



- (51) **International Patent Classification:**
Not classified
- (21) **International Application Number:**
PCT/US2022/022208
- (22) **International Filing Date:**
28 March 2022 (28.03.2022)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/166,809 26 March 2021 (26.03.2021) US
- (71) **Applicant: KWIKCLICK, LLC** [US/US]; 876 East Vine Street, Murray, UT 84207 (US).
- (72) **Inventor: COOPER, Fred**; 876 East Vine Street, Murray, UT 84207 (US).
- (74) **Agent: PHAM, Tam, Thanh et al.**; Polsinelli LLP, Three Embarcadero Center, Suite 2400, San Francisco, CA 94111 (US).
- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

(54) **Title:** INCORPORATING ADDITIONAL BLOCKCHAINS INTO A MULTI-LEVEL MARKETING SYSTEM BLOCKCHAIN

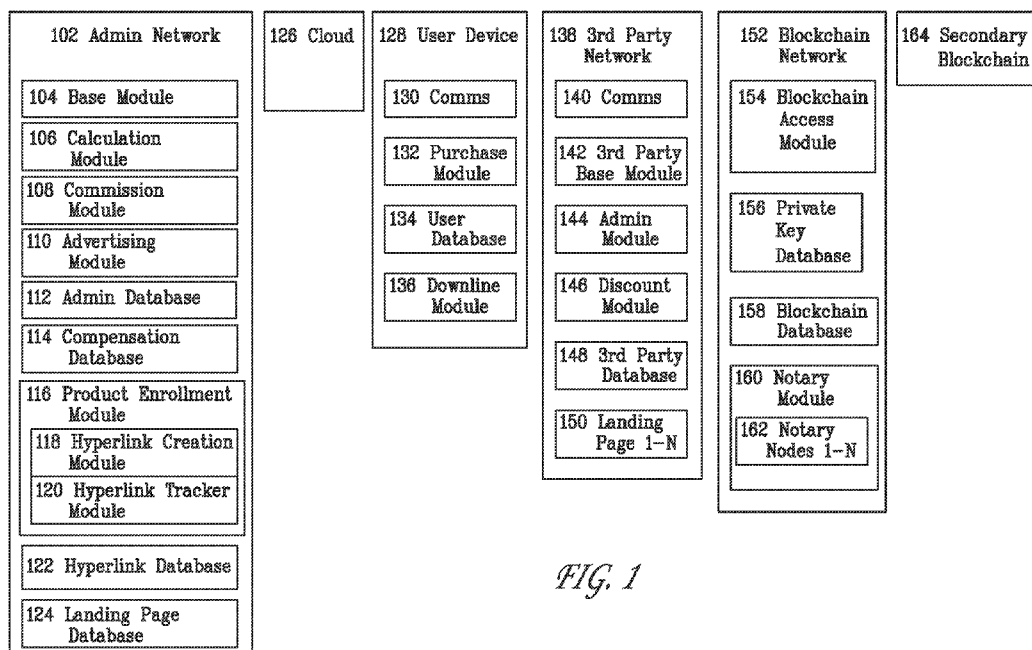


FIG. 1

(57) **Abstract:** MLMs that have begun to use blockchain technology to ensure the fidelity of data may run into problems in transporting data from one blockchain to another where the intermediate step is much more vulnerable to data loss, corruption, or outside attack than either of the two block chains.

WO 2022/204601 A2

**INCORPORATING ADDITIONAL BLOCKCHAINS
INTO A MULTI-LEVEL MARKETING SYSTEM BLOCKCHAIN**

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is related to and claims priority under 35 U.S.C § 119 from U.S. Provisional Application No. 63/166,809 filed March 26, 2021 entitled "A Method for Incorporating Additional Blockchains Into a Multi-Level Marketing System Blockchain," the entire contents of which are fully incorporated by reference herein for all purposes.

BACKGROUND OF THE INVENTION

1. Field Of The Disclosure

[0002] The present disclosure relates to incorporating additional blockchains into existing blockchain systems by tracking, gathering, and storing MLM data utilizing embedded links and blockchain technology. Aspects of the current disclosure involve compiling, processing, and transferring data sets across different blockchain systems.

2. Description of the Related Art

[0003] A multilevel marketing (MLM) system provides a structure for transactions conducted by some direct sales companies, which is used to encourage existing distributors to recruit new distributors who are paid a percentage of their recruits' sales. The recruits are the distributor's "downline." Distributors also make money through direct sales of products to customers. Amway, which sells health, beauty, and home care products, is an example of a well-known direct sales company that uses multilevel marketing.

[0004] Multilevel marketing is a legitimate business sales strategy. One problem is that some implementations of MLM may organize transactions in the structure of a pyramid tree. However, "pyramid schemes" that use money from new recruits to pay people at the top rather

than those who perform valid work or offer legitimate services are illegal. These pyramid schemes involve taking advantage of people by pretending to be engaged in legitimate multilevel or network marketing. Such illicit pyramid schemes may be identified by their greater focus on recruitment than on product sales. Another indicator in determining the legitimacy (or lack thereof) of a multilevel marketing company is whether it sells its products primarily to consumers or to its members who must recruit new members to buy their products. In the case of the former, the company is likely a legitimate multilevel marketer. In the case of the latter, it could be an illegal pyramid scheme.

[0005] Although each MLM company may specify its own specific financial compensation plan for the payout of any earnings to their respective participants, the common feature that is found across all MLMs is that the compensation plans theoretically payout to participants only from two potential revenue streams. The first is paid out from commissions of sales made by the participants directly to their own retail customers. The second is paid out from commissions based upon the wholesale purchases made by other distributors below the participant who have recruited those other participants into the MLM; in the organizational hierarchy of MLMs, these participants are referred to as one's downline distributors. MLM salespeople (distributors) are, therefore, expected to sell products directly to end-user retail consumers by means of relationship referrals and word of mouth marketing, but most importantly they are incentivized to recruit others to join the company's distribution chain as fellow salespeople so that these recruits can become downline distributors.

[0006] Currently, in order to join an MLM, there is an initiation fee, which is a barrier against those that just wish to refer to a single product they like. Current multi-level marketing (MLM) systems do not take full advantage of the internet and how consumers can influence other consumers to make purchases. Also, current MLM systems do not incorporate incentivizing users of a multi-level marketing system by offering a dynamic commission tree. In addition, there is no current MLM system that utilizes the money or funds dedicated to discounts or coupons to be reincorporated into a multi-level marketing system to incentivize consumers to make purchases and advertise the product that they purchased. Further, current

MLMs require that you be a known member in order to distribute a product and have no way to allow anonymous buyers to be part of a member's upline or to keep the commission data secure.

[0007] MLMs that have begun to use blockchain technology to ensure the fidelity of data may run into problems in transporting data from one blockchain to another where the intermediate step is much more vulnerable to data loss, corruption, or outside attack than either of the two blockchains.

[0008] Currently, there exists a need for a system that addresses these aforementioned issues that also allows for an additional level of security to an MLM system by distributing the data about the system across multiple systems so that no single intrusion can collect all the data about users of the system. The system further allows data to be transferred from existing blockchains while maintaining the fidelity of the data.

[0009] It is with these observations in mind, among others, that aspects of the present disclosure were conceived and developed.

SUMMARY OF THE CLAIMED INVENTION

[0010] Embodiments of the subject matter concern extracting extraction data from a first computing system database of a first computing system, the extraction data including at least one of product data that may be associated with a product and first user data that may be associated with a first user. The embodiment may request first blockchain data stored in a first blockchain system using the extraction data and a public key, the first blockchain data may be associated with at least one of the product and the first user, wherein access to the first blockchain system may be based on validating the public key and an associated private key. The embodiment may generate a set of processed data by processing the extraction data and the first blockchain data at the first computing system. The embodiment may send the set of processed data from the first computing system to at least one of the first blockchain system, a second computing system, and a second blockchain system and may store the set of processed data in the first computing system database.

[0011] Another embodiment involves the first blockchain data that may includes a commission schedule associated with at least one of the product and the first user. It may also include receiving at least one of the product data and the first user data at the first computing system and may determine a first discount level associated with at least one of the product, the first user, and a second user based on the product data, the first user data, and the commission schedule in the first blockchain data. The embodiment may send the first discount level from the first computing system to at least one of the first blockchain system, a second computing system, and a second blockchain system.

[0012] Another embodiment involves the first processed data being sent to the first blockchain system and it may also include receiving second blockchain data at the first computing system, wherein the second blockchain data may be associated with the set of processed data. The embodiment may compare at the first computing system, the set of processed data to the second blockchain data and may generate a first consensus based on the

comparison of the set of processed data and the second blockchain data, wherein the first consensus exceeds a predetermined threshold.

[0013] Another embodiment involves the first user data that may include follower data associated with a second user. The embodiment may also include generating a hyperlink, wherein a code associated with at least one of the product and the first user is embedded in the hyperlink and may send the hyperlink that includes the embedded code to at least one of the second computing system and a device of the second user.

[0014] Another embodiment involves identifying a commission associated with the first user that may be based on use of the hyperlink that includes the embedded code and a commission schedule within the first blockchain data.

[0015] Another embodiment involves the device of the second user that may use the hyperlink to initiate a purchase of the product, and may include associating the purchase with a discount level associated with at least one of the product, the first user, and the second user.

