. Computer storage media includes, but is not limited to, solid-state memory, phase change memory (PRAM), static random-access memory (SRAM), dynamic random-access memory (DRAM), other types of random access memory (RAM), read-only memory (ROM), electrically erasable programmable read-only memory (EEPROM), flash memory or other memory technology, compact disk read-only memory (CD-ROM), digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other non-transmission medium that can be used to store information for access by a computing device. In addition, in some examples the computer readable media can be associated with transitory computer-readable signals (in compressed or uncompressed form). Examples of computer-readable signals, whether modulated using a carrier or not, include, but are not limited to, signals that a computer system hosting or running a computer program can be configured to access, including signals downloaded through the internet or other networks.

[0098] Depending on the configuration of user device(s) 602, computer-readable media 606 can be an example of tangible non-transitory computer storage media. Further, in some examples, user device(s) 602 can access external storage, such as RAID storage systems, storage arrays, network attached storage, storage area networks, cloud storage, or any other medium that can be used to store information and that can be accessed by the one or more processors directly or through another computing device or network. Accordingly, computer-readable media 606 can be

computer storage media able to store instructions, modules, or components that can be executed by the processor(s) 604.

[0099] Computer-readable media 606 can be used to store and maintain any number of functional components that are executable by the processor(s) 604. In some implementations, these functional components comprise instructions or programs that are executable by the one or more processors and that, when executed, implement operational logic for performing the actions and services attributed above to user device(s) 602. Functional components stored in computer-readable media 606 can include enrollment module 614, payment module 616, user interface module 618 and social network module 620 which can comprise at least a portion of a community payment network application (“payment application”) 612. Enrollment module 614, payment module 616, user interface module 618, social network module 620, and community payment network application 612 (“payment application”) can correspond to enrollment module 516, payment module 514, user interface module 522, and social network module 524 of payment application 512, as described above with reference to FIG. 5.

[00100] The term “module” is intended to represent example divisions of the software for purposes of discussion and is not intended to represent any type of requirement or required method, manner or necessary organization. Accordingly, while various “modules” are discussed, their functionality, similar functionality, or both, could be arranged differently (e.g., combined into a fewer number of modules, broken into a larger number of modules, etc.). The modules can include computer instructions/code that can be stored in the computer-readable media 606 and can be executable by processor(s) 604.

[00101] The enrollment module 614 can be configured to prompt a user for enrollment information (e.g., name, address, phone, funding source identification, social security number, amount of funds to initially transfer to the financial account, referring user identity, etc.) The enrollment module can transmit enrollment information to the payment service server device(s). The enrollment module 614 can operate together with the user interface module 618 in gathering and transmitting the enrollment information via payment application 612. The enrollment module can communicate with another user device in identifying a referring user. For example, the enrollment module 614 can receive data from a scan by the user device of a QR code or other code from a referring user. The code can be displayed on a user device of the referring user or can be otherwise displayed (e.g., via email, U.S. hard copy mail, a hard copy display at a user’s business,

etc.). The enrollment module 614 can detect receipt of referring information from a referring user and associate a user's enrollment information with the referring user (by the payment service server device(s) at the time the enrollment information is received, or by the user device before the enrollment information is sent) so that the referring user receives credit for future transactions of the enrolling user.

[00102] The payment module 616 can be configured to create or receive transaction data for processing by the payment service. In examples, the transaction data can be manually entered by the user and can include transaction amount, item or service purchased, location, date or time the user wishes the transaction to be processed, etc. In examples, the transaction data can be created at a point-of-sale, either by a user device that is a POS device or that communicates with a POS device. The payment module 616 can be configured to submit the transaction data to the payment service server device(s). In examples, the transaction data may be uploaded but the transaction may not be processed until consent of the other user to the transaction is received via an indication transmitted from the user device of the other user or by a code submitted by the user device that indicates to the payment service that the other user has consented to the transaction.

[00103] The user interface module 618 can be configured to cause a user interface to be provided to a user on display(s) 630 of user device(s) 602. In examples, the user interface module 618 can cause a user interface to be provided that allows a user to perform actions associated with payment application 612 or with the community payment network more generally. User interface module 618 of user device(s) 602 can perform actions corresponding to user interface module 522 of the payment service server device(s) 502. In certain instances, user interface module 618 can be configured to provide a user interface corresponding to the user device being used. For example, information can be presented to the user in a different manner when presented on a mobile phone than when presented on a personal computer. In some examples, the user interface can be provided to a user via a web browser (e.g., software as a service (SaaS)), via a downloadable client application, or both.

[0002] The social network module 620 can be configured to enable a user to interact regarding transaction activity within the community payment network, in a social forum. For example, the social network module 620 can provide for the participation in one or more social networks with the payment network. A social network can be provided by the social network module 620 such that a user can interact with other users of the payment network. Further, external social networks

can be integrated within the payment network via third-party applications, thereby allowing a user of the payment network to engage with users of the external social networks.

[00104] Furthermore, computer-readable media 606 can include additional functional components, such as operating system(s) 626 for controlling and managing various functions of user device(s) 602 and for enabling basic user interactions. In addition, computer-readable media 606 can also store data, data structures and the like, that are used by the functional components.

[00105] Depending on the type of user device(s) 602, computer-readable media 606 can also optionally include other functional components and data, such as other modules and data 628, which can include programs, drivers, etc., and the data used or generated by the functional components. For instance, computer-readable media 606 of a user device associated with a merchant user can optionally include a point-of-sale (POS) module. Further, user device(s) 602 can include many other logical, programmatic, and physical components, of which those described are merely examples that are related to the discussion herein.

[00106] Communication interface(s) 608 can include one or more interfaces and hardware components for enabling communication with various other devices, such as over network(s) or directly. For example, communication interface(s) 608 can enable communication through one or more network, which can include, but are not limited to any type of network known in the art such as a local area network or a wide area network, such as the Internet, and can include a wireless network, such as a cellular network, a local wireless network, such as Wi-Fi and/or close-range wireless communications, such as Bluetooth®, BLE, NFC, RFID, a wired network, or any other such network, or any combination thereof. A network can include both wired and/or wireless communication technologies, including Bluetooth®, BLE, Wi-Fi and cellular communication technologies, as well as wired or fiber optic technologies. Components used for such communications can depend at least in part upon the type of network, the environment selected, or both. Protocols for communicating over such networks are well known and will not be discussed herein in detail.

[00107] User device(s) 602 can further be equipped with various input/output (I/O) device(s) 610. I/O device(s) 510 can be configured to allow a user to interface with the user device(s) 602 via one or more I/O devices. The I/O device(s) 610 can provide an interface for such devices as display(s) 630, audio speakers (not shown), a microphone (not shown), a camera (not shown), connection ports (not shown), an optical reader (not shown), a touchpad (not shown), a haptic

output device (not shown), various user interface controls (e.g., buttons, joystick, keyboard, mouse, touch screen, etc.) (not shown), or any combination thereof.

[00108] In at least one example, user device(s) 602 can include display(s) 630. Depending on the type of computing device(s) used as user device(s) 602, display(s) 630 can employ any suitable display technology. For example, display(s) 630 can be a liquid crystal display, a plasma display, a light emitting diode display, an OLED (organic light-emitting diode) display, an electronic paper display, or any other suitable type of display able to present digital content thereon. In some examples, display(s) 630 can have a touch sensor associated with display(s) 630 to provide a touchscreen display configured to receive touch inputs for enabling interaction with a graphic interface presented on display(s) 630. Accordingly, implementations herein are not limited to any particular display technology. Alternatively, in some examples, user device(s) 602 may not include display(s) 630, and information can be presented by other means, such as aurally.

[00109] In addition, user device(s) 602 can optionally include or can be connectable to card reader(s) 632. In some examples, card reader(s) 632 can plug in to a port in user device(s) 602, such as a microphone/headphone port, a data port, or other suitable port. Card reader(s) 632 can include a read head for reading a magnetic strip of a payment card, and further can include encryption technology for encrypting the information read from the magnetic strip. Alternatively, numerous other types of card readers can be employed with user device(s) 602 herein, depending on the type and configuration of user device(s) 602.

[00110] Other components included in user device(s) 602 can include GPS device(s) 634 that can indicate location information. Further, user device(s) 602 can include one or more sensors 636 such as an accelerometer, gyroscope, compass, proximity sensor, camera, microphone, and/or a switch, as discussed above. Additionally, user device(s) 602 can include various other components that are not shown, examples of which include removable storage, a power source, such as a battery and power control unit, a barcode scanner, a printer, a cash drawer, and so forth.

[00111] The present subject matter proposes the integration of at least the aforementioned features into a seamless and convenient mechanism for requesting and receiving manager approvals. With relation to the problems identified previously with conventional systems and methods, the software applications themselves become an active and cooperative component of the process, rather than the subject of it. Further, the aforementioned description is directed to devices and applications that are related to payment technology. However, it will be understood,

that the technology can be extended to any device and application. Moreover, techniques described herein can be configured to operate irrespective of the kind of user device, mobile applications, POS topologies, payment service server device, computer networks, and environments. Techniques described herein can be configured to operate in both real-time/online and offline modes.

[00112] While the aforementioned disclosure makes reference to user interactions via a UI presented via a display of a device, the UI can be presented via any input/output device. As an example, the UI can be output via a speaker, and augmented reality projector, etc. Further, while the aforementioned disclosure makes reference to a user interacting with the UI via a selectable control, in additional or alternative examples, the user can indicate a selection via a spoken input or other type of input.

[00113] The foregoing is merely illustrative of the principles of this disclosure and various modifications can be made by those skilled in the art without departing from the scope of this disclosure. The above described examples are presented for purposes of illustration and not of limitation. The present disclosure also can take many forms other than those explicitly described herein. Accordingly, it is emphasized that this disclosure is not limited to the explicitly disclosed methods, systems, and apparatuses, but is intended to include variations to and modifications thereof, which are within the spirit of the following claims.

[00114] As a further example, variations of apparatus or process limitations (e.g., dimensions, configurations, components, process step order, etc.) can be made to further optimize the provided structures, devices, and methods, as shown and described herein. In any event, the structures, and devices, as well as the associated methods, described herein have many applications. Therefore, the disclosed subject matter should not be limited to any single example described herein, but rather should be construed in breadth and scope in accordance with the appended claims.

[00115] Various instructions, methods, and techniques described herein can be considered in the general context of computer-executable instructions, such as program modules stored on computer-readable media, and executed by the processor(s) herein. Generally, program modules include routines, programs, objects, components, data structures, etc., for performing particular tasks or implementing particular abstract data types. These program modules, and the like, can be executed as native code or can be downloaded and executed, such as in a virtual machine or other just-in-time compilation execution environment. Typically, the functionality of the program

modules can be combined or distributed as desired in various implementations. An implementation of these modules and techniques can be stored on computer storage media or transmitted across some form of communication media.

Example Clauses

Clause 1. A method comprising:

receiving, by one or more servers associated with a payment service and from a first computing device associated with a first user of a plurality of users of the payment service, via a first instance of a payment application, enrollment data associated with enrollment of the first user with the payment service;

at least partly in response to receiving the enrollment data, determining, by the one or more servers associated with the payment service, that the first user is eligible to enroll with the payment service;

storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with the first user;

based at least in part on the enrollment data, identifying, by the one or more servers associated with the payment service, a funding source indicated by the first user;

sending, by the one or more servers associated with the payment service to a device associated with a financial institution, a request on behalf of the first user to open a financial account for the first user at the financial institution;

causing, by the one or more servers associated with the payment service and on a display of the first computing device, presentation of an indication of the financial account and a request for authorization to transfer funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service, the authorization;

at least partly in response to receiving the authorization, causing, by the one or more servers associated with the payment service, a transfer of funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a second computing device associated with a second user, first

transaction data associated with a first transaction between the first user and the second user, wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a third computing device of a third user via a respective instance of the payment application executing on the first computing device or the third computing device, second transaction data associated with a second transaction between the first user and the third user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor for the second transaction and the third user comprises a payee for the second transaction;

responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the second transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the third user;

- a transfer of the second number of credits from the user profile associated with the third user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile associated with the first user;

and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

Clause 2. The method as clause 1 recites, further comprising sending, by the one or more servers associated with the payment service, a transaction record for the second transaction to at least one of the first computing device or the third computing device.

Clause 3. The method as either clause 1 or clause 2 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request for a summary of transactions of the first user; and
causing, by the one or more servers associated with the payment service, presentation of the summary of transactions on a display of the first computing device.

Clause 4. The method as any of clauses 1-3 recites, wherein terms of an agreement between the payment service and one or more users of the plurality of users includes a term requiring that the payee fee be less than a minimum threshold payee fee.

Clause 5. The method as any of clauses 1-4 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request to convert one or more credits associated with the user profile associated with the first user to a currency of the funding source;
causing, by the one or more servers associated with the payment service, transfer of an amount of currency from the financial institution to the funding source of the first user, wherein the amount of currency comprises a number of the one or more credits multiplied by a ratio of currency units per credit; and
reducing a credit balance associated with the user profile associated with the first user by the one or more credits.

Clause 6. The method as any of clauses 1-5 recites, further comprising:
sending, by the one or more servers associated with the payment service to the first computing device associated with the first user, a request for additional information associated with opening the financial account for the first user at the financial institution; and
receiving, by the one or more servers associated with the payment service and from the first computing device associated with the first user, the additional information,

wherein sending the request on behalf of the first user to open the financial account for the first user at the financial institution is at least partly responsive to receiving the additional information.

Clause 7. The method as any of clauses 1-6 recites, wherein the enrollment data includes at least one of an identifier of the referring user of the first user, an identifier of the funding source, an a funding amount to transfer to the financial institution from the funding source, or personally identifying information.

Clause 8. The method as any of clauses 1-7 recites, wherein the payment application is provided to the first computing device by the one or more servers associated with the payment service.

Clause 9. The method as any of clauses 1-8 recites, wherein determining that the first user is eligible to enroll with the payment service comprises determining that the first user has not previously enrolled with the payment service.

Clause 10. The method as any of clauses 1-9 recites, wherein the funding source comprises a bank, a credit union, a savings and loan association, or a brokerage firm.

Clause 11. A method, implemented by one or more servers of a payment service, the method comprising:

receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount;

determining a payee fee associated with the transaction, wherein the payee fee is based at least in part on the transaction amount;

determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee;

transferring the first number of credits or the transaction amount from a user profile associated with the first user to a user profile associated with the second user;

transferring the second number of credits or the payee fee from the user profile associated with the second user to the payment service; and

transferring a third number of credits from the payment service to a user profile associated with a third user, wherein the third user referred the first user to the community payment network, and wherein the third number of credits comprises a first portion of the second number of credits.

Clause 12. The method as clause 11 recites, further comprising:

transferring a fourth number of credits from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits.

Clause 13. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either clause 11 or clause 12 recites.

Clause 14. A system comprising:

one or more processors; and

one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either clause 11 or clause 12 recites.

Clause 15. The method as any of clauses 1-10, 11, or 12 recites, wherein the payee fee comprises a flat fee, a percentage of the transaction amount, or a combination of a flat fee and a percentage of the transaction amount.

Clause 16. The method as any of clauses 1-10 or 15 recites, wherein at least one of the payee fee, the first percentage, or the second percentage is a term of an agreement between the payment service and the one or more users.

Clause 17. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as any of clauses 1-10, 15, or 16 recite.

Clause 18. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as any of clauses 5-16 recite.

Clause 19. A method comprising:
storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with a user of a plurality of users of a payment service, wherein the user profile includes information identifying a funding source of the first user;
receiving, by the one or more servers associated with the payment service and from the funding source, an amount of currency;
updating, by the one or more servers of the payment service, the user profile associated with the first user to add a number of credits equivalent to the amount of currency, based at least in part on a ratio of credits to currency;
receiving, by the one or more servers associated with the payment service and from at least one of a first computing device associated with the first user or a second computing device associated with a second user via a respective instance of the payment application executing on the first computing device or the second computing device, transaction data associated with a transaction between the first user and the second user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor and the third user comprises a payee in the transaction;
responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the second user;

- a transfer of the second number of credits from the user profile associated with the second user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile of the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

Clause 20. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as clause 19 recites.

Clause 21. A system comprising:

- one or more processors; and

- one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as clause 19 recites.

CLAIMS

WHAT IS CLAIMED IS:

1. A method comprising:

receiving, by one or more servers associated with a payment service and from a first computing device associated with a first user of a plurality of users of the payment service, via a first instance of a payment application, enrollment data associated with enrollment of the first user with the payment service;

at least partly in response to receiving the enrollment data, determining, by the one or more servers associated with the payment service, that the first user is eligible to enroll with the payment service;

storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with the first user;

based at least in part on the enrollment data, identifying, by the one or more servers associated with the payment service, a funding source indicated by the first user;

sending, by the one or more servers associated with the payment service to a device associated with a financial institution, a request on behalf of the first user to open a financial account for the first user at the financial institution;

causing, by the one or more servers associated with the payment service and on a display of the first computing device, presentation of an indication of the financial account and a request for authorization to transfer funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service, the authorization;

at least partly in response to receiving the authorization, causing, by the one or more servers associated with the payment service, a transfer of funds from the funding source to the financial account;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a second computing device associated with a second user, first transaction data associated with a first transaction between the first user and the second user,

wherein the first user comprises a payor for the first transaction and the second user comprises a payee for the first transaction;

receiving, by the one or more servers associated with the payment service and from at least one of the first computing device or a third computing device of a third user via a respective instance of the payment application executing on the first computing device or the third computing device, second transaction data associated with a second transaction between the first user and the third user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor for the second transaction and the third user comprises a payee for the second transaction;

responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;

determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the second transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the third user;

a transfer of the second number of credits from the user profile associated with the third user to the payment service;

a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile associated with the first user; and

a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

2. The method as claim 1 recites, further comprising sending, by the one or more servers associated with the payment service, a transaction record for the second transaction to at least one of the first computing device or the third computing device.

3. The method as either claim 1 or claim 2 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request for a summary of transactions of the first user; and
causing, by the one or more servers associated with the payment service, presentation of the summary of transactions on a display of the first computing device.

4. The method as any of claims 1-3 recites, wherein terms of an agreement between the payment service and one or more users of the plurality of users includes a term requiring that the payee fee be less than a minimum threshold payee fee.