[0016] Another embodiment involves tracking click-through data of the hyperlink that may include the embedded code and may store the tracked click-through data in the first computing system database.

[0017] Another embodiment involves the first computing system which may communicate with the first blockchain system and the second computing system using a cloud network.

[0018] Another embodiment involves the first computing system that may share computing resources with the first blockchain system.

[0019] Another embodiment involves determining whether the product and the first user exist in the first computing system database based on at least one of the product data and the first user data. The embodiment may add at least one of the product data and the first user data to the first computing system database if at least one of the product data and the first user data is not found in the first computing system database.

[0020] Another embodiment involves at least one of the product data and the first user data which may include a commission schedule. The embodiment may include sending at least one of the product data and the first user data to the first blockchain system wherein the first

blockchain system may add at least one of the product data, the first user data, and the commission schedule to a blockchain database of the first blockchain system. The Embodiment may include generating the public key, the private key, and a pointer associated with the public key, wherein the pointer points to at least one of the product data, first user data, and the commission schedule stored within the blockchain database.

[0021] Another embodiment involves processing user and product data and may generate, based on commission data, a public key, a corresponding private key, and a pointer pointing to the private key. The embodiment may store the private key and the commission data in a block at a first computing system database. The embodiment may transfer the pointer and the public key to a second computing system and may allow the second computing system access to the commission data in the block at the first computing system database based on the use of the pointer and the public key by the second computing system.

[0022] Another embodiment involves access to the commission data that may be further based on adding a second block in the first computing system, the second block associated with a sale related to the commission data.

[0023] Another embodiment involves assigning a commission to a user based on the sale related to the commission data.

[0024] Another embodiment involves access to the commission data that may be further based on an advertisement that is sent to a plurality of user devices.

[0025] Another embodiment involves the advertisement that may include a hyperlink with an embedded code associated with the commission schedule.

[0026] Another embodiment involves tracking click-through data of the hyperlink that may include the embedded code and may store the tracked click-through data in the first computing system database.

[0027] Another embodiment involves access to the commission data may be further based on adding a second block in the first computing system, the second block may be associated with new user data associated with the commission data.

[0028] Another embodiment involves the new user data which may include new product data regarding a new product, the new product data including different commission data. The embodiment may receive the different commission data at a first computing system. The embodiment may generate, based on the different commission data, a different public key, a different private key, and a different pointer pointing to the different private key. The embodiment may store the different private key and the different commission data in the second block at the first computing system database. The embodiment may transfer the second pointer and the second public key to a third computing system and may allow the third computing system access to the different commission data in the first computing system database based on the different pointer and the different public key.

[0029] Another embodiment involves the first computing system communicating with the second computing system using a cloud network.

[0030] These and other embodiments are discussed in more detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] FIG. 1 illustrates an exemplary network environment in which a system for incorporating additional blockchains into a blockchain-based multilevel marketing system may be implemented.

[0032] FIG. 2 is a flowchart illustrating an exemplary method performed by a base module for incorporating blockchain data.

[0033] FIG. 3 is a flowchart illustrating an exemplary method performed by a calculation module for incorporating blockchain data.

[0034] FIG. 4 is a flowchart illustrating an exemplary method performed by a commission module for incorporating blockchain data.

[0035] FIG. 5 is a flowchart illustrating an exemplary method performed by an advertising module for incorporating blockchain data.

[0036] FIG. 6 illustrates an exemplary admin database associated with incorporating blockchain data.

[0037] FIG. 7 illustrates an exemplary compensation database associated with incorporating blockchain data.

[0038] FIG. 8 is a flowchart illustrating an exemplary method performed by a product enrollment module for incorporating blockchain data.

[0039] FIG. 9 illustrates an exemplary hyperlink creation module associated with incorporating blockchain data.

[0040] FIG. 10 is a flowchart illustrating an exemplary method performed by a hyperlink tracker module for incorporating blockchain data.

[0041] FIG. 11 illustrates an exemplary hyperlink database associated with incorporating blockchain data.

[0042] FIG. 12 illustrates an exemplary landing page database associated with incorporating blockchain data.

[0043] FIG. 13 is a flowchart illustrating an exemplary method performed by a purchase module for incorporating blockchain data.

[0044] FIG. 14 illustrates an exemplary user database associated with incorporating blockchain data.

[0045] FIG. 15 is a flowchart illustrating an exemplary method performed by a downline module for incorporating blockchain data.

[0046] FIG. 16 is a flowchart illustrating an exemplary method performed by a 3rd party base module for incorporating blockchain data.

[0047] FIG. 17 is a flowchart illustrating an exemplary method performed by an admin module for incorporating blockchain data.

[0048] FIG. 18 is a flowchart illustrating an exemplary method performed by a discount module for incorporating blockchain data.

[0049] FIG. 19 illustrates an exemplary 3rd party database associated with incorporating blockchain data.

[0050] FIG. 20 is a flowchart illustrating an exemplary method performed by a blockchain access module for incorporating blockchain data.

[0051] FIG. 21 illustrates an exemplary private key database associated with incorporating blockchain data.

[0052] FIGs. 22A and 22B illustrate an exemplary blockchain database associated with incorporating blockchain data.

[0053] FIG. 23 is a flowchart illustrating an exemplary method performed by a notary module for incorporating blockchain data.

DETAILED DESCRIPTION

[0054] FIG. 1 illustrates an exemplary network environment in which a system for incorporating additional blockchains into a blockchain-based multilevel marketing system may be implemented. This system may comprise an admin network 102, which includes an admin network base module 104, admin network calculation module 106, admin network commission module 108, admin network advertising module 110, admin network admin database 112, admin network vendor module, admin network compensation database 114, and an admin network hyperlink database 122.

[0055] In some embodiments, a distributor may refer to the non-salaried workforce selling the company's products or services, while the earnings of the participants are derived from a pyramid-shaped or binary compensation commission system. Further, a product may refer to an article or substance that is manufactured or refined for sale, and a service may refer to a system supplying a public need such as transport, communications, or utilities such as electricity or water. A service may be an act of dealing with a customer in a store, restaurant, or hotel by taking their orders, showing, or selling them goods. Additionally, a service may be work that someone does or time that someone spends working for an organization or a business that offers a particular type of help or work.

[0056] In some embodiments, an MLM tree or commission tree may refer to the payment structure in which commissions are given out. An MLM system may be referred to as network marketing, which may be a business model that depends on person-to-person sales by independent representatives, often working from home. A network marketing business may require independent representatives to build a network of business partners or salespeople to assist with lead generation and closing sales. In some embodiments, the end of life of the MLM tree may refer to the end of the MLM tree in which further participants in the MLM will not receive a commission, the commission tree starts up again, or the commission tree is restructured in some form. An existing MLM system may refer to currently existing or established companies that use the sales strategies to encourage existing distributors to recruit

new distributors who are paid a percentage of their recruits' sales. The admin network may include data security as well as an MLM algorithm and may be able to connect to the app store.

[0057] Data security may refer to the process of protecting data from unauthorized access and data corruption throughout its lifecycle. Data security may include data encryption, tokenization, and key management practices that protect data across all applications and platforms. The MLM algorithm may refer to the calculation performed using the compensation decay rate in order to calculate the commissions for downline participants. Connect app store may refer to connecting the app store to an MLM system.

[0058] In one embodiment of the present disclosure, an admin network base module 104, which may connect to a 3rd party network 3rd party base module 142, initiates the admin network vendor module, initiates the admin network calculation module 106, and initiates the product enrollment module 116. The 3rd party network 3rd party base module 142 is the module that interacts with the sellers and the admin network vendor module is the module that is loaded on the seller's computer system, at element 104. An admin network calculation module 106, which is initiated by the admin network base module 104, extracts the discount received from the 3rd party network 3rd party base module 142 and uses the pointer in the admin network admin database 112 to request the compensation plan or commission plan (e.g., its decay rate or commission structure so that each downline gets less and less commission) data from the blockchain network blockchain access module 154 in order to determine the commissions for the MLM (Multi-Level Marketing) tree and stores the data in the admin network compensation database 112.

[0059] In some embodiments, a commission may refer to a payment to someone who sells goods that are directly related to the amount sold, or a system that uses such payments. A compensation plan or a commission plan may refer to the decay rate of the commissions provided to the MLM system from the discount offered by the 3rd party, the 3rd party also selects the decay rate in order to calculate the commissions (e.g., calculated by the calculation module 106) offered to the first purchaser as well as the percentage offered to downline participants. An admin network commission module 108 is continuously polling for user data

(the user being the product purchaser/distributor) from the 3rd party network discount module 146, and once it receives the data, the admin network commission module 108 uses the data stored in the admin network compensation database 114 and the blockchain network blockchain database 158 to determine the downline and upline commissions for the other users (product purchasers/distributors) within the MLM tree, and then initiates the admin network advertising module 110.