5. The method as any of claims 1-4 recites, further comprising:
receiving, by the one or more servers associated with the payment service and from the first computing device, a request to convert one or more credits associated with the user profile associated with the first user to a currency of the funding source;
causing, by the one or more servers associated with the payment service, transfer of an amount of currency from the financial institution to the funding source of the first user, wherein the amount of currency comprises a number of the one or more credits multiplied by a ratio of currency units per credit; and
reducing a credit balance associated with the user profile associated with the first user by the one or more credits.

6. The method as any of claims 1-5 recites, further comprising:
sending, by the one or more servers associated with the payment service to the first computing device associated with the first user, a request for additional information associated with opening the financial account for the first user at the financial institution; and
receiving, by the one or more servers associated with the payment service and from the first computing device associated with the first user, the additional information,

wherein sending the request on behalf of the first user to open the financial account for the first user at the financial institution is at least partly responsive to receiving the additional information.

7. The method as any of claims 1-6 recites, wherein the enrollment data includes at least one of an identifier of the referring user of the first user, an identifier of the funding source, an a funding amount to transfer to the financial institution from the funding source, or personally identifying information.

8. The method as any of claims 1-7 recites, wherein the payment application is provided to the first computing device by the one or more servers associated with the payment service.

9. The method as any of claims 1-8 recites, wherein determining that the first user is eligible to enroll with the payment service comprises determining that the first user has not previously enrolled with the payment service.

10. The method as any of claims 1-9 recites, wherein the funding source comprises a bank, a credit union, a savings and loan association, or a brokerage firm.

11. A method, implemented by one or more servers of a payment service, the method comprising:

receiving transaction data associated with a transaction between a first user as payor and a second user as payee, wherein the transaction data includes an indication of a transaction amount;

determining a payee fee associated with the transaction, wherein the payee fee is based at least in part on the transaction amount;

determining a first number of credits proportional to the transaction amount and a second number of credits proportional to the payee fee;

transferring the first number of credits or the transaction amount from a user profile associated with the first user to a user profile associated with the second user;

transferring the second number of credits or the payee fee from the user profile associated with the second user to the payment service; and

transferring a third number of credits from the payment service to a user profile associated with a third user, wherein the third user referred the first user to the community payment network, and wherein the third number of credits comprises a first portion of the second number of credits.

12. The method as claim 11 recites, further comprising:

transferring a fourth number of credits from the payment service to a user profile associated with a fourth user, wherein the first user paid the fourth user in an earlier transaction occurring immediately prior to the transaction, and wherein the fourth number of credits comprises a second portion of the second number of credits.

13. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as either claim 11 or claim 12 recites.

14. A system comprising:

one or more processors; and

one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as either claim 11 or claim 12 recites.

15. The method as any of claims 1-10, 11, or 12 recites, wherein the payee fee comprises a flat fee, a percentage of the transaction amount, or a combination of a flat fee and a percentage of the transaction amount.

16. The method as any of claims 1-10 or 15 recites, wherein at least one of the payee fee, the first percentage, or the second percentage is a term of an agreement between the payment service and the one or more users.

17. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as any of claims 1-10, 15, or 16 recite.

18. A system comprising:
one or more processors; and
one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as any of claims 1-10, 15, or 16 recite.

19. A method comprising:
storing, by the one or more servers associated with the payment service and in a data store associated with the payment service, a user profile associated with a user of a plurality of users of a payment service, wherein the user profile includes information identifying a funding source of the first user;
receiving, by the one or more servers associated with the payment service and from the funding source, an amount of currency;
updating, by the one or more servers of the payment service, the user profile associated with the first user to add a number of credits equivalent to the amount of currency, based at least in part on a ratio of credits to currency;
receiving, by the one or more servers associated with the payment service and from at least one of a first computing device associated with the first user or a second computing device associated with a second user via a respective instance of the payment application executing on the first computing device or the second computing device, transaction data associated with a transaction between the first user and the second user, wherein the transaction data includes an indication of the transaction amount, wherein the first user comprises a payor and the third user comprises a payee in the transaction;
responsive at least in part to receiving the second transaction data associated with the second transaction, determining, by the one or more servers associated with the payment service, a payee fee based at least in part on the second transaction amount and a predetermined calculation;
determining, by the one or more servers associated with the payment service, a first number of credits equivalent to the transaction amount and a second number of credits equivalent to the payee fee;

causing, by the one or more servers associated with the payment service, transfers of value comprising:

- a transfer of the first number of credits from the user profile associated with the first user to a user profile associated with the second user;

- a transfer of the second number of credits from the user profile associated with the second user to the payment service;

- a transfer of credits equivalent to a first percentage of the payee fee from the payment service to a user profile associated with a referring user based at least in part on determining a referring user associated with the user profile of the first user; and

- a transfer of credits equivalent to a second percentage of the payee fee from the payment service to a user profile associated with an immediately previous payee, based at least in part on determining an immediately previous payee based at least in part on the first transaction data, wherein the immediately previous payee comprises the second user.

20. One or more computer-readable media having computer-readable instructions therein that, when executed by one or more processors, cause the one or more processors to perform a method as claim 19 recites.

21. A system comprising:

- one or more processors; and

- one or more computer-readable media including computer-readable instructions that, when executed by the one or more processors, configure the system to perform a method as claim 19 recites.

ABSTRACT

Techniques are described for conducting an electronic transaction using a split-commission payment service. Techniques can include using currency-based credits, wherein credits are also provided as commissions to a referrer of the payor and a previous payee of the payor. The techniques can include one or more of a payment service providing a payment application to a user device of a user, causing a financial account to be opened on a user's behalf at a financial institution affiliated with the payment service, transferring funds from a funding source of a user to the financial account, associating a user profile of a user with credits equivalent to a balance of the financial account, receiving transaction data for a transaction, determining a payee fee for the transaction, transferring currency or credits equivalent to the transaction amount from payor to payee, splitting the payee fee between at least the payment service, referring user, and previous payee, and distributing currency or credits accordingly.

SISTEMAS Y MÉTODOS PARA UNA RED DE PAGO ELECTRÓNICO DE COMISIÓN DIVIDIDA BASADA EN CRÉDITOS

APLICACIONES RELACIONADAS

[0001] Esta solicitud de PCT reclama la prioridad de la Solicitud de Patente Provisional de EE. UU. No. 63 / 168,228, presentada el 30 de marzo de 2021, que se incorpora aquí por referencia.

ANTECEDENTES

[0002] Las transacciones de tarjetas de crédito y tarjeta de débito tradicionalmente tienen un costo para los comerciantes. Ese costo puede ser una combinación de tarifas de intercambio, tarifas de evaluación, tarifas de servicio y un margen de un procesador de pagos. En estos sistemas tradicionales, el comerciante asume el costo de la comodidad que el cliente disfruta pagando con una tarjeta de pago.

[0003] Convencionalmente, la comisión del comerciante en una transacción de tarjeta de pago es un porcentaje del monto de la transacción más una comisión fija, en conjunto con un total de alrededor del 2% del monto de la transacción. Puede haber una serie de componentes de la comisión del comerciante, que se pueden pagar a las diferentes entidades necesarias en el procesamiento y la liquidación del pago. El mayor porcentaje de la comisión del comerciante es a menudo la comisión de intercambio, que se paga al emisor de la tarjeta de pago del cliente y las tarifas de evaluación, que se pueden pagar a la red de tarjetas de pago. A menudo también se paga un porcentaje al procesador de pago. Por lo tanto, el procesamiento de las transacciones de la tarjeta de pago requiere convencionalmente la participación de múltiples entidades más allá del comerciante y el cliente, así como el pago de tarifas múltiples.

[0004] Además, mientras que los pagos digitales se pueden realizar utilizando tecnología entre pares, a menudo a un costo por transacción para el beneficiario más bajo que las transacciones de la tarjeta de pago, los procesadores tradicionales de pagos entre pares limitan la cantidad total que cualquier usuario puede pagar (o recibir en pago) en un período de tiempo. Además, en los sistemas convencionales entre pares, puede tardar días en que los fondos se transfieran a la cuenta bancaria

de un beneficiario. Esto hace que los pagos digitales sean una solución inadecuada para muchas transacciones.

[0005] Existe la necesidad de una red de pagos que minimice el costo para los beneficiarios de aceptar pagos, que minimice el número de entidades involucradas en el procesamiento de una transacción, que minimice el tiempo para transferir fondos de Pagador a beneficiario y que minimice el número de transferencias de fondos para minimizar los recursos de procesamiento. También es necesario incentivar la participación en un sistema de pago electrónico.

BREVE DESCRIPCIÓN DE LOS DIBUJOS

[0006] La descripción detallada se establece con referencia a las figuras adjuntas. En las cifras, lo (s) dígito (s) de la izquierda de un número de referencia identifica (n) la figura en la que aparece el número de referencia por primera vez. El uso de los mismos números de referencia en diferentes figuras indica elementos o características similares o idénticas.

[0007] La Fig. 1 ilustra un sistema de ejemplo para realizar una transacción de comisión dividida dentro de una red de pago comunitaria, como se describe en este documento.

[0008] La Fig. 2 es un diagrama de flujo que ilustra un proceso de ejemplo para inscribir a un nuevo usuario con una red de pago comunitaria, como se describe en este documento.

[0009] Las Figs. 3a y 3b son un diagrama de flujo que ilustra un proceso de ejemplo para realizar una transacción de comisión dividida en la red de pago de la comunidad, como se describe en este documento.

[0010] La Fig. 4 es un diagrama de flujo que ilustra un proceso de ejemplo que determina la comisión del beneficiario y las comisiones para una transacción de pago, como se describe en este documento.

[0011] La Fig. 5 ilustra un diagrama de bloques de componentes seleccionados de un dispositivo de servidor de servicio de pago, como se describe en este documento.

[0012] La Fig. 6 ilustra un diagrama de bloques de componentes seleccionados de dispositivos de usuario, como se describe en este documento.

DESCRIPCIÓN DETALLADA

[0013] Las técnicas descritas en este documento están dirigidas, al menos en parte, a una red de pago comunitaria que utiliza créditos respaldados por la moneda. En las técnicas descritas en el presente documento, una comisión del beneficiario se puede dividir y distribuir a una pluralidad de entidades (por ejemplo, uno o más servicios de pago, un usuario que remitió al pagador a la red de pagos de la comunidad, un banco, una organización benéfica, una organización. un pagador, y el beneficiario en la transacción de red más reciente del Pagador que precede a la transacción en la que se paga a la Comisión del Beneficiario). Utilizando técnicas descritas en este documento, un beneficiario que acepta el pago a través de la red de pagos comunitarios paga a una comisión del beneficiario al servicio de pago, y la comisión puede pagar una parte de la misma como comisión de otras entidades, que pueden incluir a los usuarios de otras redes de pagos comunitarios como el Usuario Que Refiere y el beneficiario anterior. En varios ejemplos, las otras entidades también pueden incluir, adicional o alternativamente, una o más instituciones financieras y / o una o más organizaciones sin fines de lucro.

[0014] Las técnicas descritas en este documento permiten una transacción de pago electrónico más eficiente al reducir el número de participantes y reducir el número de comunicaciones. La configuración única de dispositivos y aplicaciones implementadas en las técnicas descritas en este documento ofrece una mayor eficiencia al procesamiento de pagos electrónicos. En lugar de que un procesador de pagos tenga que comunicarse con una red de tarjetas y un emisor para cada transacción, un usuario de la red de pago instantáneo puede pre - fondrear una cuenta financiera afiliada al servicio de pago, y los créditos pueden ajustarse a medida que el usuario realiza las transacciones. Además, las Comisiones del beneficiario pueden ser más bajas que las transacciones electrónicas tradicionales, al menos en parte debido a dicho proceso y simplificación del sistema.

[0015] Además, las técnicas descritas en este documento retienen las comisiones que de otro modo se pagarían a los emisores de tarjetas de crédito y las redes de tarjetas y las distribuyen a los usuarios de la red de pago y / u otras entidades, que pueden ser individuos, pequeñas empresas, etc.

[0016] El pago de las comisiones al Usuario que Refiere y al beneficiario anterior sirven de incentivo para reclutar miembros y aceptar la forma de pago de la red de pagos. De esta manera, la membresía en la red de pagos comunitarias puede crecer exponencial o viralmente. Además o, alternativamente, un incentivo para participar en la red de pagos comunitaria es la comisión del beneficiario más baja que la que tradicionalmente se cobra en una transacción de tarjeta de crédito u otra transacción electrónica.

[0017] En algunos ejemplos, un "servicio de pago" es la entidad del servicio de pago que procesa los pagos u otras transferencias de fondos, incluyendo la autenticación de información de pago para una transacción, aprobando una transacción, causando la transferencia de valor entre las partes a la transacción y el pago comisión a un usuario que Refiere y un beneficiario anterior. En ejemplos, el servicio de pago puede ofrecer otros servicios, como gestión de inventario, administración del programa de fidelización, distribución de descuentos, análisis de gastos y / o seguimiento, etc.

[0018] En algunos ejemplos, un "usuario" es miembro de la red de pagos comunitarios que utiliza la red de pago comunitaria para recibir o hacer de pago a otro miembro de la red de pagos comunitarios. El usuario puede ser un usuario final de una aplicación de red de pago comunitaria ("Aplicación de pago") proporcionada por el servicio de pago. Para los propósitos de esta discusión, "miembro" y "usuario" se usan indistintamente. Dependiendo de la transacción, un usuario puede ser un pagador o un beneficiario. Como se usa en este documento, un "pagador" es un usuario que hace un pago en una transacción. Como se usa en este documento, un "beneficiario" es un usuario que recibe un pago en una transacción. Un usuario puede en algunas transacciones ser un pagador y en otras transacciones ser un beneficiario. En algunos ejemplos, un comerciante puede ser un beneficiario cuando el comerciante recibe el pago en una transacción. Para el propósito de esta discusión, un "comerciante" puede ser cualquier entidad que ofrezca artículos (por ejemplo, bienes o servicios) para la adquisición (por ejemplo, venta, arrendamiento, gratis, etc.). En algunos ejemplos, la transacción puede ser una transacción entre pares en la que el beneficiario es miembro de la red de pagos comunitarios que no es un comerciante sino un individuo que recibe fondos de otro individuo a nombre propio. Por ejemplo, el pago se puede realizar por un préstamo, para una venta privada o en otras transacciones entre pares.

[0019] En algunos ejemplos, una "Usuario Que Refiere" o "Quien Refiere" de un usuario es otro miembro de la red de pago comunitario que remitió al usuario para inscribirse en la red de pago de la comunidad. En algunos ejemplos, el servicio de pago puede identificar los usuarios que refieren y referidos utilizando datos enviados en asociación con una solicitud de inscripción de un usuario. Por ejemplo, una invitación de un primer miembro a un segundo miembro puede ser en forma de código (por ejemplo, código QR, código alfanumérico, etc.) que incluye datos representativos de la identidad del primer miembro. Los datos se pueden transmitir al servicio de pago cuando el segundo miembro incluye el código en una solicitud para inscribirse en la red de pago de la comunidad. En otros ejemplos, un usuario puede identificar manualmente a un Usuario Que Refiere como parte de un proceso de inscripción. Además, un usuario no necesita tener una referencia de Usuario que sea parte de la red de pago comunitaria. Por ejemplo, el usuario puede haber sabido de la red de pagos de la comunidad por su cuenta y puede inscribirse sin haber sido remitido.

[0020] En algunos ejemplos, un "beneficiario anterior" es un beneficiario con el que el hizo ingresó una transacción que precedió inmediatamente a una transacción pendiente. En otras palabras, el beneficiario en la transacción histórica más reciente del Pagador se conoce como un "beneficiario anterior".

[0021] En algunos ejemplos, una "Comisión del Beneficiario" es una comisión cobrada por el servicio de pago a un beneficiario por realizar una transacción a través de la red de pago comunitaria. En otras palabras, la Comisión del Beneficiario es el costo para el beneficiario de recibir el pago a través de la red de pago de la comunidad. Una comisión del beneficiario puede ser un monto fijo, un porcentaje de un monto de la transacción total, una combinación de un monto fijo y un porcentaje, etc. Por ejemplo, una comisión del beneficiario puede ser el 1% de un monto de la transacción, hasta una comisión máxima. La Comisión del Beneficiario puede establecerse mediante un acuerdo entre el servicio de pago y el beneficiario al momento de la inscripción de beneficiarios. La Comisión del Beneficiario puede variar según cada beneficiario particular, cada Pagador particular, por ubicación de la transacción, por categoría de comerciante del beneficiario o el pagador, por fecha de transacción, por historial de transacciones de al menos uno del Pagador o beneficiario, y similares. Una comisión del beneficiario para un beneficiario particular puede depender de la transacción particular, y una comisión del beneficiario para un primer beneficiario puede no ser lo mismo que la comisión del beneficiario para un segundo beneficiario en una

transacción que de resto es comparable. En ejemplos, se puede pagar a una comisión del beneficiario en créditos; En ejemplos, la comisión del beneficiario puede pagarse en dinero.

[0022] En algunos ejemplos, una "red de pagos comunitaria" es una pluralidad de individuos y / o entidades que participan en un sistema de pago en el que se utilizan créditos en transacciones en lugar de moneda y en la que hay un acuerdo de comisión dividida que divide una Comisión del Beneficiario, entre al menos una referencia de usuario que refiere, de un pagador, un comerciante anterior y un servicio de pago que administra la red de pago de la comunidad. Una parte de la Comisión del Beneficiario también puede asignarse a una o más de: una institución financiera, una organización sin ánimo de lucro u otra organización benéfica, etc. "Red de pago comunitario" se usa indistintamente con la "red de pagos" en el presente documento.

[0023] En algunos ejemplos, la "cuenta bancaria" se usa indistintamente con la "cuenta financiera" y es una cuenta financiera en una institución financiera. En algunos ejemplos, una "institución financiera" puede incluir, entre otros, uno o más bancos comerciales, un banco minorista, un banco de Internet, una cooperativa de crédito, una asociación de ahorros y préstamos, o una firma de corretaje.