[0060] An upline may refer to the MLM distributors that recruit salespeople to sell the products or services, while a downline may refer to the recruits the MLM distributors are able to secure as participants in the MLM system. In some embodiments, downline trees may go across country boundaries, which may be the ability to pay out commissions for an MLM tree even though the participants in the MLM tree may not reside in the same country. In this case, the commissions may be calculated (e.g., calculated by commission module 108) for the appropriate exchange rate to ensure participants are paid in their residing countries' currency in the correct amount. An admin network advertising module 110, which is initiated by the admin network commission module 108, may determine the user's (e.g., product purchasers/distributors) sphere of influence or contact list in order to provide the user's potential downline purchasers/distributors with a link, such as a hyperlink, and a code for the potential downline purchasers/distributors to become part of the MLM tree.

[0061] An admin network admin database 112, which is populated by the 3rd party network admin module 144 (e.g., associated with a seller of a product), may contain the data received from various 3rd parties (various sellers) that are part of the MLM. The data may contain an item ID, description of the item, the original cost of the item, the discount for the item, the cost of the item with the discount, a pointer to the compensation plan decay rate, or any combination thereof in various possible embodiments. An admin network compensation database 114, which may be created through the admin network calculation module 106 may contain pointers to the commissions for the different product purchasers/distributors. An admin network product enrollment module 116 may enroll products in the admin network landing page database 124 in a campaign so that a referral hyperlink can be created. The admin network

product enrollment module 116 may create a first referral code, which may be stored in the admin network hyperlink database 122.

[0062] An admin network hyperlink creation module 118 may create a hyperlink by combining the user-specific referral code in the hyperlink database 122 with the product-specific landing page from the landing page database 124. An admin network hyperlink tracker module 120 may track click-throughs of any hyperlinks, obtains the referral code in the hyperlink, and may generate a new entry in the hyperlink database 122 with a new referral code. An admin network hyperlink database 122 may contain item IDs, user IDs, parent codes, child codes, or any combination thereof in various possible embodiments. The code in the hyperlink that a person clicks on becomes the parent code for that entry, and the code generated for that person to refer others is the child code. An admin network landing page database 124, which may contain item IDs and a URL link to the associated landing page may be a webpage where the product can be purchased, and this information may be provided by the 3rd party.

[0063] The communication network (e.g., cloud 126) may be a wired and/or a wireless network. The communication network may be implemented using communication techniques such as Visible Light Communication (VLC), Worldwide Interoperability for Microwave Access (WiMAX), Long Term Evolution (LTE), Wireless Local Area Network (WLAN), Infrared (IR) communication, Public Switched Telephone Network (PSTN), Radio waves, and other communication techniques known in the art, or any combination thereof in various possible embodiments. The communication network, such as cloud 126, may allow ubiquitous access to shared pools of configurable system resources and higher-level services that can be rapidly provisioned with minimal management effort, often over Internet, and may rely on sharing of resources to achieve coherence and economies of scale, like a public utility, while third-party clouds enable organizations to focus on their core businesses instead of expending resources on computer infrastructure and maintenance.

[0064] A user (e.g., product purchasers/distributors) device 128 may be an electronic device such as a laptop, smartphone, tablet, computer, smart speaker, or the like. The user device comms 130 or communication network may be a wired and/or a wireless network. The

communication network may be implemented using communication techniques such as Visible Light Communication (VLC), Worldwide Interoperability for Microwave Access (WiMAX), Long Term Evolution (LTE), Wireless Local Area Network (WLAN), Infrared (IR) communication, Public Switched Telephone Network (PSTN), radio waves, and other communication techniques known in the art or any combination thereof in various possible embodiments. The communication network, such as user device comms 130, may allow ubiquitous access to shared pools of configurable system resources and higher-level services that can be rapidly provisioned with minimal management effort, often over Internet, and relies on sharing of resources to achieve coherence and economies of scale, like a public utility, while third-party clouds enable organizations to focus on their core businesses instead of expending resources on computer infrastructure and maintenance, at element 130.

[0065] A user device purchase module 132 may connect to the 3rd Party Network 138, may allow a purchaser/distributor to select an item and the associated link, may determine if the purchaser/distributor entered a code, and may send the link and code, if available, to the 3rd party network 138. A user device user database 134 may contain the user's (product purchasers/distributors) followers (e.g., sphere of influence) as well as the followers' contact information in order for them to receive commissions on their purchases. In some embodiments, a distributor contact list or followers may refer to the recruits or followers on social media that a distributor has secured to participate in their downline. In some embodiments, the User device user database 134 may include ratings and recommendations from the users. In some embodiments, rating and recommendation modules may refer to modules in which a company, entity, or person provides ratings and/or recommendations for products, goods, services or any combination thereof in various possible embodiments. A user device downline module 136 may continuously poll to receive the code and link from the admin network advertising module 110 to allow the purchaser/distributor to pass the code and link to the user's followers stored in the user device user database.

[0066] A 3rd party network 138 may be the various 3rd parties, such as retail stores including stores that sell product consumables, services, franchises, service networks, large box

stores, or e-commerce sites that allow e-commerce sales. It may include an e-commerce shopping cart that offers items to users at a discount, such as a product discount, in order to use MLM. In some embodiments, a franchise may refer to an authorization granted by a government or company to an individual or group enabling them to carry out specified commercial activities (e.g., providing a broadcasting service, or acting as an agent for a company's products). In some embodiments, product consumables may refer to goods by individuals and businesses that must be replaced regularly because they wear out or are used up. In some embodiments, service networks refer to a collection of people and information brought together on the internet to provide a specific service or achieve a common business objective, such as Angie's List.

[0067] In some embodiments, an e-commerce sale may refer to sales of goods and services where the business takes place over the internet, an extra-net, Electronic Data Interchange (EDI), other online systems, or any combination thereof in various possible embodiments. Payment may or may not be made online. Business in this context is defined as an order placed by the buyer or price and terms of sale negotiated. In some embodiments, an e-commerce shopping cart may refer to software used in E-commerce to assist visitors to make purchases online. Upon checkout, the software may calculate the total of the order, including shipping and handling, taxes, and other parameters the owner of the site has previously set. In some embodiments, a retailer may refer to a person or business that sells goods to the public in relatively small quantities for use or consumption rather than for resale. In some embodiments, product discounts may refer to a reduced price or something being sold at a price lower than that item is normally sold for. It is a reduction to a basic price for a good or service.

[0068] In some embodiments, large box stores may refer to a physically large retail establishment, usually, part of a chain of stores that offers a variety of products to its customers. The term sometimes refers, by extension, to the company that operates the store, and maybe referenced as a supercenter, superstore, megastore, etc. These stores achieve economies of scale by focusing on large sales volumes. Because volume is high, the profit margin for each product

can be lowered, which results in very competitively priced goods. The term “big-box” is derived from the store's physical appearance.

[0069] The 3rd party network comms 140, or communication network, may be a wired and/or a wireless network. The communication network may be implemented using communication techniques such as Visible Light Communication (VLC), Worldwide Interoperability for Microwave Access (WiMAX), Long Term Evolution (LTE), Wireless Local Area Network (WLAN), Infrared (IR) communication, Public Switched Telephone Network (PSTN), radio waves, other communication techniques known in the art, or any combination thereof in various possible embodiments. The communication network may allow ubiquitous access to shared pools of configurable system resources and higher-level services that can be rapidly provisioned with minimal management effort, often over Internet, and relies on sharing of resources to achieve coherence and economies of scale, like a public utility, while third-party clouds enable organizations to focus on their core businesses instead of expending resources on computer infrastructure and maintenance.

[0070] A 3rd party network 3rd party base module 142, which may initiate the 3rd party network admin module 144 may continuously poll for the user to select a link, receives the purchaser/distributor data, and may initiate the 3rd party network discount module 146. A 3rd Party Network Admin Module 144, which may be initiated from the 3rd party network base module 142, may connect to the admin network 138, may send the data for the items to be purchased, and returns to the 3rd party network 3rd party base module, at element 144. A 3rd party network discount module 146, which may be initiated from the 3rd party network 3rd party base module 142, may extract the link and compare it to the 3rd party network 3rd party database 148 to extract the corresponding discount for the selected item. The discount may be applied to the user order and may determine if the user entered a code or not. The order may then be processed, and the process returns to the 3rd party network base module 142.

[0071] A 3rd party network 3rd party database 148 may contain information about the item the 3rd party selects to offer at a discount for the admin network 102. In some embodiments, the 3rd party network 3rd party database 148 may include local media for the product or service. In

some embodiments, local media may refer to the various types of media, such as photos, videos, text, sounds, haptics, online product descriptions, etc., or any combination thereof in various possible embodiments for enhanced marketing. The 3rd party network 3rd party landing Page 150 may be at least one 3rd party landing page 150, which may be a webpage that people are directed to when they click on a referral hyperlink. Each item in the admin network landing page database 124 may have a separate landing page, or some or all may direct to the same landing page, or any combination thereof in various possible embodiments.

[0072] In order for prospective buyers to receive a discount, the landing page 150 may have the ability to receive a code, which may be entered manually by the prospective buyer, or automatically when the prospective buyer is directed to the landing page 150 (e.g., by a hyperlink with the code embedded within its URL).

[0073] A blockchain network 152 may be a provider of blockchain database management that provides management to businesses that need to store data securely in a distributed network. A blockchain network blockchain access module 154 may monitor for read or write requests being sent to the blockchain network 152, and may store commission data provided by the 3rd party network 138. Blockchain network blockchain access module 154 may provide that commission data to the admin network 102 and may create the public and private keys associated with each block. The blockchain network blockchain access module 154 may create a pointer to the block that is provided to the admin network 102, such that the admin network 102 may access the commission schedule data thereby not having the commission schedule data stored on the admin network 102.

[0074] A blockchain network private chain database 156 may store the private keys for the blockchain network blockchain database 158 along with the pointers to each block associated with each private key to the admin network 102. A blockchain network blockchain database 158 may store the commission data associated with each transaction completed through the admin network 102. In this regard, each parent-child relationship is its chain of blocks, creating a branching tree of blockchains as the number of transactions in each sphere of influence increases. Each new product enrolled by the 3rd party network 138 starts a new chain. Each

initial transaction may start a chain off of that block, and each transaction in the first sphere of influence may create its tree off of the initial purchase block. For each new transaction, the previous sphere's of influence commission data may be recorded to the new block.

[0075] A blockchain network notary module 160 may act as a gateway that is responsible for reading information on the blockchain network 152 and secondary blockchain 164 and may route the cross-chain transactions. In this regard, data from the secondary blockchain 164 may be stored and verified on the blockchain network 152. A set of blockchain network notary Nodes 162 may be computers that execute the blockchain verification protocol in order to verify that any given transaction within the Secondary Blockchain 164 is confirmed. The verified data may be transmitted to the blockchain network 152. A secondary blockchain 164 may be any digital record that utilizes blockchain protocol, a derivative protocol, or any combination thereof in various possible embodiments.

[0076] FIG. 2 is a flowchart illustrating an exemplary method performed by a base module for incorporating blockchain data. Step 200 begins with the admin network base module 104 polling (e.g., continuously, periodically, or and combination thereof) for the 3rd party network admin module 144 (e.g., sellers of products). The admin network base module 104 may connect to the 3rd party network admin module 144 at step 202. Once the admin network base module 104 connects to the 3rd party network admin module 144, the admin network base module 104 may initiate the admin network vendor Module at step 204. The admin network base module 104 may initiate the admin network calculation module 106 and the process returns to step 200, after completing step 206.

[0077] FIG. 3 is a flowchart illustrating an exemplary method performed by a calculation module for incorporating blockchain data. In step 300, the process begins with the admin network base module 104 initiating the admin network calculation module 106. The admin network calculation module 106 may extract the discount from the admin network admin database 112, which may be received from the 3rd party network 138 at step 302. The pointer associated with the identified product in the admin network admin database 112 may be used to send a request to the blockchain network blockchain access module 154 for the compensation

decay rate associated with the product at step 304. The blockchain network blockchain access module 154 may return the compensation decay rate retrieved from the blockchain network blockchain database 158 at step 306.

[0078] The admin network calculation module 106 may determine the commissions available to the downline users or the followers of the user that purchased the item. In some embodiments, the commissions may be calculated by using the discount on the item such that it may provide 50% of the discount to the first participant, and the remaining amount of the discount for the downline users at a 50% decay rate. For example, if the first user purchased an item that was originally \$59.00 discounted by 15%, the first user to make the purchase would receive \$3.32 or 50% of the discount. Any follower of the user who made the initial purchase would receive 50% of the remaining discount or 50% of \$3.32, and this may continue until there is only one cent left to pay out as a commission for the downline users at step 308. The admin network calculation module 106 may send the data to the blockchain network blockchain access module 154 to be written to the next block in the appropriate chain in the blockchain network blockchain database 158 at step 310. The admin network calculation module 106 may send a request to the user device purchase module 132 for the data stored in the user device user database 134 at step 312. The admin network calculation module 106 may receive the user device user database 134 data from the user device purchase module 132 at step 314. The admin network calculation module 106 may store the received data, as well as the code data, in the admin network hyperlink database 122 at step 316. The admin network calculation module 106 may return to the admin network base module 104 at step 318.

[0079] FIG. 4 is a flowchart illustrating an exemplary method performed by a commission module for incorporating blockchain data. In step 400, the process begins with the admin network commission module 108 polling (e.g., continuously, periodically, or any combination thereof) for the user data from the 3rd party network discount module 146 at step 400. The admin network commission module 108 may receive the user data from the 3rd party network discount module 146 at step 402. The admin network commission module 108 may determine if the user entered a code (e.g., manually or by activation of a hyperlink with an embedded code

resulting in triggered resolution of the hyperlink and embedded code by the network-connected user device) at step 404. If the user did enter a code, the admin network commission module 108 may extract the code the user entered at step 406. The extracted code may be looked up in the admin network compensation database 114, which may contain the various commissions for the different spheres of influence or potential product purchasers/distributors levels as well as the associated code for each of the different sphere of influence levels at step 408.

[0080] The admin network commission module 108 may identify the pointer to the appropriate record in the blockchain network blockchain database 158 for the code that was looked up in the admin network compensation database 114 at step 410. The pointer may direct a request to the blockchain network blockchain access module 154 for the commission data in the corresponding block at step 412. The blockchain network blockchain access module 154 may return the calculated commission, such as \$0.55 to the initial purchaser when a user in their first sphere of influence purchases cold medicine at step 414. The admin network commission module 108 may send the commission to the user (e.g., purchaser/distributor). In some embodiments, the admin network commission module 108 may track profits and payments as well as track taxes for users enrolled in the MLM system.

[0081] In some embodiments, track profits and payments may refer to the MLM system tracking the profits of the MLM and tracking the payments or commissions paid out to participants. In some embodiments, track taxes may refer to tracking the commissions provided to participants for tax purposes at step 416. Then, the admin network commission module 108 may compare the extracted code to the admin network hyperlink database 122, which may contain the list of users and the code sent to the user's followers at step 418. The admin network commission module 108 may extract the user id and sphere of influence or potential purchaser/distributor by using the extracted code at step 420. The admin network commission module 108 may compare the extracted sphere of influence or potential purchaser/distributor to the admin network compensation database 114 at step 422. The admin network commission module 108 may use the extracted sphere of influence to extract the corresponding commission from the admin network compensation database 114 at step 424. The admin network

commission module 108 may send the commission to an upline user at step 426. If the user did not enter a code, the admin network commission module 108 may initiate the admin network advertising module 110 at step 428.

[0082] FIG. 5 is a flowchart illustrating an exemplary method performed by an advertising module for incorporating blockchain data. In step 500, process begins with the admin network commission module 108 initiating the admin network advertising module 110 at step 500. The admin network advertising module 110 may determine if the user entered a code at step 502. If it is determined that the user entered a code, the code may be extracted at step 504. The admin network advertising module 110 may compare the extracted code to the admin network compensation database 114 at step 506. The admin network advertising module 110 may determine the user's sphere of influence level at step 508. If it is determined that the user did not enter a code, then the admin network advertising module 110 may designate the user as the first participant at step 510. Then, admin network advertising module 110 may extract the code for the next sphere of influence level or potential purchaser/distributor in order to provide the user's followers with a code that would allow them to join the Multi-Level Marketing tree at step 512. The admin network advertising module 110 may send the code and the link (e.g., a hyperlink with the embedded code) to the item to the user device downline module 136 at step 514.

[0083] FIG. 6 illustrates an exemplary admin database associated with incorporating blockchain data. The admin network admin database 112 may be populated by the 3rd party network admin module 144. The 3rd party network admin module 144 may send the item data to the admin network admin database 112. The admin network admin database 112 may contain the data collected from various 3rd parties enrolled in the multi-level marketing system. The admin network admin database 112 may contain the name of the 3rd party, the ID for the item, a description of the item, the original cost of the item, the discount provided by the 3rd party, the cost of the item with the discount, the compensation decay rate or how the downline commissions are calculated, or any combination thereof in various possible embodiments. In some embodiments, the admin network admin database 112 may include communicating

events with the downlines and uplines, dynamic incentives and rewards for a product, marketing materials, banking referrals, materials for suggestive selling, etc, or any combination thereof in various possible embodiments. In some embodiments, communicate events with downlines and uplines may refer to advertising events to participants in an MLM system.

[0084] In some embodiments, dynamic incentives and rewards for a product may refer to incentives or rewards that are updated (e.g., continuously, periodically, or any combination thereof) for a product. In some embodiments, marketing materials may refer to a means of marketing, advertising, or promotional materials developed by or for a license (or subject to licensee's approval) that promote the sale of the licensed product, including but not limited to, television, radio and online advertising, point of sale materials (e.g. posters, counter-cards), packaging advertising, print media and all audio or video media, or any combination thereof in various possible embodiments. In some embodiments, banking referrals may refer to a structured flow of collecting and organizing referrals for banks. Businesses who have been unsuccessful in a credit application process with a bank will be asked for their permission to have their financial information passed to designated finance platforms that can contact the business in a regulated time-frame. In some embodiments, suggestive selling may refer to a sales technique where an employee asks a customer if they would like to include an additional purchase or recommends a product that might suit the client.