[0024] En algunos ejemplos, una "fuente de financiación" es un depósito de recursos asociados con un usuario. En algunos ejemplos, una fuente de financiación puede ser una cuenta de depósito o una cuenta de ahorro de un usuario en una institución financiera. En algunos ejemplos, una fuente de financiación puede ser una cuenta de criptomonedas de un usuario. Una fuente de financiación puede ser una tarjeta de crédito o una tarjeta de débito del usuario. Una fuente de financiación también puede ser oro u otro activo tangible propiedad de un miembro. En ejemplos, se puede utilizar una fuente de financiación como fuente de fondos de un usuario para financiar una cuenta financiera PSAB. En algunos ejemplos, una "cuenta financiera bancaria afiliada al servicio de pago" o una cuenta financiera PSAB es una cuenta financiera en una institución financiera seleccionada por el servicio de pago que cae bajo una cuenta maestra que el servicio de pago mantiene en ese banco. La cuenta financiera de PSAB puede estar separada de la fuente de financiación y se puede abrir en asociación con un usuario que se vincula con la red de pago de la comunidad. Los fondos de una fuente de financiación pueden transferirse a la cuenta financiera de PSAB y viceversa. En ejemplos, tales transferencias se pueden realizar utilizando pagos ACH u otros mecanismos.

[0025] En algunos ejemplos, un "perfil de usuario" es una colección de datos asociados con la afiliación de un usuario en la red de pago de la comunidad. Un perfil de usuario se puede almacenar en un almacén de datos asociado con el servicio de pago y / o un dispositivo de almacenamiento asociado con los dispositivos del servidor de servicio de pago. En un ejemplo, un perfil de usuario puede incluir información sobre la identidad de un usuario, las fuentes de financiación, la cuenta financiera de PSAB, el historial de transacciones, la referencia de Usuario Que Refiere, referencias hechas por el usuario, saldo de crédito, etc. Los datos almacenados se pueden cifrar y almacenar en servidores seguros, lo que puede proteger la información de identificación personal, detalles sobre cuentas financieras, fuentes de financiación, etc.

[0026] En algunos ejemplos, los "créditos" son unidades dentro de la red de pagos de la comunidad para representar un valor. En un ejemplo, un crédito puede ser equivalente a 1 USD, 100 USD, 1000 USD o cualquier otro monto en dólares. En un ejemplo en el que un crédito es equivalente a 1 USD, en una transacción en la que un pagador obtiene bienes o servicios de un beneficiario valorado en 100 USD, el servicio de pago elimina 100 créditos del saldo de crédito de un pagador y el servicio de pago puede distribuir los 100 créditos entre el beneficiario, el servicio de pago, el Usuario Que Refiere, Beneficiario anterior u otros de acuerdo con un ejemplo del método y el sistema descrito en este documento.

[0027] Las técnicas que se describen en este documento se describen a menudo como que ocurren en un contexto minorista de clientes - comerciantes en el que un comerciante es un beneficiario y un cliente es un pagador. Sin embargo, las técnicas descritas en este documento también se pueden aplicar en otros contextos. Es decir, las técnicas descritas en este documento no se limitan a comerciantes minoristas, clientes, etc. sino que también se pueden aplicar a otros contextos, como la transferencia de dinero entre pares, ("P2P"), préstamos, liquidación de facturas y similares.

[0028] Las técnicas descritas en este documento pueden ofrecer una serie de beneficios y mejoras sobre las técnicas convencionales. Muchas de estas mejoras son mejoras tecnológicas para el funcionamiento de los computadores o en otros tipos de tecnología. Por ejemplo, al ofrecer pagos a través de la transferencia de crédito dentro de una red de pago comunitaria, se pueden evitar múltiples transferencias financieras intermedias. Es decir, mediante el uso de créditos, un sustituto digital para la moneda, no es necesario transferir fondos entre las instituciones financieras

(por ejemplo, emisor, adquirente, comerciante, cliente, etc.) después de cada transacción. En cambio, se puede mantener un equilibrio de créditos para los usuarios. Un saldo de crédito puede estar representado por datos en una base de datos asociada con el servicio de pago. Una transacción puede simplemente comprender una actualización de datos (que representa un cambio en un saldo de crédito) realizado por una sola entidad (el servicio de pago). Cuando un usuario desea "retirarse" (por ejemplo, convertir créditos a moneda), un saldo de crédito del usuario se convierte en moneda. Una transferencia de una cuenta financiera PSAB del usuario a una fuente de financiación original del usuario (por ejemplo, una cuenta corriente personal, una cuenta de ahorros, etc.), o a otra cuenta. Un usuario puede participar en una pluralidad de transacciones antes de cobrar, sin embargo, para lo cual se transfieren créditos, no moneda. Convencionalmente, una transacción de pago implica créditos o débitos a múltiples cuentas (emisor, banco de comerciante, procesador de fondos, etc.)

[0029] En las técnicas descritas en este documento, las transacciones se pueden consolidar debido a la naturaleza de la red de pagos comunitarias porque las transacciones individuales en la red de pagos no requieren "liquidación" en un sentido tradicional. Además, los pagos de la comisión pueden acumularse sin que un usuario que necesite tomar medidas y los créditos no se necesitan cobrar sino hasta que se solicite. Eliminar al emisor y eliminar las complejas comisiones comerciales y permitir comisiones sin esfuerzo y eliminar o reducir la necesidad de comunicaciones interbancarias proporcionan beneficios a la eficiencia, la memoria y el procesamiento, en el dispositivo de servicio de pago y evitan la necesidad de otras entidades y sus dispositivos, como el del emisor de tarjetas, la red de tarjetas, etc. Al menos de esta manera, la tecnología se mejora. Además, puede haber beneficios para los usuarios, como las comisiones de transacciones reducidas, menos transacciones bancarias, una ausencia de límites de cantidad de pago, etc. Además, la red de pago comunitaria permite la participación de comerciantes e individuos en igualdad de condiciones. En ejemplos, los usuarios que son comerciantes y usuarios que son individuos pueden pagar las mismas comisiones del beneficiario, recibir el mismo factor de conversión y ganar las mismas comisiones al actuar como un Usuario que refiere o como un "beneficiario anterior". Además, el servicio de pago puede retener el valor de los pagos de la comisión para pagar como impuestos en los montos que pueden basarse en los países en los que se realiza la transacción. Los impuestos pueden pagarse directamente a las entidades gubernamentales en algunos ejemplos. Además, el servicio de pago puede demorar el valor de los

pagos de la comisión y distribuir por el servicio de pago a otras entidades, como organizaciones benéficas, corporaciones sin ánimo de lucro, etc. a elección o según lo designe un usuario.

[0030] Al menos por las razones dadas anteriormente, las técnicas descritas en este documento, y los sistemas descritos como la implementación de técnicas descritas en este documento, son mejoras no convencionales, no rutinarias, no genéricas y generan mejoras a las tecnologías relevantes.

[0031] La referencia a una "incorporación" en este documento no limita los elementos descritos a una sola incorporación; Todos los elementos descritos se pueden combinar en cualquier incorporación de ninguna cantidad de maneras. Además, a los efectos de interpretar esta especificación, el uso de "o" en este documento significa "y / o" a menos que se indique lo contrario. El uso de "A" o "A" en este documento significa "uno o más" a menos que se indique lo contrario. El uso de "comprensión", "comprende", "que comprende", "incluir", "incluye" e "incluir" son intercambiables y no están destinados a ser limitantes. Además, a menos que se indique lo contrario, el uso de términos como "primero", "segundo", "tercero", "superior", "inferior" y similares no denota ningún orden o importancia espacial, secuencial o jerárquico, sino que se usan para distinguir un elemento de otro. Es de apreciar que el uso de los términos "y / o" y "al menos uno de", por ejemplo, en los casos de "A y / o B" y "al menos uno de A y B", busca abarcar la selección de la primera opción enumerada (a) solamente, o la selección de la segunda opción listada (b) solamente, o la selección de ambas opciones (A y B). Como un ejemplo adicional, en los casos de "A, B y / o C" y "al menos uno de A, B y C", tal redacción tiene la intención de abarcar la selección de la primera opción enumerada (a) Solamente, o la selección de la segunda opción enumerada (b) solamente, o la selección de la tercera opción enumerada (c) solamente, o la selección de las opciones listadas (A y B) solamente, o la selección de la selección de la Las opciones enumeradas en primera y tercera (A y C) solamente, o la selección de las opciones listadas en la segunda y tercera (B y C), o la selección de las tres opciones (A y B y C). Esto puede extenderse, como sea evidente para alguien con habilidades ordinarias en esta y en las artes relacionadas, para cuantos ítems se requieran de la misma lista,

[0032] Los expertos en el arte también deben apreciar que cualquier diagrama de bloques, pasos o subprocesos en el presente documento representa vistas conceptuales de sistemas ilustrativos que incorporan los principios del presente tema. Del mismo modo, se apreciará que

cualquier diagrama de flujo, flujogramas, diagramas de transición de estado, pseudo código y similares representan varios procesos que pueden representarse sustancialmente en medio legible por computador y así ejecutado por un computador o procesador, ya sea que dicho computador o el procesador se muestre explícitamente o no. El orden en que se describen los métodos no pretende ser interpretado como una limitación, y cualquier número de bloques de métodos descritos se puede eliminar, mover, agregar, subdividirse, combinar y / o modificarse en cualquier orden para implementar los métodos, o una combinación alternativa o sub - combinaciones. Además, si bien los pasos, subprocesos o bloques se muestran a veces como realizados en serie, algunos pasos, subprocesos o bloques se pueden realizar en paralelo, o se pueden realizar en diferentes momentos como lo reconocerá la persona que tenga una habilidad ordinaria en el arte. Además, cualquier número específico observado en este documento se refiere a solo ejemplos; Las implementaciones alternativas pueden emplear valores o rangos diferentes. Además, los métodos se pueden implementar en cualquier hardware, software, firmware o combinación adecuados.

[0033] [0033] La Fig. 1 ilustra un sistema de ejemplo 100 para realizar una transacción de comisión dividida dentro de una red de pago comunitaria, como se describe en este documento. El sistema 100 incluye dispositivos del servidor de servicio de pago 102 (1) - 102 (N), dispositivos de usuario 104 (1) - 104 (N) (incluyendo el dispositivo de usuario del vendedor 104 (1) y el dispositivo de usuario del comprador 104 (2) y otros dispositivos de usuario 104 (3) - 104 (N)), dispositivos del servidor bancario del vendedor 106 (1) - 106 (N), dispositivos del servidor bancario del comprador 108 (1) - 108 (N) , otros dispositivos del servidor de bancos de otros usuarios 110 (1) - 110 (N), y dispositivo de servidor Bank (S) de Bank (S) afiliado al servicio de pago (S) 112 (1) - 112 (N). Los dispositivos del servidor también pueden referirse aquí en este "servidor (es)". Los dispositivos de System 100 se comunican entre sí a través de la red (s) 114 (1) - 114 (N) (por ejemplo, Internet, redes de cable, redes celulares, redes inalámbricas (por ejemplo, Wi - Fi) y redes con cables, así como comunicaciones de corto alcance como Bluetooth®, Bluetooth® baja energía y similares).

[0034] Aunque se ilustran el dispositivo de usuario de un solo vendedor 104 (1) y el dispositivo de usuario del comprador 104 (2), en ejemplos adicionales o alternativos, el sistema 100 puede tener múltiples dispositivos de vendedor 104 (1) y dispositivos del comprador 104 (2). Además, cada usuario de una pluralidad de usuarios del servicio de pago puede asociarse con un banco, por lo que el Sistema 100 puede incluir una pluralidad de los dispositivos del servidor de bancos de

los usuarios (106 (1) - 106 (N), 108 ((1) - 108 (N), 110 (1) - 110 (N)) para una pluralidad de usuarios. Además, para simplicidad de referencia, los componentes a lo largo de esta divulgación pueden referirse en forma singular y en relación con un único número de referencia generalizado. Por ejemplo, los dispositivos de usuario 104 (1) - 104 (N) (es decir, la forma plural) pueden referirse como un dispositivo de usuario 104 (es decir, la forma singular). No obstante, debe entenderse que el uso de la forma singular puede incluir la forma plural en ciertas implementaciones.

[0035] El dispositivo de servidor de servicio de servicio 102, el dispositivo de usuario 104, el dispositivo del servidor Bank del servidor Bank 106, el dispositivo del servidor bancario del servidor bancario del comprador, el dispositivo del servidor bancos de otros usuarios, el dispositivo 110 o el dispositivo del servidor PSAB 112, sean uno o más de ellos, pueden incluir cualquier tipo de dispositivo informático que esté generalmente configurado para realizar una operación. Por ejemplo, uno o más del dispositivo de servidor de servicio de pago 102, el dispositivo de usuario 104, el dispositivo del servidor bancario del vendedor 106, el dispositivo del servidor bancario del comprador 108, el dispositivo del servidor de los bancos de otros usuarios 110 o el dispositivo del servidor PSAB 112 se pueden implementar como un computadora portátil, un computador de escritorio, un servidor, un teléfono inteligente, un dispositivo de lector electrónico, un teléfono móvil, un asistente digital personal (PDA), un dispositivo de navegación portátil, un dispositivo de juego portátil, una tableta, un reloj, un reproductor multimedia portátil, un televisor, una caja decisiva, un sistema informático en un automóvil, un dispositivo, una cámara, un robot, un sistema de holograma, un sistema informático basado en el hogar (por ejemplo, sistema de intercomunicador, sistema de medios domésticos, etc.), un proyector, una máquina de cajero automático (ATM), un par de anteojos con capacidades informáticas, etc.

[0036] Un servicio de pago asociado con los dispositivos del servidor de servicio de pago 102 (1) - 102 (N) puede constituir un servicio de pago en línea que procesa los pagos para múltiples usuarios. Los dispositivos del servidor de servicio de pago (s) 102 (1) - 102 (N) pueden exponer una interfaz de programación de aplicaciones (API) basada en la red a través del cual el servicio de pago presta servicios a múltiples usuarios a través de dispositivos de usuario 104 (1) - 104 (N). Para el propósito de esta discusión, el servicio de pago y / o los dispositivos del servidor de servicio de pago 102 (1) - 102 (N) pueden ser cualquier número de servidores, una entidad, una plataforma, un proveedor de servicios, una red proveedora de servicios, etc. El servicio de pago puede

mantener un sitio web, plataforma, base de datos, etc. al que los usuarios accedan a través de los dispositivos de usuario 104 (1) - 104 (N). En algunas incorporaciones, el servicio de pago puede ofrecer varios servicios basados en la red (o "basados en la nube") a los usuarios para satisfacer las necesidades informáticas de los usuarios. En algunas incorporaciones, el servicio de pago puede operar redes de servicios de pago que incluyen grupos de servidores administrados (u otros dispositivos informáticos basados en hardware) almacenados en centros de datos ubicados en diferentes regiones geográficas. Los dispositivos del servidor de servicio de pago 102 (1) - 102 (N) se describen más adelante en la discusión para la FIG. 5.

[0037] Un dispositivo de usuario de los dispositivos de usuario 104 (1) - 104 (N) puede ser un dispositivo de punto de venta (POS) y puede ejecutar una aplicación de pago que puede ser proporcionada por los dispositivos del servidor de servicio de pago 102 (1) - 102 (N) para realizar actividades asociadas con la red de pago. Los dispositivos de usuario 104 (1) - 104 (N) se describen más adelante en la discusión para la FIG. 5.

[0038] Los dispositivos del servidor bancario del vendedor 106 (1) - 106 (N) y los dispositivos del servidor bancario del comprador 108 (1) - 108 (N) pueden asociarse con bancos u otras instituciones financieras en las que el vendedor y el comprador, respectivamente, tienen cuentas financieras.

[0039] Los dispositivos del servidor PSAB del servidor 112 (1) - 112 (N) pueden asociarse con un banco PSAB designado por el servicio de pago para abrir y mantener cuentas financieras relacionadas con la red de pago. Los dispositivos del servidor PSAB 112 (1) - 112 (N) mantienen cuentas financieras de PSAB para los usuarios de la red de pago de la comunidad. El servicio de pago puede tener una cuenta maestra en el PSAB, a la que se pueden asociar las cuentas financieras de los usuarios. Los dispositivos del servidor de servicio de pago (s) 102 (1) - 102 (N) pueden hacer que los dispositivos del servidor PSAB 112 (1) - 112 (N) abran una cuenta financiera PSAB para un usuario al inscribir el usuario en la red de pagos de la comunidad. Los dispositivos del servidor de servicio de pago (s) 102 (1) - 102 (N) pueden proporcionar la información del banco PSAB sobre los usuarios (por ejemplo, nombre, número de seguro social, dirección, nacionalidad, etc.), que se puede obtener a través de un proceso de inscripción o a través de consultas a los usuarios, para abrir una cuenta financiera PSAB en nombre de los usuarios. En ejemplos, se puede

utilizar una institución financiera alternativa para el PSAB (si un usuario no está calificado para abrir una cuenta bancaria de EE. UU., Por ejemplo).

[0040] En incorporaciones, ningún dispositivo PSAB 112 (1) - 112 (N) se incluye en el sistema 100. En tales incorporaciones, los usuarios pueden usar sus propias fuentes de financiación (por ejemplo, cuentas financieras mantenidas en sus propias instituciones financieras (por ejemplo, 106 (1) - 106 (N), 108 (1) - 108 (N) o 110 (1) - 110 (N))) como respaldo financiero para los créditos utilizados en la red de pago de la comunidad.

[0041] A continuación, se describen algunos componentes adicionales y funciones de, e interacciones entre, dispositivos de Ejemplo de Sistema 100 (al menos con respecto a las Figs. 4 y 5).

[0042] La Fig. 2 es un diagrama de flujo que ilustra un proceso de ejemplo 200 para inscribir o vincular a un nuevo usuario con una red de pago comunitaria, como se describe en este documento.