[0085] FIG. 7 illustrates an exemplary compensation database associated with incorporating blockchain data. FIG. 7 displays the admin network compensation database 114, which may be created through the admin network calculation module 106. The admin network calculation module 106 may extract the discount and the compensation plan decay rate in order to calculate the downline commissions for additional users and the various sphere of influence levels. Those calculations may be stored in the blockchain network blockchain database 158, with a pointer to where the relevant block is stored in the admin network compensation database 114. The admin network compensation database 114 may contain the 3rd party, the ID for the item, the item, the compensation plan decay rate, the various sphere of influence levels, the commission for each sphere of influence level, the code to be used by the user's followers to enroll in the MLM

system, or any combination thereof in various possible embodiments. In some embodiments, the admin network compensation database 114 may include a lottery structure for how the commissions are paid to users or freelancers. In some embodiments, a lottery may refer to a process or thing whose success or outcome is governed by chance. A means of raising money by selling number tickets and giving prizes to the holders of the number drawn at random. In some embodiments, freelancers may refer to a person who works as a writer, designer, performer, or the like, selling work or services by the hour, day, job, etc. or any combination thereof in various possible embodiments, rather than working on a regular salary basis for one employer.

[0086] FIG. 8 is a flowchart illustrating an exemplary method performed by a product enrollment module for incorporating blockchain data. In step 800, the process begins with the admin network product enrollment module 116 being initiated admin module base module 104. The admin network product enrollment module 116 may extract the first item id from the admin module landing page database at step 802. The admin network product enrollment module 116 may check the admin network hyperlink database 122 for a matching Item ID. If a matching ID is found, the item has already been enrolled at step 804. The admin network product enrollment module 116 may determine if the item ID already exists in the admin network hyperlink database 122 at step 806. If the item ID does not already exist in the admin network hyperlink database 122, the admin network product enrollment module 116 may create a new entry in the admin network hyperlink database 122 with item ID at step 808. The admin network product enrollment module 116 may generate a child code using a random string generator. The generated string should be long enough that the chance of a string being generated twice is effectively zero. In some embodiments the admin network product enrollment module 116 may check to make sure no identical code exists in the admin network hyperlink database 122. In another embodiment, the child code may be mathematically created from the Item ID in a way that makes it unique at step 810. the admin network product enrollment module 116 may store the child code in the admin network hyperlink database 122 in the same entry as the item Id from step 808 at step 812. If the item ID already exists in the

Admin Network Hyperlink Database 122, the Admin Network Product Enrollment Module 116 may determine if there is another item ID in the admin network landing page database 124 that has not been extracted, and if not, skip to step 818 at step 814. If there is another item ID in the admin network landing page database 124 that has not been extracted, the admin network product enrollment module may extract 116 that item ID from admin network landing page database 124 and may return to step 804 at step 816. If there are no item IDs in the admin network landing page database 124 that have not been extracted, the admin network product enrollment module 116 may return to the admin network base module at step 818.

[0087] FIG. 9 illustrates an exemplary hyperlink creation module associated with incorporating blockchain data. In step 900, the process begins with the admin network hyperlink creation module 118 polling (e.g., continuously, periodically, or any combination thereof) for a new data entry in the admin network hyperlink database 122 at step 900. The admin network hyperlink creation module 118 may extract the item id and child code from the new entry in the admin network hyperlink database 122 at step 902. The admin network hyperlink creation module 118 may search the admin network landing page database 124 for the matching item ID at step 904. The admin network hyperlink creation module 118 may extract the landing page URL corresponding to the item ID from the admin network landing page database 124 at step 906. The admin network hyperlink creation module 118 may create a hyperlink from the landing page URL, the item ID, the child code, or any combination thereof in various possible embodiments, by concatenating them. In other embodiments, the form the hyperlink takes may be based on how the landing page API is designed and may vary between items, landing pages, and 3rd parties at step 908. The admin network hyperlink creation module 118 may modify the hyperlink to include code that calls the admin network hyperlink tracker module 120 by pinging a designated web address. In another embodiment, the hyperlink is modified to direct whoever clicks on it to a web portal that may interface with the admin network hyperlink tracker module 120 for an instant before being redirected to the landing page. In another embodiment, the hyperlink may direct whoever clicks on it to a webpage with a cookie that is downloaded quickly onto their web browser in order to track

them, and then are redirected to the landing page at step 910. The admin network hyperlink creation module 118 may store the created hyperlink in the admin network hyperlink database 122 in a new entry at step 912.

[0088] FIG. 10 is a flowchart illustrating an exemplary method performed by a hyperlink tracker module for incorporating blockchain data. In step 1000, the process begins with the admin network hyperlink tracker module 120 polling (e.g., continuously, periodically, or any combination thereof) for a call from a hyperlink. Normally, a hyperlink contains a URL, which directs a browser to an IP address based on a DNS server database. In this case, the URL may contain a protocol that calls the admin network hyperlink tracker module 120. In one embodiment, the admin network may host its own DNS server, and the URL contained in the hyperlink may be directed to the admin network DNS server in order to identify the IP address of the landing page and the admin network hyperlink tracker module 120 may poll for connections to the DNS server. In another embodiment, the URL in the hyperlink directs a browser to a web page, which may redirect the browser to the landing page, and the admin network hyperlink tracker module 120 polls for connections to the web page. In another embodiment the landing page has code that may identify the child code in the URL and may send that data to the admin network hyperlink tracker module 120 at step 1000. The admin network hyperlink tracker module 120 may read the child code and item ID from the URL in the hyperlink at step 1002. The admin network hyperlink tracker module 120 may create a new entry in the admin network hyperlink database 122 with the item ID obtained from the hyperlink at step 1004. the admin network hyperlink tracker module 120 may store the child code obtained from the Hyperlink as the parent code for the new entry at step 1006. The admin network hyperlink tracker module 120 may generate a new child code using a random string generator. The generated string should be long enough that the chance of a string being generated twice is effectively zero. In some embodiments the admin network hyperlink tracker module 120 may check to make sure no identical code exists in the admin network hyperlink database 122. In another embodiment, the child code may be mathematically created from the parent code in a way that makes it unique at step 1008. the admin network hyperlink tracker

module 120 may store the generated child code in the admin network Hyperlink Database 122 at step 1010. The admin network hyperlink tracker module 120 may prompt the user or a person who clicked the hyperlink who, but is not a user, to enter their user ID if they are a user with a pop-up window or tab in their browser. In another embodiment, the user may be identified via their IP address, MAC address, or both. In another embodiment, the 3rd party site may prompt the buyer for their user ID after a purchase is made. In another embodiment a browser-based add-on may automatically inform the admin network hyperlink tracker module of the user's ID. In another embodiment, a user ID may be randomly generated and later assigned to a user who claims the transaction (e.g., by scanning a receipt) at step 1012. The admin network hyperlink tracker module 120 may store the user ID in the admin network hyperlink database 122 at step 1014.

[0089] FIG. 11 illustrates an exemplary hyperlink database associated with incorporating blockchain data. The database may contain Item IDs, user IDs, parent codes, child codes, or any combination thereof in various possible embodiments. The code in the hyperlink that a person clicks on becomes the parent code for that entry. The code generated for that person to refer others is the child code, and a hyperlink may be generated by the admin network hyperlink creation module 118. If no user ID can be obtained, the database will have a null or not applicable ("N/A") under user ID for that entry. In another embodiment, a placeholder user ID may be generated so that the buyer/distributor may later be identified after the entry has been generated. Users who bought the item without being referred will not have a parent code but will still receive a child code so they may refer others.

[0090] FIG. 12 illustrates an exemplary landing page database associated with incorporating blockchain data. The database may contain item IDs and a URL link to the associated landing page, which may be the webpage where the product can be purchased. The information is provided by the 3rd party, the item IDs may be unique identifiers for each item. An item may be a product, service, or a product and service, in some embodiments multiple items may be combined into one campaign and the database may contain a campaign ID or any combination

thereof in various possible embodiments. The URL landing pages may be provided by the third party.

[0091] FIG. 13 is a flowchart illustrating an exemplary method performed by a purchase module for incorporating blockchain data. In step 1300, the process begins with the user device purchase module 132 may poll (continuously, periodically, or any combination thereof) for a request from the admin network calculation module 106 for the user device user database data. The user device purchase module 132 may receive a request from the admin network calculation module 106 for the user device user database data at step 1302. Then, the user device purchase module 132 may send the user device user database data to the admin network calculation module 106 at step 1304. The user device purchase module 132 may connect to the 3rd party network base module 142 at step 1306. The user may select an item from the 3rd party network at step 1308. The user may select the link from the 3rd party network 138 at step 1310. The user device purchase module 132 may determine if the user entered a code, if not the process continues to step 1310 at step 1312. If it is determined the user entered a code, the user device purchase module 132 may send the code to the 3rd party network base module 142 at step 1314. The user device purchase module 132 may send the user data to the 3rd party network base module 142. In some embodiments, the user data may be data to purchase the item such as name, address, billing information, etc, or any combination thereof in various possible embodiments. In some embodiments, the user data sent to the 3rd party network base module 142 may include information from a credit card system. In some embodiments, a credit card system may refer to a system that allows cardholders to borrow funds with which to pay for goods and services with the condition that the cardholders pay back the borrowed funds, plus interest, as well as any additional agreed-upon charges at step 1316.