[0043] El bloque 202 ilustra la recepción de una solicitud de un usuario para inscribirse en una red de pago comunitaria. Los dispositivos del servidor de servicio de pago pueden recibir la solicitud de un dispositivo de usuario, a través de formulario web, correo electrónico, mensaje directo, notificación de aplicaciones, etc. En ejemplos, la solicitud puede incluir o estar asociada con la información de Usuario Que Refiere. La información de Usuario Que Refiere identifica a un miembro existente de la red de pago que remitió al usuario al servicio de pago. La información de Usuario Que Refiere se puede integrar como datos en una solicitud de inscripción. En un ejemplo, un usuario puede escanear un código QR presentado por un usuario comercial o activar una URL proporcionada por el comerciante que dirige al usuario a una interfaz de inscripción. En un ejemplo, escanear un código QR con un dispositivo de usuario puede hacer que se abra una ventana del navegador en el dispositivo de usuario, desde el cual el usuario puede obtener información de inscripción por el usuario. En ejemplos, para que un usuario califique como Usuario Que Refiere en la red de pago, el referido debe inscribirse dentro de un tiempo umbral del usuario que le da al referido el código QR o URL. Por ejemplo, el servicio de pago puede marcar el tiempo de tiempo del código QR en su generación y comparar esa marca de tiempo con el primer contacto de un usuario que se inscribe con el servicio de pago. Además o alternativamente, un usuario puede proporcionar a un usuario inscrito un código. Cuando el usuario

que se vincula proporciona el código al servicio de pago durante la inscripción, el servicio de pago reconoce al usuario que entregó el código al usuario inscrito como Usuario Que Refiere. Además o alternativamente, la información de Usuario Que Refiere se puede obtener mediante el (los) dispositivo (s) de servicio (s) de pago por separado de una solicitud de inscripción. El servicio de pago puede almacenar un identificador para un Usuario Que Refiere en asociación con un nuevo perfil de usuario para el usuario, que puede almacenarse en un almacén de datos asociado con los dispositivos del servidor de servicio de pago.

[0044] En ejemplos, un usuario puede inscribirse en un momento de una transacción con una referencia de Usuario Que Refiere. Los datos de transacción, un enlace de inscripción y un identificador de Usuario Que Refiere, se pueden obtener mediante un dispositivo de usuario del usuario (por ejemplo, escaneando un código QR presentado al usuario por un comerciante a través de un dispositivo comercial). En ejemplos, el usuario puede inscribirse antes de realizar cualquier transacción en la red de pago de la comunidad. En un ejemplo, un dispositivo de usuario puede escanear un código QR que se muestra por un dispositivo comercial o publicado en una ubicación de comerciante, de modo que el comerciante asociado con el dispositivo comercial puede calificarse como la referencia de Usuario que no ha ocurrido ninguna transacción. En otros ejemplos, un usuario puede inscribirse visitando una página web de la red de pagos de la comunidad sin haber sido referido directamente, de modo que, en ejemplos, las comisiones de las transacciones del usuario no se dividen en tres o más formas (por ejemplo, red de pago, comerciante anterior, Usuario Que Refiere), sino como máximo de dos maneras (red de pagos, comerciante anterior). En una primera transacción dentro de la red de pagos por un usuario con un perfil de usuario para el que no se ha asociado Usuario Que Refiere, la red de pagos conserva la comisión completa del beneficiario (o créditos equivalentes) porque no existe un comerciante anterior ni un Usuario Que Refiere. Una vez que se inscribe el usuario, el usuario puede realizar transacciones dentro de la red de pago.

[0045] Como parte del proceso de inscripción, los dispositivos del servidor de servicio de pago pueden solicitar información de identificación sobre una fuente de financiación de un usuario. Esta fuente de financiación (por ejemplo, cuenta corriente, etc.) se puede utilizar para financiar la cuenta financiera PSAB de un usuario o puede usarse para la provisión de respaldo directo de créditos intercambiados en la red de pagos de la comunidad. Los créditos pueden ser respaldados por

dólares estadounidenses o por otra moneda, criptomoneda u otro mecanismo de valor. Los créditos de diferentes usuarios pueden estar respaldados por diferentes monedas o mecanismos de valor.

[0046] El bloque 204 ilustra el envío de una solicitud en nombre de un usuario a los dispositivos del servidor PSAB para abrir una cuenta financiera PSAB para un usuario. El servicio de pago puede seleccionar un banco para ser el PSAB, y el servicio de pago puede mantener una cuenta maestra o paraguas en el PSAB para todas las cuentas abiertas para los usuarios del servicio de pago. El servicio de pago puede almacenar una asociación entre la nueva cuenta financiera PSAB del usuario y el perfil de usuario del usuario en la red de pago de la comunidad. También se puede almacenar una asociación entre la fuente de financiación del usuario y el perfil del usuario, lo que permite una determinación de la cuenta financiera PSAB de un usuario y la fuente de financiación dada en el identificador del usuario. En algunos ejemplos, el servicio de pago o el PSAB pueden comunicarse con el usuario (por correo electrónico, mensaje directo, notificación de aplicaciones, etc.) para obtener información adicional del usuario después de la inscripción inicial para abrir la cuenta financiera de PSAB (por ejemplo, para obtener la autorización directa del usuario para abrir la cuenta financiera de PSAB). En algunos ejemplos, no se abre ninguna cuenta financiera de PSAB, pero en cambio, las transferencias ocurren directamente entre las fuentes de financiación del Beneficiario y el Pagador (por ejemplo, cuenta corriente, etc.), o la fuente de financiación de un usuario y una cuenta financiera de PSAB de un segundo usuario. En un ejemplo en el que un usuario no usa o no tiene una cuenta financiera PSAB, un usuario puede acordar que la fuente de financiación del usuario pueda debitarse para agregar créditos al saldo de crédito del usuario asociado con el perfil del usuario del usuario. Un usuario puede acordar que si el saldo de crédito cae por debajo de un umbral mínimo, se pueden transferir fondos adicionales al servicio de pago para aumentar los créditos asociados con el usuario. Cuando un usuario desea "cobrar", los fondos se pueden transferir del servicio de pago a la fuente de financiación del usuario. Del mismo modo, en los ejemplos en los que está presente una cuenta financiera PSAB, un usuario puede aceptar la restitución automática de la cuenta financiera PSAB desde la fuente de financiación del usuario si el saldo de la cuenta financiera de PSAB cae por debajo de un umbral mínimo.

[0047] El bloque 206 ilustra que los fondos se transfieran de una fuente de financiación del usuario a la cuenta financiera PSAB del usuario para financiar inicialmente la cuenta financiera PSAB del usuario. Por ejemplo, el servicio de pago puede iniciar una transferencia de ACH entre

una fuente de financiación y una cuenta financiera de PSAB. En algunos ejemplos, un usuario autoriza una cantidad particular para la transferencia a través de una entrada a una aplicación de pago que se ejecuta en un dispositivo de usuario del usuario, un mensaje directo, correo electrónico, un registro de formulario web, etc. En algunos ejemplos, el servicio de pago puede sugerir un monto para la transferencia o requerir una cantidad mínima como financiación inicial de la cuenta financiera de PSAB. El usuario puede autorizar transferencias automáticas de la fuente de financiación a la cuenta financiera de PSAB. En ejemplos, se produce una transferencia automática cuando el saldo de la cuenta financiera de PSAB cae por debajo de una cantidad de umbral mínimo.

[0048] El bloque 208 ilustra la determinación de una serie de créditos equivalentes al saldo de la cuenta financiera de PSAB. Como se describe a continuación, se puede utilizar un factor de conversión de créditos a la moneda para determinar cuántos créditos vale un cierto monto de la moneda, y para determinar un monto de la moneda, vale la pena una serie de créditos (por ejemplo, como "cobrar" créditos, como se discutirá a continuación).

[0049] El bloque 210 ilustra el asociar el número determinado de créditos con un perfil del usuario como un saldo de crédito del usuario.

[0050] Un usuario puede "retirar" o "cobrar" créditos en cualquier momento. En ejemplos, para hacerlo, un usuario envía una solicitud al servicio de pago. La solicitud puede incluir una cantidad de créditos que el usuario desea retirar y puede identificar una cuenta a la que se deben transferir los fondos. La cuenta identificada puede ser la fuente de financiación que originalmente financió la cuenta financiera de PSAB o puede ser otro método de desembolso. En respuesta al recibo de la solicitud, el servicio de pago genera una transferencia de fondos de la cuenta financiera de PSAB a la cuenta identificada (o tipo de desembolso alternativo). La cantidad de créditos que se puede cobrar puede estar limitada por un saldo de crédito mínimo que debe mantenerse como parte de los términos de la red de pago comunitaria. Sin embargo, si un usuario tiene la intención de retirarse de la red de pago de la comunidad, todos los créditos se pueden cobrar. En ejemplos, cuando un usuario disminuye, el cobro completo ocurre automáticamente.

[0051] Si una transacción hace que un saldo de crédito de un usuario caiga por debajo de lo que es equivalente a un monto monetario en la cuenta financiera PSAB del usuario (por ejemplo, el usuario realiza una transacción que hace que el saldo de crédito caiga por debajo del equivalente

en créditos de los \$ 10 en la cuenta financiera PSAB del usuario), el servicio de pago puede solicitar la autorización de una transferencia de la fuente de financiación del usuario (por ejemplo, por una transferencia ACH, etc.). Alternativamente, en un ejemplo, no se requiere autorización cuando el perfil de usuario permite reabastecer la cuenta financiera de PSAB. Por ejemplo, dado un factor de conversión de 1: 1 créditos en dólares, un saldo de \$ 100 en la cuenta financiera PSAB del usuario, una transacción pendiente por \$ 50 y un saldo mínimo para la cuenta financiera PSAB de \$ 75, el servicio de pago puede generar transferencia de \$ 25 al momento de la transacción o alrededor del mismo.

[0052] Las Fig. 3A y 3B son un diagrama de flujo que ilustra un proceso de ejemplo 300 para realizar una transacción de comisión dividida en la red de pago de la comunidad, como se describe en este documento.

[0053] El bloque 302 ilustra la recepción de datos de transacciones de una aplicación de pago que se ejecuta en un dispositivo de usuario para una transacción pendiente entre un pagador y un beneficiario en una red de pago. En ejemplos, la aplicación de pago es una aplicación de pago móvil. En ejemplos, el servicio de pago puede recibir los datos de la transacción de una aplicación de pago que se ejecuta en un dispositivo de usuario de un pagador (como el dispositivo de usuario del comprador 104 (2)) para una transacción entre un pagador y un beneficiario. En ejemplos, el servicio de pago puede recibir datos de transacción desde un dispositivo POS. En ejemplos, el pagador puede ser un cliente del beneficiario, que puede ser un comerciante. Los datos de la transacción pueden incluir información convencional (por ejemplo, cantidad de transacción, ubicación de transacción, artículos o servicios comprados, identidad del comerciante, etc.). Los datos de la transacción también pueden incluir un identificador de pagador que, en algunos ejemplos, puede agregarse a los datos de transacción convencionales mediante la instancia particular de la aplicación de pago que se ejecuta en el dispositivo de usuario del pagador. Los datos de transacción se pueden obtener mediante la ejecución de la instancia de la aplicación de pago en el dispositivo de usuario del pagador, ya sea desde el dispositivo de usuario del beneficiario, a través de la entrada manual, etc. Alternativamente, los datos de transacción se pueden recibir de una instancia de la aplicación de pago que ejecuta la aplicación de pago. en un dispositivo de usuario de un beneficiario (como el dispositivo de usuario del vendedor 104 (1)) para una transacción entre un pagador y un beneficiario. En un ejemplo, el dispositivo de usuario del beneficiario obtiene y agrega un identificador de pagador a través de la entrada manual por el

pagador o el beneficiario (por ejemplo, la entrada de un número de teléfono en una interfaz de usuario del dispositivo de usuario del beneficiario, escaneando un identificador con un identificador Captura de imagen Componente del dispositivo de usuario del beneficiario en el que el identificador se puede mostrar en una visualización del dispositivo de usuario del pagador, etc.).

[0054] En algunos ejemplos, los datos de transacción pueden generarse en primera instancia mediante una aplicación de punto de venta (POS) que está separada de la aplicación de pago. En algunos ejemplos, los datos de la transacción pueden generarse en primera instancia mediante un dispositivo POS que puede acoplarse comunicativamente a un dispositivo de usuario del Beneficiario. En ejemplos, el dispositivo de usuario del beneficiario puede ser un dispositivo POS.

[0055] Los dispositivos del servidor de servicio de pago del servidor de pago pueden hacer que una o más interfaces de usuario se presenten en un dispositivo de usuario a través de una aplicación de pago que se ejecuta en un dispositivo de usuario. Una o más interfaces de usuario pueden mostrar controles para permitir que un usuario haga una transferencia de fondos entre cuentas financieras asociadas con el perfil del usuario del usuario, para indicar una intención de hacer un valor de compra o transferencia a otro usuario, indicar una intención de aceptar el valor (por ejemplo, los créditos) que se transfiere al usuario por parte de otro usuario, para verificar un saldo de crédito, modificar un perfil de usuario, revisar un historial de transacciones, buscar un historial de transacciones, buscar a los usuarios participantes de la red de pago comunitaria (por ejemplo, buscar por nombre, ubicación u otro criterio), para ver un factor de conversión, para determinar un tipo de cambio entre diferentes monedas, para comunicarse con otros usuarios o con el servicio de pago, para participar en una red social proporcionada por el servicio de pago, Para iniciar un escaneo del dispositivo de usuario de un código de barras, código QR u otro gráfico que pueda, por ejemplo, representar datos de transacciones para una transacción pendiente o incluir un identificador de otro usuario con el que el usuario desea ingresar una transacción, etc.

[0056] El bloque 304 ilustra la identificación de los perfiles de usuario del Pagador y el beneficiario basado al menos en parte en los datos de la transacción. Como se describió anteriormente, los dispositivos del servidor de servicio de pago pueden recibir los datos de la transacción de cualquier variedad de formas, incluyendo las descritas anteriormente en relación con el Bloque 302. Los datos de la transacción pueden incluir identificadores para el Pagador y el beneficiario. Los dispositivos del servidor de servicio de pago pueden asignar el identificador de

Pagador al perfil de usuario del pagador y mapea el identificador Beneficiario al perfil de usuario del beneficiario, en el que el servicio de pago puede almacenar los perfiles del usuario.

[0057] El bloque 306 ilustra la determinación de una comisión del beneficiario asociada con la transacción basada al menos en parte en los datos de la transacción y los términos de servicio entre el beneficiario y el servicio de pago. En algunos ejemplos, la Comisión del Beneficiario puede calcularse como un porcentaje del monto de la transacción (por ejemplo, 0.5%, 1.0%, 1.5%, etc.). Por ejemplo, si el pagador está comprando zapatos del beneficiario que cuestan \$ 50.00, y la comisión del beneficiario acordada por el vendedor es del 1.0%, entonces la comisión del beneficiario es de \$ 0.50. Se puede hacer un acuerdo para la Comisión del Beneficiario al momento de la inscripción de un usuario y la Comisión del Beneficiario puede ser ajustada mediante el Servicio de Pago, con el acuerdo del usuario. En algunos ejemplos, la Comisión del Beneficiario puede calcularse como una comisión plana más un porcentaje del monto de la transacción. Por ejemplo, en el ejemplo anterior en el que el monto de la transacción es de \$ 50, si la Comisión del Beneficiario es del 1.0% más \$ 1.00, entonces la Comisión del Beneficiario sería de \$ 1.50. En algunos ejemplos, la comisión total del beneficiario está limitada (por ejemplo, a \$ 10.00, \$ 15.00, \$ 20.00, etc.).

[0058] El bloque 308 ilustra la determinación de un beneficiario anterior a quien el pagador pagó en una transacción histórica más reciente realizada en la red de pagos. La determinación de un beneficiario más reciente puede basarse en registros de transacciones almacenados por los dispositivos del servidor de servicio de pago. En ejemplos, los dispositivos del servidor de servicio de pago y los dispositivos de usuario se pueden acoplar a través de la red a un dispositivo de almacenamiento (no se muestra) que almacena los registros de transacciones, los perfiles de usuario, etc. Además o alternativamente, el dispositivo de almacenamiento puede residir localmente con respecto a los dispositivos del servidor de servicio de pago, los dispositivos de usuario o ambos. En ciertas implementaciones, los dispositivos de almacenamiento pueden incluir uno, o una combinación de, medios legibles por computadora. Los dispositivos del servidor de servicio de pago analizan el historial de compra del Pagador basado al menos en parte en el perfil de usuario del Pagador y determinan el identificador del beneficiario en la transacción realizada por el Pagador que precede inmediatamente a la transacción pendiente.

[0059] El bloque 310 ilustra la determinación de una identidad de un Usuario Que Refiere que inicialmente remitió al Pagador a la red de pagos. La identidad de la referencia de Usuario Que Refiere se puede almacenar en el perfil de usuario del pagador.

[0060] El bloque 312 ilustra los créditos de deducción del saldo de crédito del Pagador. El saldo de crédito de un usuario (aquí, el saldo de crédito de Pagador) se puede almacenar en asociación con un perfil de usuario del usuario. El número de créditos deducidos del saldo de crédito se calcula multiplicando el monto de la transacción mediante un factor de conversión de créditos por unidad de moneda. En un ejemplo en el que el monto de la transacción es de 100 USD, y el factor de conversión para los créditos a USD es 1: 1, se pueden deducir 100 créditos del perfil de usuario del Pagador. El factor de conversión de los créditos a la moneda puede variar por fecha, ubicación, usuario, tipo de bienes / servicios, historial de transacciones, etc. y puede ser fijado por el servicio de pago. El servicio de pago puede revelar los factores de conversión a los usuarios como parte de los términos y condiciones iniciales de participación en la red de pagos comunitarios. Del mismo modo, el servicio de pago puede notificar los cambios al factor de conversión durante la inscripción del usuario en el servicio de pago. El acuerdo para el uso de uno o más factores de conversión por parte de un usuario puede estar implícito en función del uso continuado del usuario de la red de pago de la comunidad. En una transacción transfronteriza (por ejemplo, cuando un pagador está en México y un beneficiario está en los Estados Unidos), los cálculos de crédito se pueden realizar utilizando un factor de conversión aplicable a la moneda utilizada en la transacción. Alternativamente o además, el dinero se puede deducir de la cuenta de PSAB de un pagador para el monto de la transacción.

[0061] El bloque 314 ilustra la adición de créditos al saldo de créditos del beneficiario equivalente al monto de la transacción menos la comisión del beneficiario. Los créditos se pueden calcular determinando el monto de la transacción menos la Comisión del Beneficiario, multiplicada por un factor de conversión aplicable. El número de créditos se puede calcular con la ecuación:

$$C = (T - F) * R,$$

en donde c = créditos para beneficiario, t = monto de la transacción en la moneda de la transacción, f = cantidad de comisión en la moneda de la transacción y r = factor de conversión de créditos por unidad de moneda. Por ejemplo, si un monto de la transacción es de 100 USD, una comisión del

beneficiario es 1 USD, y los créditos por USD son 0.05, $C = 99 \text{ USD} * 0.05 \text{ créditos} / \text{USD} = 4.95$ créditos. En otro ejemplo, si un monto de la transacción es de 100 €, una comisión del beneficiario es de 5 €, y los créditos por € son 0.08, $c = 95 \text{ €} * 0.04 \text{ créditos} / \text{€} = 3.8$ créditos. Alternativamente o además, la moneda se puede agregar a una cuenta PSAB de Pagador u otra cuenta financiera para el monto de la transacción.