[0092] FIG. 14 illustrates an exemplary user database associated with incorporating blockchain data. The figure displays the user device user database 134, which may contain the user's followers as well as the follower's information. In some embodiment, the user's followers are par of the user's sphere of influence. The user device user database 134 may contain the user's ID, the followers' user's ID, the code provided to the followers, the follower's e-mail

address, the follower's phone number, the follower's address, or any combination thereof in various possible embodiments. In some embodiments, the user device user database 134 may contain the follower's social media information such as Twitter, Instagram, Facebook, etc. In some embodiments, the user database 134 may contain social media plug-ins for enhanced marketing or social media aggregators. In some embodiments, social media plug-ins for enhanced marketing may refer to sharing content with other people through social media platforms, for example, a share or like button. In some embodiments, the User Device User database 134 may contain payment information such as bank accounts, credit card information, PayPal, Venmo, etc, or any combination thereof in various possible embodiments. In some embodiments, a user ID or ID Enrollment may refer to a participant enrolling in an MLM product tree through an ID, which is unique to each participant in the MLM system. In some embodiments, social media aggregators may refer to a tool that allows a person to collate posts and updates from many different social media feeds. It creates an organized view of social posts on a specific topic and are often used to display user-generated content on live social walls.

[0093] FIG. 15 is a flowchart illustrating an exemplary method performed by a downline module for incorporating blockchain data. In step 1500, the process begins with the user device downline module 136 polling (e.g., continuously, periodically, or any combination thereof) for the code and the link from the admin network advertising module 110. The user device downline module 136 may receive the code and the link from the admin network advertising module 110 at step 1502. The user device downline module 136 may select the first follower in the user device user database 134 at step 1504. The user device downline module 136 may extract the followers' contact information stored in the user device user database 134 at step 1506. Then, the user device downline module 136 may send the code and link to the follower's contact information. In some embodiments, the code and link may be shared on social media sites, such as Twitter, Instagram, Facebook, etc., for the user's followers to receive the code and link at step 1508. The user device downline module 136 may determine if there are more followers remaining in the user device user database 134 at step 1510. If it is determined that there are more followers stored in the user device user database 134, the user device downline

module 136 may select the next user stored in the user device user database 134 and the process may return to step 1506 at step 1512. If the user device downline module 136 determines that there are no more followers remaining in the user device user database 134, then the process ends at step 1514.

[0094] FIG. 16 is a flowchart illustrating an exemplary method performed by a 3rd party base module for incorporating blockchain data. In step 1600, the process begins with the 3rd party network base module 142 initiating the 3rd party network admin module 144 at step 1600. Then, the 3rd party network base module 142 may poll (e.g., continuously, periodically, or any combination thereof) for the user to select the link at step 1602. The user may select the link on the 3rd party network 138 at step 1604. the 3rd party network base module 142 may receive the user data from the user device purchase module 132. In some embodiments, the user data may be data to purchase the item such as name, address, billing information, etc., or any combination thereof in various possible embodiments at step 1606. The 3rd party network base module 142 may initiate the 3rd party network discount module 146 at step 1608.

[0095] FIG. 17 is a flowchart illustrating an exemplary method performed by an admin module for incorporating blockchain data. In step 1700, the process begins with the 3rd party network admin module 144 being initiated by the 3rd party network base module 142. The 3rd party network admin module 144 may connect to the admin network base module 104 at step 1702. Then, the 3rd party network admin module 144 may send the 3rd party network 3rd party database 148 to the admin network landing page database 124 and the admin network admin database 112. The URL data may go into the admin network landing page database 124 and the product information, price, and discount may be sent to the admin network admin database 112 at step 1704. The compensation decay rate and topline commission data may be sent to the blockchain network blockchain module to be stored in the blockchain network blockchain database 158 at step 1706. The 3rd party network admin module 144 may return to the 3rd party network base module 142 at step 1708.

[0096] FIG. 18 is a flowchart illustrating an exemplary method performed by a discount module for incorporating blockchain data. In step 1800, the process begins with the 3rd party

network base module 142 initiating the 3rd party network discount module 146. The 3rd party network discount module 146 may extract the link received from the user through the process described in the 3rd party network base module 142 at step 1802. Then, the 3rd party network discount module 146 may compare the extracted link to the 3rd party network 3rd party database 148 at step 1804. The 3rd party network discount module 146 may extract the corresponding discount using the extracted link from the 3rd party network 3rd party database 148 at step 1806. The 3rd party network discount module 146 may apply the extracted discount to the user's order at step 1808. The 3rd party network discount module 146 may determine if the user entered a code at step 1810. If it is determined that the user did not enter a code, the 3rd party network discount module 146 may send the user data to the admin network Advertising module 110 at step 1812. If it is determined that the user entered a code, the 3rd party network discount module 146 may send the code and the user data to the admin network commission module 108 at step 1814. Then, the 3rd party network discount module 146 may process the user's order at step 1816, and the 3rd party network discount module 146 may then return to the 3rd party network base module 142 at step 1818.

[0097] FIG. 19 illustrates an exemplary 3rd party database associated with incorporating blockchain data. The 3rd party database 148 may contain the information about the items enrolled in the MLM system as well as the link created by the admin network vendor module. The 3rd Party Network 3rd Party Database 148 may contain the item ID, the item, the original cost of the item, the discount provided by the 3rd party for the item, the cost of the item with the discount, the compensation plan decay rate which the 3rd party enters, or any combination thereof in various possible embodiments. In some embodiments, the 3rd party network 3rd party database 148 may include the rates of exchange for product returns, marketing materials, airline sky miles, etc, or any combination thereof in various possible embodiments. In some embodiments, product returns may refer to a process in which a customer or consumer takes previously purchased product, merchandise, or goods back to the retailer, and in turn receive a refund in the original form of payment, exchange for another item (e.g., identical or different), or store credit. In some embodiments, the information about the product or service may be

advertisements to the network, or as seen on TV sales. Advertisements to the network may refer to the advertisement provided to the MLM system from the 3rd party offering a product, good, or service. In some embodiments, as seen on TV sales may refer to a generic nameplate for products advertised on television in the United States for direct-response mail-order through a toll-free telephone number. In some embodiments, marketing materials may refer to a means of marketing, advertising, or promotional materials, or for a license (or subject to licensee's approval) that promote the sale of the licensed product, including but not limited to, television, radio and online advertising, point of sale materials (e.g. posters, counter-cards), packaging advertising, print media and all audio or video media, or any combination thereof in various possible embodiments. In some embodiments, airline sky miles may refer to a loyalty program offered by airlines and/or credit cards. Typically, consumers accumulate a set amount of miles based on how much is spent on a ticket or a credit card and are also known as frequent flyer miles or travel points.

[0098] FIG. 20 is a flowchart illustrating an exemplary method performed by a blockchain access module for incorporating blockchain data. In step 2000, the process begins with the blockchain network blockchain access module 154 polling (e.g., continuously, periodically, or any combination thereof) for new requests to either write information to or read information from the blockchain network blockchain database 158 from either the admin network calculation module 106 or the 3rd party network admin module 144. If there is no request, the module returns to step 2000. The blockchain network blockchain access module 154 may determine if the request is to read data from or write data to the blockchain network blockchain database 158 at step 2002. If it is a request from the 3rd party network admin module 144 to write data to the blockchain network blockchain database 158, a new block is added to the blockchain to start a new tree based on the product data provided at step 2004. The received data may be written to the newly created block and the public and private keys for that block, and the pointer associated with the public key, may be created at step 2006. The pointer associated with the public key for the newly created block, and the product associated with that block, may be sent to the admin network admin database 112 at step 2008. The private key

associated with the newly created block, along with the pointer provided to the admin network admin database 112, may be written to the blockchain network private key database 156 at step 2010. If it is a request from the admin network calculation module 106, the blockchain network blockchain access module 154 may identify the private key associated with the pointer in the blockchain network private key database 156 and retrieve the associated commission data, such as \$0.55 to the initial purchaser for each of the purchases made by people in his first sphere of influence at step 2012. The commission data may be sent to the admin network calculation module 106 and the blockchain access module 154 may return to polling for requests at step 2014.

[0099] FIG. 21 illustrates an exemplary private key database associated with incorporating blockchain data. The database may contain the private key connected with each pointer provided by the blockchain network blockchain access module 154 to the admin network admin 112 and commission databases 108. This allows the blockchain network 138 to provide its level of security, separate from the security put on the admin network 102, on the commission data so that an intruder would need to get past both network's security protocols in order to get the commission information as the user data is not visible to the blockchain network 152.

[0100] FIGs. 22A and 22B illustrate an exemplary blockchain database associated with incorporating blockchain data. The database may contain data about products associated with an MLM distribution network. The data, in this example represents commission data, in the blockchain network blockchain database 158 may be provided by the 3rd party network 138 who is distributing their products through the MLM. Each chain begins with a product that is being distributed. A tree comes off of this initial block for each initial purchaser (someone who is participating in the MLM but not utilizing a discount code provided by another member) that buys that product. A tree will branch off of each initial purchaser's block for each sale of the product to someone in the initial purchaser's first sphere of influence. This expanding tree of blockchains will continue as purchasers get in the initial purchaser's second, third, or more spheres of influence. Each subsequent block in the chain will store the commission data for each of the previous blocks in the chain. So, the fourth sphere of influence (blocks 11-13) will have, in

this example, the \$0.55 commission paid to the purchaser in sphere 3 (blocks 8-10), the \$0.27 paid to the purchaser in sphere 2, the \$0.14 paid to the purchaser in sphere 1 (blocks 5-7) and the \$0.07 paid to the initial purchaser. An example of a visual representation of the database is shown in FIG. 22A. Each block in the database will have the public key associated with the block that, when prompted by the blockchain network blockchain access module 154, may provide either the ability for the 3rd party network admin module 144 to write new product and commission structure data to the blockchain network blockchain database 158, or for the admin network calculation 106 and commission modules 108 to access the sections of the blockchain that are necessary for a given commission calculation. The arrow through the expanding commission data represents the total commission paid to a single purchaser (in this example the initial purchaser) in this tree of their MLM distribution, as shown in figure 22B.

[0101] Functioning of the notary module will now be explained with reference to FIG. 23. FIG. 23 is a flowchart illustrating an exemplary method performed by a notary module for incorporating blockchain data. In step 2300, the process begins with the blockchain network notary module 160 polling (e.g., continuously, periodically, or any combination thereof) for data, which may be in the form of blocks, from the blockchain network notary Nodes 1-N 162. Multiple instances of the blockchain network notary module 160 may be polling simultaneously from each blockchain network notary node 162 or non-notary nodes that may exist in the blockchain network 152. The blockchain network notary module 160 may determine if there is a consensus among the blockchain network notary nodes 162 on the data, either in a block or as a whole. Consensus may be an agreement between more than 50% of all blockchain network notary nodes 162, 2/3rds of all blockchain network notary nodes, or some other threshold based on the required level of fidelity in various possible embodiments. The Byzantine fault tolerance (BFT) algorithm is generally used for notary services, but other algorithms, such as RAFT, Istanbul BFT, Simplified BFT, Redundant BFT, Crash Fault Tolerant, any other algorithm, or any combination of algorithms may be used in various possible embodiments at step 2302. If there is a consensus, The blockchain network notary module 160 may record verified blocks or blocks of data in the blockchain network . This step of the module may occur simultaneously on one or

more nodes within the blockchain network 152 at step 2304. The blockchain network notary module 160 may return to polling for transaction data from the blockchain network notary nodes 162 at step 2306.

[0102] The functions performed in the processes and methods may be implemented in differing order. Furthermore, the outlined steps and operations are only provided as examples, and some of the steps and operations may be optional, combined into fewer steps and operations, or expanded into additional steps and operations without detracting from the essence of the disclosed embodiments.

[0103] Various embodiments of the disclosure are discussed in detail above. While specific implementations are discussed, it should be understood that this is done for illustration purposes only. A person skilled in the relevant art will recognize that other components and configurations may be used without parting from the spirit and scope of the disclosure. Thus, the previous description and drawings are illustrative and are not to be construed as limiting. Numerous specific details are described to provide a thorough understanding of the disclosure. However, in certain instances, well-known or conventional details are not described in order to avoid obscuring the description. References to one or more embodiments in the present disclosure can be references to the same embodiment or any embodiment; and, such references mean at least one of the embodiments.

[0104] Reference to "one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the disclosure. The appearances of the phrase "in one embodiment" in various places in the specification are not necessarily all referring to the same embodiment, nor are separate or alternative embodiments mutually exclusive of other embodiments. Moreover, various features are described, which may be exhibited by some embodiments and not by others.

[0105] The terms used in this specification generally have their ordinary meanings in the art, within the context of the disclosure, and in the specific context where each term is used. Alternative language and synonyms may be used for any one or more of the terms discussed

herein, and no special significance should be placed upon whether or not a term is elaborated or discussed herein. In some cases, synonyms for certain terms are provided. A recital of one or more synonyms does not exclude the use of other synonyms. The use of examples anywhere in this specification including examples of any terms discussed herein is illustrative only and is not intended to further limit the scope and meaning of the disclosure or of any example term. Likewise, the disclosure is not limited to various embodiments given in this specification.

[0106] Without intent to limit the scope of the disclosure, examples of instruments, apparatus, methods and their related results according to the embodiments of the present disclosure are given above. Note that titles or subtitles may be used in the examples for convenience of a reader, which in no way should limit the scope of the disclosure. Unless otherwise defined, technical and scientific terms used herein have the meaning as commonly understood by one of ordinary skill in the art to which this disclosure pertains. In the case of conflict, the present document, including definitions will control.

[0107] Additional features and advantages of the disclosure were set forth in the description, and in part are obvious from the description, or can be learned by practice of the herein disclosed principles. The features and advantages of the disclosure can be realized and obtained by means of the instruments and combinations particularly pointed out in the appended claims. These and other features of the disclosure will become more fully apparent from the appended claims or can be learned by the practice of the principles set forth herein.

CLAIMS

WHAT IS CLAIMED IS:

1. A method for securely processing user and product data, the method comprising:
 - extracting extraction data from a first computing system database of a first computing system, the extraction data including at least one of product data associated with a product and first user data associated with a first user;
 - requesting first blockchain data stored in a first blockchain system using the extraction data and a public key, the first blockchain data associated with at least one of the product and the first user, wherein access to the first blockchain system is based on validating the public key and an associated private key;
 - generating a set of processed data by processing the extraction data and the first blockchain data at the first computing system;
 - sending the set of processed data from the first computing system to at least one of the first blockchain system, a second computing system, and a second blockchain system; and
 - storing the set of processed data in the first computing system database.

2. The method of claim 1, wherein the first blockchain data includes a commission schedule associated with at least one of the product and the first user, the method further comprising:
 - receiving at least one of the product data and the first user data at the first computing system;
 - determining a first discount level associated with at least one of the product, the first user, and a second user based on the product data, the first user data, and the commission schedule in the first blockchain data; and
 - sending the first discount level from the first computing system to at least one of the first blockchain system, a second computing system, and a second blockchain system.

3. The method of claim 1, wherein the first processed data is sent to the first blockchain system, the method further comprising:
 - receiving second blockchain data at the first computing system, wherein the second blockchain data is associated with the set of processed data;
 - comparing, at the first computing system, the set of processed data to the second blockchain data; and
 - generating a first consensus based on the comparison of the set of processed data and the second blockchain data, wherein the first consensus exceeds a predetermined threshold.
4. The method of claim 1, wherein the first user data includes follower data associated with a second user, the method further comprising:
 - generating a hyperlink, wherein a code associated with at least one of the product and the first user is embedded in the hyperlink; and
 - sending the hyperlink that includes the embedded code to at least one of the second computing system and a device of the second user.
5. The method of claim 4, further comprising identifying a commission associated with the first user based on use of the hyperlink that includes the embedded code and a commission schedule within the first blockchain data.
6. The method of claim 4, wherein the device of the second user uses the hyperlink to initiate a purchase of the product, and further comprising associating the purchase with a discount level associated with at least one of the product, the first user, and the second user.
7. The method of claim 4, further comprising:
 - tracking click-through data of the hyperlink that includes the embedded code; and
 - storing the tracked click-through data in the first computing system database.

8. The method of claim 1, wherein the first computing system communicates with the first blockchain system and the second computing system using a cloud network.
9. The method of claim 8, wherein the first computing system shares computing resources with the first blockchain system.
10. The method of claim 1, further comprising:
 - determining whether the product and the first user exist in the first computing system database based on at least one of the product data and the first user data; and
 - adding at least one of the product data and the first user data to the first computing system database if at least one of the product data and the first user data is not found in the first computing system database.
11. The method of claim 13, wherein at least one of the product data and the first user data includes a commission schedule, the method further comprising sending at least one of the product data and the first user data to the first blockchain system, wherein the first blockchain system:
 - adds at least one of the product data, the first user data, and the commission schedule to a blockchain database of the first blockchain system; and
 - generates the public key, the private key, and a pointer associated with the public key, wherein the pointer points to at least one of the product data, first user data, and the commission schedule stored within the blockchain database.

12. A method for securely processing user and product data, the method comprising:
 - generating, based on commission data, a public key, a corresponding private key, and a pointer pointing to the private key;
 - storing the private key and the commission data in a block at a first computing system database;
 - transferring the pointer and the public key to a second computing system; and
 - allowing the second computing system access to the commission data in the block at the first computing system database based on the use of the pointer and the public key by the second computing system.
13. The method of claim 12, wherein access to the commission data is further based on adding a second block in the first computing system, the second block associated with a sale related to the commission data.
14. The method of claim 13, further comprising assigning a commission to a user based on the sale related to the commission data.
15. The method of claim 12, wherein access to the commission data is further based on an advertisement that is sent to a plurality of user devices.
16. The method of claim 15, wherein the advertisement includes a hyperlink with an embedded code associated with the commission schedule.
17. The method of claim 16, further comprising
 - tracking click-through data of the hyperlink that includes the embedded code; and
 - storing the tracked click-through data in the first computing system database.

18. The method of claim 12, wherein access to the commission data is further based on adding a second block in the first computing system, the second block associated with new user data associated with the commission data.

19. The method of claim 18, wherein the new user data includes new product data regarding a new product, the new product data including different commission data, the method further comprising:

receiving the different commission data at a first computing system;

generating, based on the different commission data, a different public key, a different private key, and a different pointer pointing to the different private key;

storing the different private key and the different commission data in the second block at the first computing system database;

transferring the second pointer and the second public key to a third computing system;

and

allowing the third computing system access to the different commission data in the first computing system database based on the different pointer and the different public key.