[0062] El bloque 316 ilustra una transferencia de la Comisión del Beneficiario de una cuenta financiera PSAB del beneficiario a una cuenta del servicio de pago. El servicio de pago puede mantener una cuenta financiera y / o puede almacenar un saldo de crédito para los créditos asociados con el servicio de pago. El servicio de pago puede recibir una comisión del beneficiario en créditos o la cantidad equivalente de moneda o alguna combinación de créditos y moneda. Los créditos pueden transferirse del saldo de crédito del beneficiario; La moneda puede transferirse de la cuenta financiera PSAB del beneficiario.

[0063] El bloque 318 ilustra la adición de créditos al saldo de crédito del beneficiario anterior. Los créditos adicionales pueden ser una parte de los créditos equivalentes a la Comisión del Beneficiario. En al menos un ejemplo, la porción varía de al menos aproximadamente 0.1% a máximo de aproximadamente 75.0%, o de al menos aproximadamente 10% a lo máximo de aproximadamente 50%, y / o de al menos aproximadamente un 25% a la máximo de aproximadamente 60 %. Sin embargo, el porcentaje no necesita limitarse a este rango y puede ser establecido por el servicio de pago (y acordado por los usuarios) en cualquier cantidad. Cuando no se identifica ningún beneficiario anterior (por ejemplo, si este es el primer pago por este pagador), estos créditos simplemente no pueden desembolsarse.

[0064] El Bloque 320 ilustra la adición de créditos al saldo de créditos de Usuario Que Refiere. El saldo de créditos del Usuario Que Refiere se puede almacenar en asociación con un perfil de usuario del Usuario Que Refiere. Los créditos adicionales pueden ser una parte de los créditos equivalentes a la Comisión del Beneficiario. En al menos un ejemplo, la porción varía de al menos aproximadamente 0.1% a un máximo de aproximadamente 75.0%, o de al menos aproximadamente 10% a un máximo de aproximadamente 50%, y / o de al menos aproximadamente un 25% a un máximo de aproximadamente 60 %, pero el porcentaje no necesita limitarse a este rango y puede ser establecido por el servicio de pago (y acordado por los usuarios) en cualquier cantidad. La porción de beneficiario anterior y la parte de Usuario Que Refiere pueden

ser el mismo porcentaje o diferentes porcentajes. Cuando no se identifica Usuario Que Refiere (por ejemplo, si el pagador se inscribió sin una referencia), estos créditos simplemente no pueden desembolsarse. Por lo tanto, cuando hay un beneficiario previo y un Usuario Que Refiere, en efecto, la Comisión del Beneficiario pagada por el Beneficiario puede dividirse entre al menos el servicio de pago, el Usuario Que Refiere y el beneficiario anterior. En varios ejemplos, la Comisión del Beneficiario se puede dividir entre el servicio de pago, el Usuario Que Refiere, el beneficiario anterior y una o más entidades que pueden incluir una o más instituciones financieras y / o una o más organizaciones sin fines de lucro. El porcentaje de la comisión del beneficiario retenido por el servicio de pago puede ser equivalente al porcentaje asignado al beneficiario anterior y / o la rehabilitación de Usuario que también puede ser mayor o menos que el porcentaje asignado al beneficiario anterior y / o Usuario Que Refiere. El pagador puede recibir una parte de la comisión (por ejemplo, como "devolución de efectivo") en algunos ejemplos, lo que puede reducir las porciones distribuidas al menos al comerciante anterior y / o usuario que Refiere.

[0065] El bloque 322 ilustra la realización de actividades posteriores a la transacción. El servicio de pago puede prestar servicios adicionales después de la transacción, como almacenar detalles de la transacción, entregar un recibo al comprador, presentar datos de transacciones en una interfaz de usuario de una visualización de un dispositivo de usuario, actualizar recompensas de lealtad, etc. Los dispositivos del servidor de servicio de pago pueden enviar un recibo al dispositivo del comprador por correo electrónico, mensaje, etc., pueden enviar un enlace, pueden hacer que la aplicación de pago en el dispositivo del comprador dé un aviso o pueden habilitar el acceso al recibo en la solicitud de pago.

[0066] La Fig. 4 es un diagrama de flujo que ilustra un proceso de ejemplo 400 que determina un beneficiario y comisiones de una transacción de pago, como se describe en este documento.

[0067] El bloque 402 ilustra la recepción de datos de transacciones asociados con una transacción entre un primer usuario como pagador y un segundo usuario como beneficiario, en el que los datos de la transacción incluyen una indicación de una cantidad de transacción. Los datos de la transacción pueden transmitirse al servicio de pago por al menos cualquiera de los participantes en una transacción. Los datos de la transacción pueden incluir al menos uno de: la cantidad de transacción, fecha y hora de transferencia deseados, identidad de pagador, identidad

de beneficiario, pagarés de formato libre de un usuario (s), ubicación (es), elemento (s) o servicio (s) comprado (s), etc.

[0068] El bloque 404 ilustra la determinación de una comisión del beneficiario asociada con la transacción, en la que la comisión del beneficiario se basa en el monto de la transacción. En ejemplos, la comisión del beneficiario es una comisión plana o una combinación de una comisión plana y un porcentaje del monto de la transacción. La Comisión del Beneficiario no se limita a estos montos y puede ser establecida mediante el servicio de pago.

[0069] El bloque 406 ilustra la determinación de un primer número de créditos proporcionales al monto de la transacción y un segundo número de créditos proporcionales a la Comisión del Beneficiario. El primer número de créditos y el segundo número de créditos se pueden calcular utilizando un factor de conversión de créditos a la unidad de moneda.

[0070] El bloque 408 ilustra la transferencia del primer número de créditos de un perfil de usuario asociado con el primer usuario a un perfil de usuario asociado con el segundo usuario. El servicio de pago puede deducir créditos de un usuario de Pagador. Aunque el término "transferencia" se usa en esta especificación, los cambios en los saldos de crédito pueden verse como deducciones o adiciones sin referencia a una "transferencia" de o a otro usuario. Es decir, una "transferencia" de Pagador a Beneficiario puede describirse en su lugar como que se le debitaron al Pagador los créditos y que se le abonen créditos al beneficiario. Alternativamente o además, el monto de la transacción se puede transferir de una primera cuenta de usuario a una segunda cuenta de usuario.

[0071] El bloque 410 ilustra la transferencia del segundo número de créditos del perfil de usuario asociado con el segundo usuario al servicio de pago. En ejemplos, la Comisión del Beneficiario se puede pagar al servicio de pago en créditos deducidos del saldo de crédito del beneficiario. En otros ejemplos, la Comisión del Beneficiario se puede pagar al servicio de pago en moneda deducida de la cuenta financiera PSAB del beneficiario (o, en ausencia de una cuenta financiera PSAB, de la fuente de financiación del beneficiario).

[0072] El bloque 412 ilustra la transferencia de un tercer número de créditos desde el servicio de pago a un perfil de quien refiere al primer usuario, en el que el tercer número de créditos es una parte del segundo número de créditos. En algunas incorporaciones, la transferencia de créditos al tercer usuario puede describirse como una transferencia directamente de beneficiario al tercer

usuario sin ser asignado primero al servicio de pago. En ejemplos, se puede transferir un cuarto número de créditos del servicio de pago a un perfil de usuario asociado con un cuarto usuario, en el que el primer usuario pagó al cuarto usuario en una transacción anterior que ocurre inmediatamente antes de la transacción, y en donde el cuarto número de Los créditos comprenden una segunda porción del segundo número de créditos. En algunas incorporaciones, la transferencia de créditos al cuarto usuario puede describirse como una transferencia directamente de beneficiario al cuarto usuario sin ser asignado primero al servicio de pago. Sin embargo, en los ejemplos en los que no hay beneficiario previo o ningún Usuario Que Refiere, la asignación de créditos al beneficiario previo o Usuario Que Refiere se puede hacer al servicio de pago en lugar de permanecer con el Beneficiario.

[0073] Además, en algunos ejemplos, el pagador puede recibir una parte de la Comisión del Beneficiario (por ejemplo, como "reembolso en efectivo" dentro de una transacción). El pagador puede pagar al beneficiario con créditos o dinero y recibir créditos o devolución de dinero para la transacción. La parte del pagador de la comisión del beneficiario puede estar asociada con un perfil de usuario del pagador en créditos o dinero.

[0074] Las Figs. 2, 3a, 3b y 4 son diagramas de flujo que ilustran procesos de ejemplo de acuerdo con algunas implementaciones. Los procesos de las Figs. 2, 3a, 3b y 4 se ilustran como colecciones de bloques en diagramas de flujo lógico, que representan una secuencia de operaciones, algunas o todas las cuales pueden implementarse en hardware, software o una combinación de los mismos. En el contexto del software, los bloques pueden representar instrucciones ejecutables por computador almacenadas en uno o más medios legibles por computador que, cuando se ejecutan por uno o más procesadores, programan los procesadores para realizar las operaciones recitadas. En general, las instrucciones ejecutables por computador incluyen rutinas, programas, objetos, componentes, estructuras de datos y similares que realizan funciones particulares o implementan tipos de datos particulares. El orden en el que se describen los bloques no debe interpretarse como una limitación. Cualquier número de bloques descritos se puede combinar en cualquier orden y / o en paralelo para implementar el proceso, o procesos alternativos, y no se deben ejecutar todos los bloques. Además, en algunos ejemplos, algunas o todas las operaciones ilustradas en una o más de las Figs. 2, 3a, 3b y 4 se pueden combinar con algunas o todas las operaciones ilustradas en otras de las Figs. 2, 3a, 3b y 4. Para fines de discusión, los procesos se describen con referencia a los entornos, arquitecturas y dispositivos descritos en

los ejemplos en este documento, aunque los procesos se pueden implementar en una amplia variedad de otros entornos, arquitecturas y dispositivos.

[0075] La Fig. 5 ilustra un diagrama de bloques 500 de componentes seleccionados de un dispositivo de servidor de servicio de pago 502, como se describe en este documento.

[0076] Los dispositivos del servidor de servicio de pago 502 pueden incluir uno o más servidores u otros tipos de dispositivos informáticos que se pueden incorporar de cualquier cantidad de maneras. Por ejemplo, en el ejemplo de un servidor, los módulos, otros componentes funcionales y los datos se pueden implementar en un solo servidor, un clúster de servidores, una granja de servidores o centro de datos, un servicio informático alojado en la nube, un Servicio de almacenamiento alojado en la nube, etc., aunque otras arquitecturas de computadoras se pueden utilizar además o alternativamente.

[0077] Además, mientras las cifras ilustran los componentes y datos del servidor de servicio de pago 502 como presentes en una sola ubicación, estos componentes y datos pueden distribuirse alternativamente en diferentes dispositivos informáticos y diferentes ubicaciones de cualquier manera. Múltiples dispositivos del servidor de servicios de pago 502 se pueden ubicar juntos o por separado, y organizarse, por ejemplo, como servidores virtuales, bancos de servidores y / o granjas de servidores. Los servidores de una sola entidad o empresa pueden proporcionar la funcionalidad descrita, o pueden ser proporcionados por los servidores y / o servicios de múltiples clientes o empresas diferentes.

[0078] En el ejemplo ilustrado, los dispositivos del servidor de servicio (s) de pago 502 pueden incluir uno o más procesadores 504, uno o más medios legibles por computadora 506, una o más interfaces de comunicación 508 y uno o más dispositivos de entrada / salida 510. Cada uno de los procesadores 504 puede ser una sola unidad de procesamiento o una serie de unidades de procesamiento, y puede incluir unidades informáticas simples o múltiples o múltiples núcleos de procesamiento. El (los) procesador (es) 504 se puede (n) implementar como uno o más microprocesadores, microcomputadores, microcontroladores, procesadores de señal digital, unidades de procesamiento central, máquinas de estado, circuitos lógicos y / o cualquier dispositivo que manipule señales basadas en instrucciones operativas. Por ejemplo, los procesadores 504 pueden ser uno o más procesadores de hardware y / o circuitos lógicos de cualquier tipo adecuado programado o configurado específicamente para ejecutar los algoritmos y

procesos descritos en este documento. El (los) Procesador (es) 504 se puede (n) configurar para obtener y ejecutar instrucciones legibles por computador almacenadas en medios legibles por computador 506, que pueden programar procesadores 504 para realizar las funciones descritas en este documento.

[0079] Los medios legibles por computador 506 incluyen medios de almacenamiento de computador y señales legibles por computador. Los medios de almacenamiento del computador incluyen medios volátiles y no volátiles, extraíbles y no extraíbles implementados en cualquier método o tecnología para el almacenamiento de información, como instrucciones legibles por computador, estructuras de datos, módulos de programa u otros datos. Los medios de almacenamiento del computador incluyen, entre otros, memoria de estado sólido, memoria de cambio de fase (PRAM), memoria de acceso aleatorio estático (SRAM), memoria dinámica de acceso aleatorio (DRAM), otros tipos de memoria de acceso aleatorio (RAM), Memoria de solo lectura (ROM), memoria de solo lectura programable eléctricamente borrable (EEPROM), memoria flash u otra tecnología de memoria, memoria de lectura de solo disco compacto (CD - ROM), discos versátiles digitales (DVD) u otro almacenamiento óptico, Cassettes magnéticos, cinta magnética, almacenamiento de disco magnético u otros dispositivos de almacenamiento magnético, o cualquier otro medio que no sea transmisión que pueda usarse para almacenar información para acceder mediante un dispositivo informático. Además, en algunos ejemplos, los medios legibles por computador pueden estar asociados con señales transitorias legibles por computadora (en forma comprimida o sin comprimir). Ejemplos de señales legibles por computador, ya sea moduladas usando un portador o no, incluyen, pero no se limitan a, las señales de que un sistema informático que aloja o ejecuta un programa de computador puede ser configurado para acceder, incluyendo las señales descargadas a través de Internet u otras redes.

[0080] Dependiendo de la configuración de los dispositivos del servidor de servicio de pago 502, los medios 506 legibles por computador pueden ser un ejemplo de medios de almacenamiento de computador no transitorio tangible, en algunos ejemplos, los dispositivos del servidor de servicio de pago 502 pueden acceder a Almacenamiento externo, como sistemas de almacenamiento RAID, matrices de almacenamiento, almacenamiento adjunto de red, redes de área de almacenamiento, almacenamiento en la nube o cualquier otro medio que pueda usarse para almacenar información y que uno o más procesadores puedan acceder directamente o mediante otra informática dispositivo o red. En consecuencia, los medios 506 legibles por computador

pueden ser medios de almacenamiento de computador capaces de almacenar instrucciones, módulos o componentes que los procesadores puedan ejecutar 504.

[0081] Los medios 506 legibles por computador se pueden utilizar para almacenar cualquier número de componentes funcionales que sean ejecutables por el procesador (es) 504. Los componentes almacenados en medios legibles por computador 506 pueden incluir el módulo de pago 514, el módulo de inscripción 516, el módulo de financiación 518, el módulo de servicios adicionales 520, el módulo de interfaz de usuario 522 y el módulo de red social 524, que puede comprender al menos una parte de la aplicación de redes comunitarias de pago comunitario ("Aplicación de pago") 512. La aplicación de pago 512 puede ser proporcionada por los dispositivos del servidor de servicio de pago 502 y puede configurarse para permitir que un usuario realice las funciones asociadas con el pago de la red de la comunidad.

[0082] El término "módulo" está destinado a representar divisiones de ejemplo del software para fines de discusión y no está destinado a representar ningún tipo de requisito o método requerido, manera o organización necesaria. En consecuencia, aunque se discuten varios "módulos", su funcionalidad, funcionalidad similar, o ambos, podrían organizarse de manera diferente (por ejemplo, combinados en un número menor de módulos, divididos en un mayor número de módulos, etc.). Los módulos pueden incluir instrucciones / código del computador que se pueden almacenar en los medios 506 legibles por computador y pueden ser ejecutables por el (los) procesador (es) 504.

[0083] El módulo de pago 514 se puede configurar para crear, recibir y / o transmitir datos de transacción para una transacción electrónica realizada dentro de la red de pago comunitaria. En algunos ejemplos, cualquiera de los usuarios de una transacción puede enviar los datos de la transacción al servicio de pago a través de una instancia de una aplicación de pago proporcionada por el servicio de pago que se ejecuta en un dispositivo de usuario. Por ejemplo, si un beneficiario está enviando la transacción, el beneficiario puede obtener la autorización del pagador antes de hacerlo, ya sea mediante un control en el dispositivo de usuario del pagador o mediante un control en el dispositivo de usuario del beneficiario. Adicional o alternativamente, basándose al menos en parte en los datos de la transacción, el módulo de pago 514 puede deducir créditos de un saldo de crédito del pagador equivalente al monto de la transacción, determinar una comisión del beneficiario para la transacción, agregar créditos al saldo de crédito del beneficiario equivalente al

monto de la transacción menos la comisión del beneficiario, agregar una porción de la comisión del beneficiario (por ejemplo, en créditos equivalentes a la comisión del beneficiario) a un saldo de crédito del beneficiario anterior, agregar una porción (igual o diferente de la porción correspondiente al beneficiario anterior) de la comisión del beneficiario a un saldo acreedor del usuario a que se refiere, y retener la comisión del beneficiario restante por el servicio de pago. Adicional o alternatively, el módulo de pago 514 puede acceder a un factor de conversión o tipo de cambio entre créditos y moneda para realizar las transferencias descritas anteriormente. El factor de conversión puede establecerse mediante acuerdo entre el servicio de pago y uno o más usuarios que participan en la red de pago comunitaria.

[0084] El módulo de inscripción 516 se puede configurar para permitir la recepción de información de inscripción de un usuario. En algunos ejemplos, un usuario descarga la aplicación de pago antes de la inscripción y la utiliza para enviar información de inscripción. El módulo de inscripción 516 y el módulo de interfaz de usuario 522 pueden hacer que se muestre un formulario al usuario para ingresar información de inscripción. El módulo de inscripción se puede configurar para confirmar con el servicio de pago que un usuario aún no está inscrito (por ejemplo, solicitando al menos una dirección de correo electrónico, número de teléfono, nombre, etc.) antes de solicitar información de inscripción. El módulo de inscripción puede detectar la recepción de información de referencia de un usuario que refiere y asociar la información de inscripción del usuario con el usuario que refiere (por el dispositivo servidor de servicios de pago en el momento en que se recibe la información de inscripción, o por el dispositivo del usuario antes se envía la información de inscripción) para que el usuario que refiere reciba crédito para futuras transacciones del usuario que se inscribe.

[0085] El módulo de financiación 518 se puede configurar para transferir fondos desde la fuente de financiación personal de un usuario a la cuenta financiera PSAB del usuario. En ejemplos, el módulo de financiación 518 puede determinar la fuente de financiación basándose al menos en parte en la información proporcionada por un usuario. Al menos con el permiso del usuario, el módulo de financiación puede provocar una transferencia de fondos entre la fuente de financiación y la cuenta financiera. La cuenta financiera se puede utilizar para respaldar los créditos asignados al usuario por el servicio de pago. En algunos ejemplos, el servicio de pago retiene parte o todo el control sobre la cuenta financiera de modo que a medida que disminuye el saldo de crédito de un usuario, el módulo de financiación 518 puede retirar una cantidad

proporcional de fondos de la cuenta financiera. Cuando un usuario abandona la red de pago comunitaria o a petición de un usuario, el módulo de financiación 518 puede provocar una transferencia del saldo de la cuenta financiera a la fuente de financiación del usuario o a otra cuenta de su elección. Adicional o alternativamente, el módulo de financiamiento puede gestionar ajustes de saldo de crédito correspondientes a transacciones de la red de pagos, incluidas las comisiones.

[0086] El módulo de servicios adicionales 520 se puede configurar para proporcionar servicios adicionales del servicio de pago al usuario. Por ejemplo, el módulo de servicios adicionales 520 puede hacer que un dispositivo de almacenamiento almacene detalles de la transacción, proporcione un recibo a los usuarios involucrados en la transacción, haga que los datos de la transacción se muestren (en cooperación con el módulo de interfaz de usuario 522) en una interfaz de usuario de una pantalla de un dispositivo de usuario, actualizar recompensas de fidelidad que pueden ser administradas por el servicio de pago, hacer que la información de la transacción se muestre a través de una red social externa o una red social asociada con la red de pago comunitaria, etc. En ejemplos, el módulo de servicios adicionales 420 puede enviar a un dispositivo de usuario un recibo por correo electrónico, mensaje, etc., puede enviar un enlace URL a un dispositivo de usuario, puede hacer que una aplicación de pago en un dispositivo de usuario muestre una notificación asociada con un recibo, o de otro modo habilitar el acceso a un recibo a través de la aplicación de pago. Adicional o alternativamente, el servicio de pago puede ofrecer otros servicios adicionales como gestión de inventario, distribución de descuentos, etc.

[0087] El módulo de interfaz de usuario 522 se puede configurar para realizar acciones que pueden incluir hacer que se proporcione una interfaz de usuario a un usuario a través de una pantalla de un dispositivo de usuario. En ejemplos, el módulo de interfaz de usuario 522 puede hacer que se muestre una interfaz de usuario que permite a un usuario al menos uno de seleccionar un beneficiario o pagador para una transacción, ingresar un monto de transacción, solicitar un saldo de crédito, solicitar un saldo de un PSAB cuenta financiera, transmitir un mensaje al servicio de pago o a otro usuario de la red de pago, solicitar un historial de transacciones del usuario, solicitar un mapa de usuarios cercanos de la red de pago, solicitar una lista de otros usuarios que el usuario ha referido a la red de pago, solicitar una identidad del usuario a la que se refiere el usuario, solicitar una vista resumida de un perfil de usuario o panel de la participación del usuario en la red de pago o adición de información de una pluralidad de transacciones que se determinan como asociadas con el perfil de usuario. Adicional o alternativamente, los actos pueden incluir generar una interfaz

de usuario que le permita a un usuario realizar acciones que incluyen una o más de las siguientes: ver, ordenar, filtrar o cualquier combinación de las mismas, al menos una parte de información en diferentes niveles de granularidad. Adicional o alternativamente, el módulo de interfaz de usuario 522 puede hacer que se proporcione una interfaz de usuario a un usuario para solicitar la entrada de credenciales de usuario para, por ejemplo, un perfil de usuario y / o una cuenta financiera de PSAB. Adicional o alternativamente, los actos pueden incluir vincular una cuenta financiera y / o fuente de financiamiento al perfil de usuario del usuario.

[0088] En ciertos casos, el módulo de interfaz de usuario 522 se puede configurar para proporcionar una interfaz de usuario correspondiente al dispositivo de usuario que se está utilizando. Por ejemplo, la información se puede presentar al usuario de una manera diferente cuando se presenta en un teléfono móvil que cuando se presenta en un computador personal.

[0089] En algunos ejemplos, la interfaz de usuario se puede dar a un usuario a través de un navegador web (por ejemplo, software como servicio (SaaS)), a través de una aplicación cliente descargable, o ambos.

[0090] El módulo de red social 524 se puede configurar para permitir que un usuario interactúe con respecto a la actividad de transacciones dentro de la red de pago comunitaria, en un foro social. Por ejemplo, el módulo de red social 524 puede proporcionar la integración de una o más redes sociales dentro de la red de pago. El módulo de red social 524 puede proporcionar una red social de manera que un usuario pueda interactuar con otros usuarios de la red de pago. Además, las redes sociales externas pueden integrarse dentro de la red de pago a través de aplicaciones de terceros, permitiendo así que un usuario de la red de pago interactúe con usuarios de las redes sociales externas.

[0091] Los componentes funcionales adicionales almacenados en medios legibles por computador 406 pueden incluir un sistema operativo 530 para controlar y gestionar diversas funciones de los dispositivos de servidor de servicios de pago 502. En al menos un ejemplo, los medios legibles por computador 506 pueden incluir o mantener adicionalmente otros componentes funcionales y datos, tales como otros módulos y datos 532, que pueden incluir programas, controladores, etc., y los datos utilizados o generados por los componentes funcionales. Además, los dispositivos de servidor de servicios de pago 502 pueden incluir muchos otros componentes

lógicos, programáticos y físicos, de los cuales los descritos anteriormente son simplemente ejemplos que están relacionados con la discusión en el presente documento.

[0092] Las interfaces de comunicación 508 pueden incluir una o más interfaces y componentes de hardware para permitir la comunicación con varios otros dispositivos, tales como a través de redes o directamente. Por ejemplo, la(s) interfaz(es) de comunicación 508 pueden permitir la comunicación a través de una o más redes, que pueden incluir, entre otras, cualquier tipo de red conocida en la técnica, tal como una red de área local o una red de área amplia, tal como la Internet, y puede incluir una red inalámbrica, como una red celular, una red inalámbrica local, como Wi - Fi y / o comunicaciones inalámbricas de corto alcance, como Bluetooth®, BLE, NFC, RFID, una red por cable o cualquier otra red de este tipo, o cualquier combinación de las mismas. Una red puede incluir tecnologías de comunicación tanto cableadas como inalámbricas, incluidas tecnologías de comunicación Bluetooth®, BLE, Wi - Fi y celular, así como tecnologías cableadas o de fibra óptica. Los componentes utilizados para dichas comunicaciones pueden depender, al menos en parte, del tipo de red, el entorno seleccionado o ambos. Los protocolos para comunicarse a través de dichas redes son bien conocidos y no se discutirán en detalle aquí.

[0001] Los dispositivos de servidor de servicios de pago 502 pueden equiparse además con varios dispositivos de entrada / salida (E / S) 510. Los dispositivos de E / S 510 pueden configurarse para permitir que un usuario interactúe con el o los dispositivos de servidor de servicios de pago 502 a través de uno o más dispositivos de I / O. El (los) dispositivo (s) de I / O 510 pueden proporcionar una interfaz para dispositivos tales como una pantalla (no mostrado), altavoces de audio (no mostrados), un micrófono (no mostrado), una cámara (no mostrado), puertos de conexión (no mostrados), un lector óptico (no mostrado), un panel táctil (no mostrado), un dispositivo de salida háptico (no mostrado), varios controles de interfaz de usuario (por ejemplo, botones, joystick, teclado, mouse, pantalla táctil, etc.) (no mostrados), o cualquier combinación de los mismos.

[0093] Los expertos en la técnica apreciarán que los componentes de hardware y diversos módulos funcionales representados en las FIGS. 5, 6 y otros lugares pueden variar. Los componentes ilustrativos no pretenden ser exhaustivos, sino más bien representativos para resaltar los componentes que se utilizan para implementar el tema divulgado en la presente solicitud. Por ejemplo, se pueden usar otros dispositivos / componentes además o en lugar del hardware representado. Además, los diversos componentes ilustrados en almacenamiento y memoria pueden

ubicarse alternativamente en cualquier almacenamiento o memoria a través de la (s) red (es) 114 (1) - 114 (N). El ejemplo representado no pretende implicar limitaciones arquitectónicas o de otro tipo con respecto al tema de esta divulgación.

[0094] FIG. 6 ilustra un diagrama de bloques 600 de componentes seleccionados de los dispositivos de usuario 602, como se describe en el presente documento.

[0095] En al menos un ejemplo, los dispositivos de usuario 602 pueden ser cualquier tipo adecuado de dispositivo móvil, por ejemplo, portátil, semiportátil o semiestacionario. Algunos ejemplos de dispositivo (s) de usuario 602 pueden incluir dispositivos informáticos tipo tableta; teléfonos inteligentes y dispositivos de comunicación móviles; computadores portátiles, netbooks y otros computadores portátiles o semi - portátiles; dispositivos informáticos portátiles u otros dispositivos informáticos montados en el cuerpo; dispositivos de realidad aumentada; u otros dispositivos informáticos capaces de enviar comunicaciones y realizar las funciones según las técnicas aquí descritas.

[0096] En el ejemplo ilustrado, los dispositivos de usuario 602 pueden incluir uno o más procesadores 504, uno o más medios legibles por computador 606, una o más interfaces de comunicación 608 y una o más entradas / salidas (I / O) dispositivo(s) 610. Cada procesador 604 puede incluir uno o más procesadores o núcleos de procesamiento. Por ejemplo, los procesadores 604 pueden implementarse como uno o más microprocesadores, microcomputadores, microcontroladores, procesadores de señales digitales, unidades centrales de procesamiento, máquinas de estado, circuitos lógicos y / o cualquier dispositivo que manipule señales basándose en instrucciones operativas. En algunos ejemplos, los procesadores 604 pueden ser uno o más procesadores de hardware y / o circuitos lógicos de cualquier tipo adecuado específicamente programados o configurados para ejecutar los algoritmos y procesos descritos en el presente documento. Los procesadores 604 pueden configurarse para buscar y ejecutar instrucciones ejecutables por procesador legibles por computador almacenadas en medios legibles por computador 606, que pueden programar el procesador 604 para realizar las funciones descritas en el presente documento.

[0097] Los medios legibles por computador 606 incluyen medios de almacenamiento por computador y señales legibles por computador. Los medios de almacenamiento informático incluyen medios volátiles y no volátiles, extraíbles y no extraíbles implementados en cualquier

método o tecnología para el almacenamiento de información, como instrucciones legibles por computadora, estructuras de datos, módulos de programas u otros datos. Los medios de almacenamiento informático incluyen, entre otros, memoria de estado sólido, memoria de cambio de fase (PRAM), memoria estática de acceso aleatorio (SRAM), memoria dinámica de acceso aleatorio (DRAM) y otros tipos de memoria de acceso aleatorio (RAM), memoria de sólo lectura (ROM), memoria de sólo lectura programable y borrrable eléctricamente (EEPROM), memoria flash u otra tecnología de memoria, memoria de sólo lectura de disco compacto (CD - ROM), discos versátiles digitales (DVD) u otro almacenamiento óptico, casetes magnéticos, cintas magnéticas, discos magnéticos de almacenamiento u otros dispositivos de almacenamiento magnéticos, o cualquier otro medio que no sea de transmisión y que pueda usarse para almacenar información a la que pueda acceder un dispositivo informático. Además, en algunos ejemplos, los medios legibles por computadora pueden asociarse con señales transitorias legibles por computadora (en forma comprimida o sin comprimir). Ejemplos de señales legibles por computador, ya sea moduladas a través de un portador o no, incluyen, entre otras, señales a las que se puede configurar un sistema informático que aloja o ejecuta un programa informático para acceder, incluidas señales descargadas a través de Internet u otras redes.

[0098] Dependiendo de la configuración de los dispositivos de usuario 602, los medios legibles por computador 606 pueden ser un ejemplo de medios de almacenamiento de computador tangibles y no transitorios. Además, en algunos ejemplos, los dispositivos de usuario 602 pueden acceder a almacenamiento externo, como son los sistemas de almacenamiento RAID, matrices de almacenamiento, almacenamiento conectado a la red, redes de área de almacenamiento, almacenamiento en la nube o cualquier otro medio que pueda usarse para almacenar información y que uno o más procesadores pueden acceder directamente o a través de otro dispositivo informático o red. En consecuencia, los medios legibles por computadora 606 pueden ser medios de almacenamiento de computadora capaces de almacenar instrucciones, módulos o componentes que pueden ser ejecutados por el(los) procesador(es) 604.

[0099] Los medios legibles por computador 606 se pueden usar para almacenar y mantener cualquier número de componentes funcionales que sean ejecutables por el (los) procesador (es) 604. En algunas implementaciones, estos componentes funcionales comprenden instrucciones o programas que son ejecutables por uno o más procesadores y que, cuando se ejecutan, implementan lógica operativa para realizar las acciones y servicios atribuidos anteriormente a los

dispositivos de usuario 602. Los componentes funcionales almacenados en medios legibles por computadora 606 pueden incluir el módulo de inscripción 614, el módulo de pago 616, el módulo de interfaz de usuario 618 y módulo de red social 620 que puede comprender al menos una parte de una aplicación de red de pago comunitaria ("aplicación de pago") 612. Módulo de inscripción 614, módulo de pago 616, módulo de interfaz de usuario 618, módulo de red social 620 y aplicación de red de pago comunitaria 612 ("aplicación de pago") puede corresponder al módulo de inscripción 516, al módulo de pago 514, al módulo de interfaz de usuario 522 y al módulo de red social 524 de la aplicación de pago 512, como se describió anteriormente con referencia a la FIG. 5.

[00100] El término "módulo" pretende representar divisiones de ejemplo del software para fines de discusión y no pretende representar ningún tipo de requisito o método requerido, manera u organización necesaria. En consecuencia, si bien se analizan varios "módulos", su funcionalidad, funcionalidad similar o ambas podrían organizarse de manera diferente (por ejemplo, combinados en un número menor de módulos, divididos en un número mayor de módulos, etc.). Los módulos pueden incluir instrucciones / códigos de computador que pueden almacenarse en los medios legibles por computador 606 y pueden ser ejecutados por procesador(es) 604.

[00101] El módulo de inscripción 614 se puede configurar para solicitar a un usuario información de inscripción (por ejemplo, nombre, dirección, teléfono, identificación de la fuente de financiamiento, número de seguro social, cantidad de fondos para transferir inicialmente a la cuenta financiera, identidad del usuario a la que se refiere, etc.) El módulo de inscripción puede transmitir información de inscripción al dispositivo servidor de servicios de pago. El módulo de inscripción 614 puede funcionar junto con el módulo de interfaz de usuario 618 para recopilar y transmitir la información de inscripción a través de la aplicación de pago 612. El módulo de inscripción puede comunicarse con otro dispositivo de usuario para identificar al usuario que refiere. Por ejemplo, el módulo de inscripción 614 puede recibir datos de un escaneo por parte del dispositivo de usuario de un código QR u otro código de un usuario que refiere. El código se puede mostrar en un dispositivo del usuario que refiere o se puede mostrar de otra manera (por ejemplo, por correo electrónico, correo impreso de EE. UU., una copia impresa en la empresa de un usuario, etc.). El módulo de inscripción 614 puede detectar la recepción de información de referencia de un usuario que refiere y asociar la información de inscripción de un usuario con el usuario que refiere (por el (los) dispositivo (s) servidor (es) del servicio de pago en el momento en que se recibe

la información de inscripción, o por el dispositivo del usuario antes de que se envíe la información de inscripción) para que el usuario que refiere reciba crédito para futuras transacciones del usuario que se inscribe.

[00102] El módulo de pago 616 se puede configurar para crear o recibir datos de transacción para su procesamiento por parte del servicio de pago. En los ejemplos, el usuario puede ingresar manualmente los datos de la transacción y pueden incluir el monto de la transacción, el artículo o servicio comprado, la ubicación, la fecha u hora en que el usuario desea que se procese la transacción, etc. En los ejemplos, los datos de la transacción se pueden crear en un punto de venta, ya sea mediante un dispositivo de usuario que sea un dispositivo POS o que se comuniquen con un dispositivo POS. El módulo de pago 616 se puede configurar para enviar los datos de la transacción al dispositivo servidor del servicio de pago. En ejemplos, los datos de la transacción se pueden cargar, pero la transacción no se puede procesar hasta que se reciba el consentimiento del otro usuario para la transacción a través de una indicación transmitida desde el dispositivo de usuario del otro usuario o mediante un código enviado por el dispositivo de usuario que indica al servicio de pago que el otro usuario ha dado su consentimiento para la transacción.

[00103] El módulo de interfaz de usuario 618 se puede configurar para provocar que se proporcione una interfaz de usuario a un usuario en la (s) pantalla (s) 630 del (de los) dispositivo (s) de usuario 602. En ejemplos, el módulo de interfaz de usuario 618 puede provocar que una interfaz de usuario proporcionarse que permita a un usuario realizar acciones asociadas con la aplicación de pago 612 o con la red de pago comunitaria de manera más general. El módulo de interfaz de usuario 618 del (de los) dispositivo(s) de usuario 602 puede realizar acciones correspondientes al módulo de interfaz de usuario 522 del(los) dispositivo(s) de servidor de servicios de pago 502. En ciertos casos, el módulo de interfaz de usuario 618 puede configurarse para proporcionar una interfaz de usuario correspondiente al dispositivo de usuario que se está utilizando. Por ejemplo, la información se puede presentar al usuario de una manera diferente cuando se presenta en un teléfono móvil que cuando se presenta en una computadora personal. En algunos ejemplos, la interfaz de usuario se puede proporcionar a un usuario a través de un navegador web (por ejemplo, software como servicio (SaaS)), a través de una aplicación cliente descargable, o ambos.

[0002] El módulo de red social 620 se puede configurar para permitir que un usuario interactúe con respecto a la actividad de transacciones dentro de la red de pago comunitaria, en un foro social. Por ejemplo, el módulo de red social 620 puede proporcionar la participación en una o más redes sociales con la red de pago. El módulo de red social 620 puede proporcionar una red social de manera que un usuario pueda interactuar con otros usuarios de la red de pago. Además, las redes sociales externas pueden integrarse dentro de la red de pago a través de aplicaciones de terceros, permitiendo así que un usuario de la red de pago interactúe con usuarios de las redes sociales externas.

[00104] Aún más, los medios legibles por computador 606 pueden incluir componentes funcionales adicionales, tales como sistemas operativos 626 para controlar y gestionar diversas funciones de los dispositivos de usuario 602 y para permitir interacciones básicas del usuario. Además, los medios legibles por computador 606 también pueden almacenar datos, estructuras de datos y similares, que son utilizados por los componentes funcionales.

[00105] Dependiendo del tipo de dispositivo(s) de usuario 602, los medios legibles por computador 606 también pueden incluir opcionalmente otros componentes y datos funcionales, tales como otros módulos y datos 628, que pueden incluir programas, controladores, etc., y el datos utilizados o generados por los componentes funcionales. Por ejemplo, los medios legibles por computadora 606 de un dispositivo de usuario asociado con un usuario comerciante pueden incluir opcionalmente un módulo de punto de venta (POS). Además, los dispositivos de usuario 602 pueden incluir muchos otros componentes lógicos, programáticos y físicos, de los cuales los descritos son simplemente ejemplos que están relacionados con la discusión en el presente documento.

[00106] Las interfaces de comunicación 608 pueden incluir una o más interfaces y componentes de hardware para permitir la comunicación con varios otros dispositivos, tales como a través de redes o directamente. Por ejemplo, la (s) interfaz (es) de comunicación 608 pueden permitir la comunicación a través de una o más redes, que pueden incluir, entre otras, cualquier tipo de red conocida en la técnica, tal como una red de área local o una red de área amplia, tal como la Internet, y puede incluir una red inalámbrica, como una red celular, una red inalámbrica local, como Wi - Fi y / o comunicaciones inalámbricas de corto alcance, como Bluetooth®, BLE, NFC, RFID, una red por cable o cualquier otra red de este tipo, o cualquier combinación de las mismas. Una red

puede incluir tecnologías de comunicación tanto cableadas como inalámbricas, incluidas tecnologías de comunicación Bluetooth®, BLE, Wi - Fi y celular, así como tecnologías cableadas o de fibra óptica. Los componentes utilizados para dichas comunicaciones pueden depender, al menos en parte, del tipo de red, el entorno seleccionado o ambos. Los protocolos para comunicarse a través de dichas redes son bien conocidos y no se discutirán aquí en detalle.

[00107] Los dispositivos de usuario 602 pueden equiparse además con varios dispositivos de entrada / salida (E / S) 610. Los dispositivos de E / S 610 pueden configurarse para permitir que un usuario interactúe con el dispositivo de usuario (s) 602 a través de uno o más dispositivos de E / S. El (los) dispositivo (s) de E / S 610 pueden proporcionar una interfaz para dispositivos tales como pantalla(s) 630, parlantes de audio (no mostrados), un micrófono (no mostrado), una cámara (no mostrada), puertos de conexión (no mostrados) , un lector óptico (no mostrado), un panel táctil (no mostrado), un dispositivo de salida háptica (no mostrado), varios controles de interfaz de usuario (por ejemplo, botones, joystick, teclado, mouse, pantalla táctil, etc.) (no mostrado) , o cualquier combinación de los mismos.

[00108] [00108] En al menos un ejemplo, el (los) dispositivo (s) de usuario 602 pueden incluir pantalla(s) 630. Dependiendo del tipo de dispositivo (s) informático (s) usado (s) como dispositivo (s) de usuario 602, la (s) pantalla (s) 630 pueden emplear cualquier tecnología de visualización adecuada. Por ejemplo, la (s) pantalla (s) 630 pueden ser una pantalla de cristal líquido, una pantalla de plasma, una pantalla de diodo emisor de luz, una pantalla OLED (diodo emisor de luz orgánico), una pantalla de papel electrónico o cualquier otro tipo adecuado de pantalla capaz de presentar contenido digital en el mismo. En algunos ejemplos, las pantallas 630 pueden tener un sensor táctil asociado con las pantallas 530 para proporcionar una pantalla táctil configurada para recibir entradas táctiles para permitir la interacción con una interfaz gráfica presentada en las pantallas 630. Por consiguiente, las implementaciones en el presente documento no se limitan a ninguna tecnología de visualización en particular. Alternativamente, en algunos ejemplos, los dispositivos de usuario 602 pueden no incluir pantallas 630, y la información puede presentarse por otros medios, tales como auditivamente.

[00109] Además, los dispositivos de usuario 602 pueden incluir opcionalmente o pueden conectarse a lectores de tarjetas 632. En algunos ejemplos, los lectores de tarjetas 632 pueden conectarse a un puerto en los dispositivos de usuario 602, como un puerto de micrófono /

auriculares, un puerto de datos u otro puerto adecuado. Los lectores de tarjetas 632 pueden incluir un cabezal de lectura para leer una banda magnética de una tarjeta de pago, y además pueden incluir tecnología de cifrado para cifrar la información leída de la banda magnética. Alternativamente, se pueden emplear muchos otros tipos de lectores de tarjetas con los dispositivos de usuario 602 en el presente documento, dependiendo del tipo y la configuración de los dispositivos de usuario 6002.

[00110] Otros componentes incluidos en los dispositivos de usuario 602 pueden incluir dispositivos GPS 634 que pueden indicar información de ubicación. Además, los dispositivos de usuario 602 pueden incluir uno o más sensores 636 tales como un acelerómetro, giroscopio, brújula, sensor de proximidad, cámara, micrófono y / o un interruptor, como se analizó anteriormente. Además, los dispositivos de usuario 602 pueden incluir varios otros componentes que no se muestran, ejemplos de los cuales incluyen almacenamiento extraíble, una fuente de energía, tal como una batería y una unidad de control de energía, un escáner de código de barras, una impresora, un cajón de efectivo y y así sucesivamente.

[00111] El presente tema propone la integración de al menos las características antes mencionadas en un mecanismo fluido y conveniente para solicitar y recibir aprobaciones del administrador. En relación con los problemas identificados previamente con los sistemas y métodos convencionales, las propias aplicaciones de software se convierten en un componente activo y cooperativo del proceso, en lugar de ser el sujeto del mismo. Además, la descripción antes mencionada está dirigida a dispositivos y aplicaciones que están relacionados con la tecnología de pago. Sin embargo, se entenderá que la tecnología se puede extender a cualquier dispositivo y aplicación. Además, las técnicas descritas en el presente documento se pueden configurar para funcionar independientemente del tipo de dispositivo de usuario, aplicaciones móviles, topologías de POS, dispositivo servidor de servicios de pago, redes informáticas y entornos. Las técnicas descritas en el presente documento se pueden configurar para funcionar tanto en tiempo real / en línea como fuera de línea.

[00112] Si bien la divulgación antes mencionada hace referencia a las interacciones del usuario a través de una UI presentada a través de una pantalla de un dispositivo, la UI se puede presentar a través de cualquier dispositivo de entrada / salida. Como ejemplo, la UI puede emitirse a través de un altavoz y un proyector de realidad aumentada, etc. Además, aunque la divulgación antes

mencionada hace referencia a un usuario que interactúa con la UI a través de un control seleccionable, en ejemplos adicionales o alternativos, el usuario puede indicar una selección a través de una entrada hablada u otro tipo de entrada.

[00113] Lo anterior es meramente ilustrativo de los principios de esta divulgación y los expertos en la técnica pueden realizar diversas modificaciones sin apartarse del alcance de esta divulgación. Los ejemplos descritos anteriormente se presentan con fines ilustrativos y no limitativos. La presente divulgación también puede adoptar muchas formas distintas a las descritas explícitamente en el presente documento. En consecuencia, se enfatiza que esta divulgación no se limita a los métodos, sistemas y aparatos explícitamente divulgados, sino que pretende incluir variaciones y modificaciones de los mismos, que están dentro del espíritu de las siguientes reivindicaciones.

[00114] Como ejemplo adicional, se pueden realizar variaciones de las limitaciones del aparato o del proceso (por ejemplo, dimensiones, configuraciones, componentes, orden de los pasos del proceso, etc.) para optimizar aún más las estructuras, dispositivos y métodos proporcionados, como se muestra y describe en el presente documento. En cualquier caso, las estructuras y dispositivos, así como los métodos asociados, descritos en el presente documento tienen muchas aplicaciones. Por lo tanto, el tema divulgado no debe limitarse a ningún ejemplo único descrito en el presente documento, sino que debe interpretarse en amplitud y alcance de acuerdo con las reivindicaciones adjuntas.

[00115] Varias instrucciones, métodos y técnicas descritas en el presente documento se pueden considerar en el contexto general de instrucciones ejecutables por computador, tales como módulos de programa almacenados en medios legibles por computador y ejecutados por el (los) procesador (es) en este documento. Generalmente, los módulos de programa incluyen rutinas, programas, objetos, componentes, estructuras de datos, etc., para realizar tareas particulares o implementar tipos de datos abstractos particulares. Estos módulos de programa y similares se pueden ejecutar como código nativo o se pueden descargar y ejecutar, como en una máquina virtual u otro entorno de ejecución de compilación justo a tiempo. Normalmente, la funcionalidad de los módulos del programa se puede combinar o distribuir según se desee en varias implementaciones. Una implementación de estos módulos y técnicas puede almacenarse en un medio de almacenamiento informático o transmitirse a través de algún tipo de medio de comunicación.

Cláusulas de Ejemplos

Cláusula 1. Un método que comprende:

recibir, por uno o más servidores asociados con un servicio de pago y desde un primer dispositivo informático asociado con un primer usuario de una pluralidad de usuarios del servicio de pago, a través de una primera instancia de una aplicación de pago, datos de inscripción asociados con la inscripción del primer usuario con el servicio de pago;

al menos parcialmente en respuesta a la recepción de los datos de inscripción, determinando, mediante uno o más servidores asociados con el servicio de pago, que el primer usuario es elegible para inscribirse en el servicio de pago;

almacenar, por uno o más servidores asociados con el servicio de pago y en un almacén de datos asociado con el servicio de pago, un perfil de usuario asociado con el primer usuario;

basándose al menos en parte en los datos de inscripción, identificando, mediante uno o más servidores asociados con el servicio de pago, una fuente de financiación indicada por el primer usuario;

enviar, por uno o más servidores asociados con el servicio de pago a un dispositivo asociado con una institución financiera, una solicitud en nombre del primer usuario para abrir una cuenta financiera para el primer usuario en la institución financiera;

provocar, por uno o más servidores asociados con el servicio de pago y en una pantalla del primer dispositivo informático, la presentación de una indicación de la cuenta financiera y una solicitud de autorización para transferir fondos desde la fuente de financiación a la cuenta financiera;

recibir, por uno o más servidores asociados con el servicio de pago, la autorización;

al menos parcialmente en respuesta a la recepción de la autorización, provocando, por uno o más servidores asociados con el servicio de pago, una transferencia de fondos desde la fuente de financiación a la cuenta financiera;

recibir, por uno o más servidores asociados con el servicio de pago y desde al menos uno del primer dispositivo informático o un segundo dispositivo informático asociado con un segundo usuario, primeros datos de transacción asociados con una primera transacción entre el primer

usuario y el segundo usuario , en donde el primer usuario comprende un pagador para la primera transacción y el segundo usuario comprende un beneficiario para la primera transacción;

recibir, por uno o más servidores asociados con el servicio de pago y desde al menos uno del primer dispositivo informático o un tercer dispositivo informático de un tercer usuario a través de una instancia respectiva de la aplicación de pago que se ejecuta en el primer dispositivo informático o en el tercer dispositivo informático dispositivo, segundos datos de transacción asociados con una segunda transacción entre el primer usuario y el tercer usuario, en donde los datos de la transacción incluyen una indicación del monto de la transacción, en donde el primer usuario comprende un pagador para la segunda transacción y el tercer usuario comprende un beneficiario para la segunda transacción;

que responda, al menos en parte, al recibo de los datos de la segunda transacción asociados con la segunda transacción, determinando, por uno o más servidores asociados con el servicio de pago, una comisión del beneficiario basada al menos en parte en el monto de la segunda transacción y un cálculo predeterminado;

determinar, por uno o más servidores asociados con el servicio de pago, un primer número de créditos equivalente al segundo monto de la transacción y un segundo número de créditos equivalente a la comisión del beneficiario;

provocando, por uno o más servidores asociados con el servicio de pago, transferencias de valor que comprenden:

una transferencia del primer número de créditos desde el perfil de usuario asociado con el primer usuario a un perfil de usuario asociado con el tercer usuario;

una transferencia del segundo número de créditos desde el perfil de usuario asociado con el tercer usuario al servicio de pago;

una transferencia de créditos equivalente a un primer porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un usuario a que se refiere basada al menos en parte en la determinación de un usuario a que se refiere asociado con el perfil de usuario asociado con el primer usuario; y

una transferencia de créditos equivalente a un segundo porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un beneficiario

inmediatamente anterior, basada al menos en parte en la determinación de un beneficiario inmediatamente anterior basado al menos en parte en los datos de la primera transacción , donde el beneficiario inmediatamente anterior comprende el segundo usuario.

Cláusula 2. El método como se indica en la cláusula 1, que comprende además enviar, por uno o más servidores asociados con el servicio de pago, un registro de transacción para la segunda transacción a al menos uno del primer dispositivo informático o el tercer dispositivo informático.

Cláusula 3. El método según lo recita la cláusula 1 o la cláusula 2, que comprende además:
recibir, por uno o más servidores asociados con el servicio de pago y desde el primer dispositivo informático, una solicitud de un resumen de las transacciones del primer usuario; y
provocando, por uno o más servidores asociados con el servicio de pago, la presentación del resumen de transacciones en una pantalla del primer dispositivo informático.

Cláusula 4. El método según cualquiera de las cláusulas 1 - 3 recita, en donde los términos de un acuerdo entre el servicio de pago y uno o más usuarios de la pluralidad de usuarios incluye un término que requiere que la comisión del beneficiario sea menor que un umbral mínimo de comisión del beneficiario.

Cláusula 5. El método según cualquiera de las cláusulas 1 a 4, que comprende además:
recibir, por uno o más servidores asociados con el servicio de pago y desde el primer dispositivo informático, una solicitud para convertir uno o más créditos asociados con el perfil de usuario asociado con el primer usuario a una moneda de la fuente de financiación;
provocar, por uno o más servidores asociados con el servicio de pago, la transferencia de una cantidad de moneda desde la institución financiera a la fuente de financiación del primer usuario, en donde la cantidad de moneda comprende un número de uno o más créditos multiplicado por un índice de unidades monetarias por crédito; y

reducir un saldo de crédito asociado con el perfil de usuario asociado con el primer usuario en uno o más créditos.

Cláusula 6. El método según cualquiera de las cláusulas 1 a 5, que comprende además:

enviar, mediante uno o más servidores asociados con el servicio de pago al primer dispositivo informático asociado con el primer usuario, una solicitud de información adicional asociada con la apertura de la cuenta financiera para el primer usuario en la institución financiera; y

recibir, por uno o más servidores asociados con el servicio de pago y desde el primer dispositivo informático asociado con el primer usuario, la información adicional,

en el que enviar la solicitud en nombre del primer usuario para abrir la cuenta financiera para el primer usuario en la institución financiera responde al menos en parte a la recepción de la información adicional.

Cláusula 7. El método como se recita en cualquiera de las cláusulas 1 a 6, en el que los datos de inscripción incluyen al menos uno de un identificador del usuario que refiere el primer usuario, un identificador de la fuente de financiamiento, un monto de financiamiento para transferir al institución financiera de la fuente de financiamiento, o información de identificación personal.

Cláusula 8. El método según cualquiera de las cláusulas 1 a 7, en el que la aplicación de pago es proporcionada al primer dispositivo informático por uno o más servidores asociados con el servicio de pago.

Cláusula 9. El método según cualquiera de las cláusulas 1 a 8, donde determinar que el primer usuario es elegible para inscribirse en el servicio de pago comprende determinar que el primer usuario no se ha inscrito previamente en el servicio de pago.

Cláusula 10. El método según cualquiera de las cláusulas 1 a 9, donde la fuente de financiamiento comprende un banco, una cooperativa de crédito, una asociación de ahorro y préstamo o una casa de bolsa.

Cláusula 11. Un método, implementado por uno o más servidores de un servicio de pago, comprendiendo el método:

recibir datos de transacción asociados con una transacción entre un primer usuario como pagador y un segundo usuario como beneficiario, en donde los datos de la transacción incluyen una indicación de un monto de transacción;

determinar una comisión del beneficiario asociada con la transacción, en donde la comisión del beneficiario se basa al menos en parte en el monto de la transacción;

determinar un primer número de créditos proporcional al monto de la transacción y un segundo número de créditos proporcional a la comisión del beneficiario;

transferir el primer número de créditos o el monto de la transacción desde un perfil de usuario asociado con el primer usuario a un perfil de usuario asociado con el segundo usuario;

transferir el segundo número de créditos o la comisión del beneficiario del perfil de usuario asociado al segundo usuario al servicio de pago; y

transferir un tercer número de créditos del servicio de pago a un perfil de usuario asociado con un tercer usuario, en donde el tercer usuario refirió al primer usuario a la red de pago comunitaria, y en donde el tercer número de créditos comprende una primera parte del segundo número de créditos.

Cláusula 12. El método que recita la cláusula 11, comprende además:

transferir un cuarto número de créditos del servicio de pago a un perfil de usuario asociado con un cuarto usuario, en donde el primer usuario pagó al cuarto usuario en una transacción anterior que ocurrió inmediatamente antes de la transacción, y en donde el cuarto número de créditos comprende una segunda porción del segundo número de créditos.

Cláusula 13. Uno o más medios legibles por computadora que contienen instrucciones legibles por computadora que, cuando son ejecutados por uno o más procesadores, hacen que uno o más procesadores realicen un método como lo recita la cláusula 11 o la cláusula 12..

Cláusula 14. Un sistema que comprende:

uno o más procesadores; y

uno o más medios legibles por computadora, incluidas instrucciones legibles por computadora que, cuando son ejecutadas por uno o más procesadores, configuran el sistema para realizar un método como se recita en la cláusula 11 o la cláusula 12.

Cláusula 15. El método según cualquiera de las cláusulas 1 - 10, 11 ó 12, en donde la comisión del beneficiario comprende una comisión fija, un porcentaje del monto de la transacción o una combinación de una comisión fija y un porcentaje del monto de la transacción.

Cláusula 16. El método según recita cualquiera de las cláusulas 1 - 10 o 15, en el que al menos uno de la comisión del beneficiario, el primer porcentaje o el segundo porcentaje es un término de un acuerdo entre el servicio de pago y uno o más usuarios. .

Cláusula 17. Uno o más medios legibles por computador que contienen instrucciones legibles por computador que, cuando son ejecutadas por uno o más procesadores, hacen que uno o más procesadores realicen un método como recitan cualquiera de las cláusulas 1 - 10, 15 o 16 se recitan.

Cláusula 18. Un sistema que comprende:

uno o más procesadores; y

uno o más medios legibles por computadora, incluidas instrucciones legibles por computadora que, cuando son ejecutadas por uno o más procesadores, configuran el sistema para realizar un método según cualquiera de las cláusulas 5 a 16.

Cláusula 19. Un método que comprende:

almacenar, por uno o más servidores asociados con el servicio de pago y en un almacén de datos asociado con el servicio de pago, un perfil de usuario asociado con un usuario de una pluralidad de usuarios de un servicio de pago, en donde el perfil de usuario incluye información que identifica una financiación fuente del primer usuario;

recibir, por uno o más servidores asociados con el servicio de pago y desde la fuente de financiación, una cantidad de moneda;

actualizar, por uno o más servidores del servicio de pago, el perfil de usuario asociado con el primer usuario para agregar una cantidad de créditos equivalente a la cantidad de moneda, basándose al menos en parte en una proporción de créditos a moneda;

recibir, por uno o más servidores asociados con el servicio de pago y desde al menos uno de un primer dispositivo informático asociado con el primer usuario o un segundo dispositivo informático asociado con un segundo usuario a través de una instancia respectiva de la aplicación de pago que se ejecuta en el primer dispositivo informático o el segundo dispositivo informático, datos de transacción asociados con una transacción entre el primer usuario y el segundo usuario, en donde los datos de la transacción incluyen una indicación del monto de la transacción, en donde el primer usuario comprende un pagador y el tercer usuario comprende un beneficiario en la transacción;

que responde al menos en parte al recibo de los datos de la segunda transacción asociados con la segunda transacción, determinando, por uno o más servidores asociados con el servicio de pago, una comisión del beneficiario basada al menos en parte en el monto de la segunda transacción y un cálculo predeterminado;

determinar, por uno o más servidores asociados con el servicio de pago, un primer número de créditos equivalente al monto de la transacción y un segundo número de créditos equivalente a la comisión del beneficiario;

provocando, por uno o más servidores asociados con el servicio de pago, transferencias de valor que comprenden:

una transferencia del primer número de créditos desde el perfil de usuario asociado con el primer usuario a un perfil de usuario asociado con el segundo usuario;

una transferencia del segundo número de créditos desde el perfil de usuario asociado con el segundo usuario al servicio de pago;

una transferencia de créditos equivalente a un primer porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un usuario a que se refiere basada al menos en parte en la determinación de un usuario a que se refiere asociado con el perfil de usuario del primer usuario; y

una transferencia de créditos equivalente a un segundo porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un beneficiario inmediatamente anterior, basada al menos en parte en la determinación de un beneficiario inmediatamente anterior basado al menos en parte en los datos de la primera transacción, donde el beneficiario inmediatamente anterior comprende el segundo usuario.

Cláusula 20. Uno o más medios legibles por computador que tienen instrucciones legibles por computador que, cuando son ejecutadas por uno o más procesadores, hacen que uno o más procesadores realicen un método como lo establece la cláusula 19.

Cláusula 21. Un sistema que comprende:

uno o más procesadores; y

uno o más medios legibles por computadora, incluidas instrucciones legibles por computadora que, cuando son ejecutadas por uno o más procesadores, configuran el sistema para realizar un método según lo recita la cláusula 19.

REIVINDICACIONES

LO QUE SE REIVINDICA ES:

1. Un método que comprende:

recibir, por uno o más servidores asociados con un servicio de pago y desde un primer dispositivo informático asociado con un primer usuario de una pluralidad de usuarios del servicio de pago, a través de una primera instancia de una aplicación de pago, datos de inscripción asociados con la inscripción del primer usuario con el servicio de pago;

al menos parcialmente en respuesta a la recepción de los datos de inscripción, determinando, mediante uno o más servidores asociados con el servicio de pago, que el primer usuario es elegible para inscribirse en el servicio de pago;

almacenar, por uno o más servidores asociados con el servicio de pago y en un almacén de datos asociado con el servicio de pago, un perfil de usuario asociado con el primer usuario;

basándose al menos en parte en los datos de inscripción, identificar, mediante uno o más servidores asociados con el servicio de pago, una fuente de financiación indicada por el primer usuario;

enviar, por uno o más servidores asociados con el servicio de pago a un dispositivo asociado con una institución financiera, una solicitud en nombre del primer usuario para abrir una cuenta financiera para el primer usuario en la institución financiera;

provocar, por uno o más servidores asociados con el servicio de pago y en una pantalla del primer dispositivo informático, la presentación de una indicación de la cuenta financiera y una solicitud de autorización para transferir fondos desde la fuente de financiación a la cuenta financiera;

recibir, por uno o más servidores asociados con el servicio de pago, la autorización;

al menos parcialmente en respuesta al recibo de la autorización, provocar, por uno o más servidores asociados con el servicio de pago, una transferencia de fondos desde la fuente de financiación a la cuenta financiera;

recibir, por uno o más servidores asociados con el servicio de pago y desde al menos uno del primer dispositivo informático o un segundo dispositivo informático asociado con un segundo usuario, primeros datos de transacción asociados con una primera transacción entre el primer usuario y el segundo usuario, en donde el primer usuario comprende un pagador para la primera transacción y el segundo usuario comprende un beneficiario para la primera transacción;

recibir, por uno o más servidores asociados con el servicio de pago y desde al menos uno del primer dispositivo informático o un tercer dispositivo informático de un tercer usuario a través de una instancia respectiva de la aplicación de pago que se ejecuta en el primer dispositivo informático o en el tercer dispositivo informático dispositivo, segundos datos de transacción asociados con una segunda transacción entre el primer usuario y el tercer usuario, en donde los datos de la transacción incluyen una indicación del monto de la transacción, en donde el primer usuario comprende un pagador para la segunda transacción y el tercer usuario comprende un beneficiario para la segunda transacción;

en respuesta al menos en parte al recibo de los datos de la segunda transacción asociados con la segunda transacción, determinar, por uno o más servidores asociados con el servicio de pago, una comisión del beneficiario basada al menos en parte en el monto de la segunda transacción y un cálculo predeterminado;

determinar, por uno o más servidores asociados con el servicio de pago, un primer número de créditos equivalente al segundo monto de la transacción y un segundo número de créditos equivalente a la comisión del beneficiario;

provocar, por uno o más servidores asociados con el servicio de pago, transferencias de valor que comprenden:

- una transferencia del primer número de créditos desde el perfil de usuario asociado con el primer usuario a un perfil de usuario asociado con el tercer usuario;

- una transferencia del segundo número de créditos desde el perfil de usuario asociado con el tercer usuario al servicio de pago;

- una transferencia de créditos equivalente a un primer porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un usuario a que se

refiere basada al menos en parte en la determinación de un usuario que refiere asociado con el perfil de usuario asociado con el primer usuario; y

una transferencia de créditos equivalente a un segundo porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un beneficiario inmediatamente anterior, basada al menos en parte en la determinación de un beneficiario inmediatamente anterior basado al menos en parte en los datos de la primera transacción, donde el beneficiario inmediatamente anterior comprende al segundo usuario.

2. El método según la reivindicación 1, que comprende además enviar, mediante uno o más servidores asociados con el servicio de pago, un registro de transacción para la segunda transacción a al menos uno del primer dispositivo informático o el tercer dispositivo informático.

3. El método según la reivindicación 1 o la reivindicación 2, que comprende además:
recibir, por uno o más servidores asociados con el servicio de pago y desde el primer dispositivo informático, una solicitud de un resumen de las transacciones del primer usuario; y
provocando, por uno o más servidores asociados con el servicio de pago, la presentación del resumen de transacciones en una pantalla del primer dispositivo informático

4. El método según cualquiera de las reivindicaciones 1 a 3, en el que los términos de un acuerdo entre el servicio de pago y uno o más usuarios de la pluralidad de usuarios incluyen un término que requiere que la comisión del beneficiario sea inferior a un umbral mínimo de comisión del beneficiario.

5. El método según cualquiera de las reivindicaciones 1 a 4, que comprende además:
recibir, por uno o más servidores asociados con el servicio de pago y desde el primer dispositivo informático, una solicitud para convertir uno o más créditos asociados con el perfil de usuario asociado con el primer usuario a una moneda de la fuente de financiación;

provocar, por uno o más servidores asociados con el servicio de pago, la transferencia de una cantidad de moneda desde la institución financiera a la fuente de financiación del primer

usuario, en donde la cantidad de moneda comprende un número de uno o más créditos multiplicado por un índice de unidades monetarias por crédito; y

reducir un saldo de crédito asociado con el perfil de usuario asociado con el primer usuario en uno o más créditos.

6. El método según cualquiera de las reivindicaciones 1 a 5, que comprende además:

enviar, mediante uno o más servidores asociados con el servicio de pago al primer dispositivo informático asociado con el primer usuario, una solicitud de información adicional asociada con la apertura de la cuenta financiera para el primer usuario en la institución financiera; y

recibir, por uno o más servidores asociados con el servicio de pago y desde el primer dispositivo informático asociado con el primer usuario, la información adicional,

en el que enviar la solicitud en nombre del primer usuario para abrir la cuenta financiera para el primer usuario en la institución financiera responde al menos en parte al recibo de la información adicional.

7. El método según cualquiera de las reivindicaciones 1 a 6, en el que los datos de inscripción incluyen al menos uno de un identificador del usuario que refiere el primer usuario, un identificador de la fuente de financiamiento, un monto de financiamiento para transferir al banco financiero, institución de la fuente de financiamiento, o información de identificación personal.

8. El método según cualquiera de las reivindicaciones 1 a 7, en el que la aplicación de pago se proporciona al primer dispositivo informático mediante uno o más servidores asociados con el servicio de pago.

9. El método según cualquiera de las reivindicaciones 1 a 8, en el que determinar que el primer usuario es elegible para inscribirse en el servicio de pago comprende determinar que el primer usuario no se ha inscrito previamente en el servicio de pago.

10. El método según cualquiera de las reivindicaciones 1 a 9, en el que la fuente de financiación comprende un banco, una cooperativa de crédito, una asociación de ahorro y préstamo o una empresa de corretaje.

11. Un método, implementado por uno o más servidores de un servicio de pago, comprendiendo el método:

recibir datos de transacción asociados con una transacción entre un primer usuario como pagador y un segundo usuario como beneficiario, en donde los datos de la transacción incluyen una indicación de un monto de transacción;

determinar una comisión del beneficiario asociada con la transacción, en donde la comisión del beneficiario se basa al menos en parte en el monto de la transacción;

determinar un primer número de créditos proporcional al monto de la transacción y un segundo número de créditos proporcional a la comisión del beneficiario;

transferir el primer número de créditos o el monto de la transacción desde un perfil de usuario asociado con el primer usuario a un perfil de usuario asociado con el segundo usuario;

transferir el segundo número de créditos o la comisión del beneficiario del perfil de usuario asociado al segundo usuario al servicio de pago; y

transferir un tercer número de créditos del servicio de pago a un perfil de usuario asociado con un tercer usuario, en donde el tercer usuario refirió al primer usuario a la red de pago comunitaria, y en donde el tercer número de créditos comprende una primera parte del segundo número de créditos.

12. El método según la reivindicación 11, que comprende además:

transferir un cuarto número de créditos del servicio de pago a un perfil de usuario asociado con un cuarto usuario, en donde el primer usuario pagó al cuarto usuario en una transacción anterior que ocurrió inmediatamente antes de la transacción, y en donde el cuarto número de créditos comprende una segunda porción del segundo número de créditos.

13. Uno o más medios legibles por computador que tienen instrucciones legibles por computador que, cuando son ejecutadas por uno o más procesadores, hacen que uno o más procesadores realicen un método como se indica en la reivindicación 11 o en la reivindicación 12.

14. Un sistema que comprende:

uno o más procesadores; y

uno o más medios legibles por computador que incluyen instrucciones legibles por computadora que, cuando son ejecutadas por uno o más procesadores, configuran el sistema para realizar un método como se recita en la reivindicación 11 o en la reivindicación 12.

15. El método según cualquiera de las reivindicaciones 1 - 10, 11 ó 12, en el que la comisión del beneficiario comprende una comisión fija, un porcentaje del monto de la transacción o una combinación de una comisión fija y un porcentaje del monto de la transacción.

16. El método según cualquiera de las reivindicaciones 1 a 10 o 15, en el que al menos uno de la comisión del beneficiario, el primer porcentaje o el segundo porcentaje es un término de un acuerdo entre el servicio de pago y uno o más usuarios.

17. Uno o más medios legibles por computador que tienen instrucciones legibles por computador que, cuando son ejecutadas por uno o más procesadores, hacen que uno o más procesadores realicen un método como recita cualquiera de las reivindicaciones 1 a 10, 15 o 16.

18. Un sistema que comprende:

uno o más procesadores; y

uno o más medios legibles por computador que incluyen instrucciones legibles por computador que, cuando son ejecutadas por uno o más procesadores, configuran el sistema para realizar un método como recita cualquiera de las reivindicaciones 1 a 10, 15 o 16..

19. Un método que comprende:

almacenar, por uno o más servidores asociados con el servicio de pago y en un almacén de datos asociado con el servicio de pago, un perfil de usuario asociado con un usuario de una pluralidad de usuarios de un servicio de pago, en donde el perfil de usuario incluye información que identifica una financiación fuente del primer usuario;

recibir, por uno o más servidores asociados con el servicio de pago y desde la fuente de financiación, una cantidad de moneda;

actualizar, por uno o más servidores del servicio de pago, el perfil de usuario asociado con el primer usuario para agregar una cantidad de créditos equivalente a la cantidad de moneda, basándose al menos en parte en una proporción de créditos a moneda;

recibir, por uno o más servidores asociados con el servicio de pago y desde al menos uno de un primer dispositivo informático asociado con el primer usuario o un segundo dispositivo informático asociado con un segundo usuario a través de una instancia respectiva de la aplicación de pago que se ejecuta en el primer dispositivo informático o el segundo dispositivo informático, datos de transacción asociados con una transacción entre el primer usuario y el segundo usuario, en donde los datos de la transacción incluyen una indicación del monto de la transacción, en donde el primer usuario comprende un pagador y el tercer usuario comprende un beneficiario en la transacción;

como respuesta al menos en parte al recibo de los datos de la segunda transacción asociados con la segunda transacción, determinar, por parte de uno o más servidores asociados con el servicio de pago, una comisión del beneficiario basada al menos en parte en el monto de la segunda transacción y un cálculo predeterminado;

determinar, por parte de uno o más servidores asociados con el servicio de pago, un primer número de créditos equivalente al monto de la transacción y un segundo número de créditos equivalente a la comisión del beneficiario;

provocar, por uno o más servidores asociados con el servicio de pago, transferencias de valor que comprenden:

una transferencia del primer número de créditos desde el perfil de usuario asociado con el primer usuario a un perfil de usuario asociado con el segundo usuario;

una transferencia del segundo número de créditos desde el perfil de usuario asociado con el segundo usuario al servicio de pago;

una transferencia de créditos equivalente a un primer porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un usuario que refiere basada al menos en parte en la determinación de un usuario a que se refiere asociado con el perfil de usuario del primer usuario; y

una transferencia de créditos equivalente a un segundo porcentaje de la comisión del beneficiario del servicio de pago a un perfil de usuario asociado con un beneficiario inmediatamente anterior, basada al menos en parte en la determinación de un beneficiario inmediatamente anterior basado al menos en parte en los datos de la primera transacción, donde el beneficiario inmediatamente anterior comprende el segundo usuario.

20. Uno o más medios legibles por computador que tienen instrucciones legibles por computador en el mismo que, cuando son ejecutadas por uno o más procesadores, hacen que uno o más procesadores realicen un método como se describe en la reivindicación 19.

21. Un sistema que comprende:

uno o más procesadores; y

uno o más medios legibles por computador que incluyen instrucciones legibles por computador que, cuando son ejecutadas por uno o más procesadores, configuran el sistema para realizar un método como se recita en la reivindicación 19.

RESUMEN

Se describen técnicas para realizar una transacción electrónica utilizando un servicio de pago de comisión dividida. Las técnicas pueden incluir el uso de créditos basados en moneda, en los que los créditos también se proporcionan como comisiones a alguien que refiere al pagador y un beneficiario previo del pagador. Las técnicas pueden incluir uno o más de un servicio de pago que proporciona una aplicación de pago a un dispositivo de usuario de un usuario, lo que hace que una cuenta financiera se abra en nombre de un usuario en una institución financiera afiliada al servicio de pago, transfiriendo fondos de una fuente de fondeo de un usuario a la cuenta financiera, asociando un perfil de usuario de un usuario con créditos equivalentes a un saldo de la cuenta financiera, recibiendo datos de transacciones para una transacción, determinando una comisión de beneficiario para la transacción, transfiriendo moneda o créditos equivalentes al Monto de la transacción del pagador al beneficiario, dividiendo la comisión del beneficiario entre al menos el servicio de pago, el usuario que refiere y el beneficiario anterior, y distribuyendo moneda o créditos de conformidad