20. The method of claim 12, wherein the first computing system communicates with the second computing system using a cloud network.

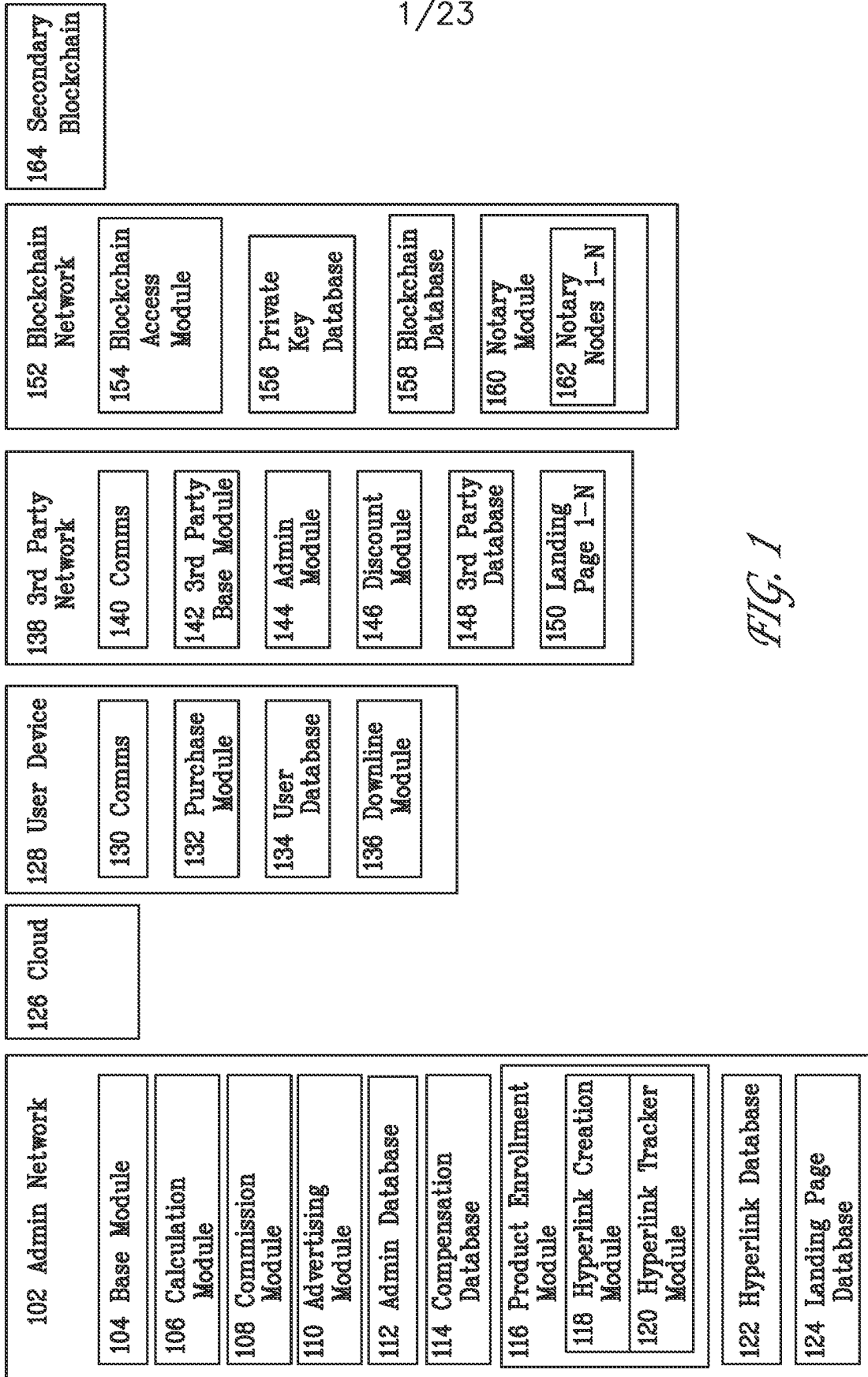


FIG. 1

2/23

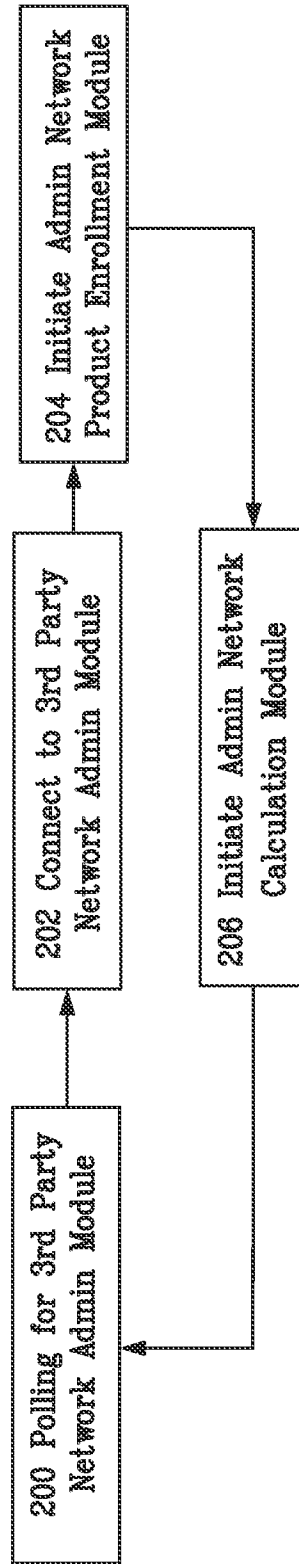


FIG. 2

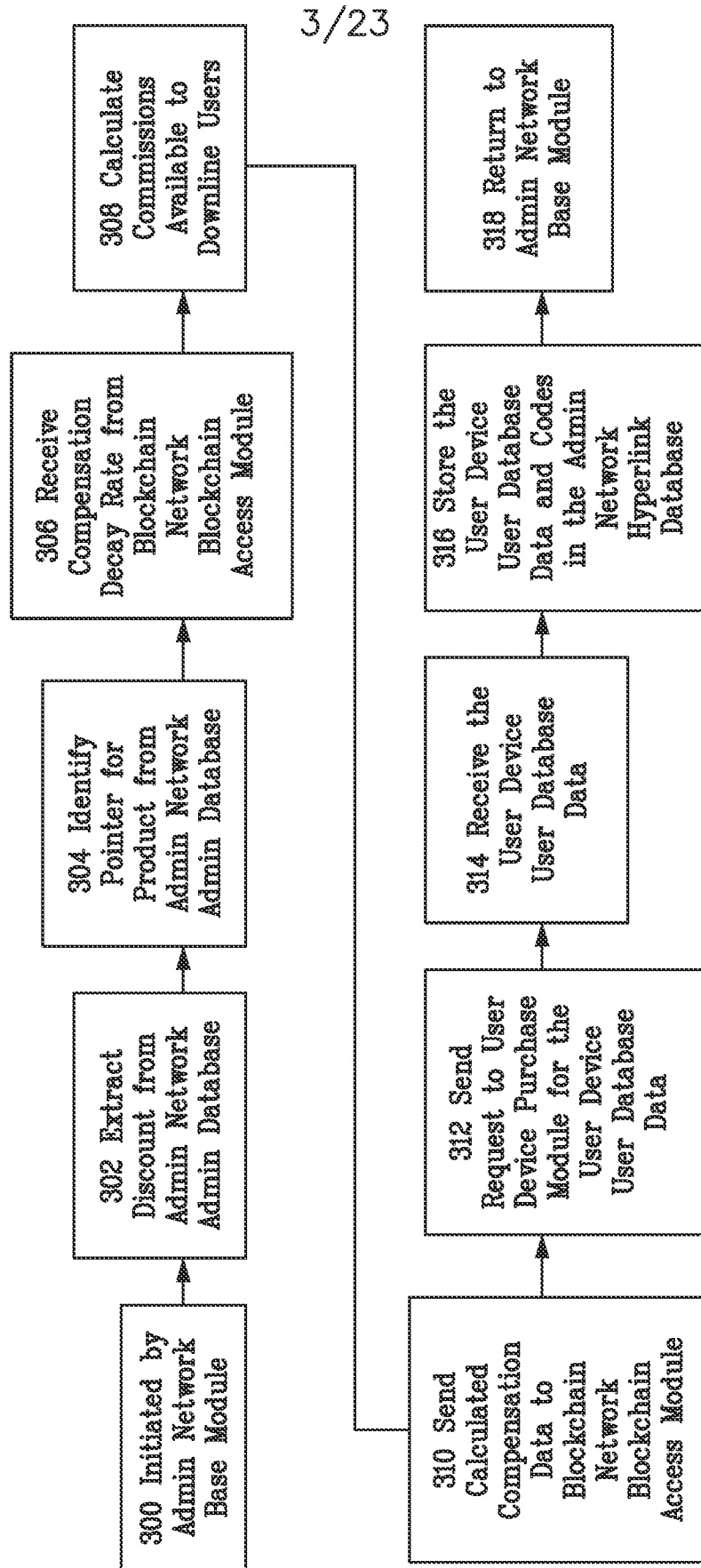


FIG. 3

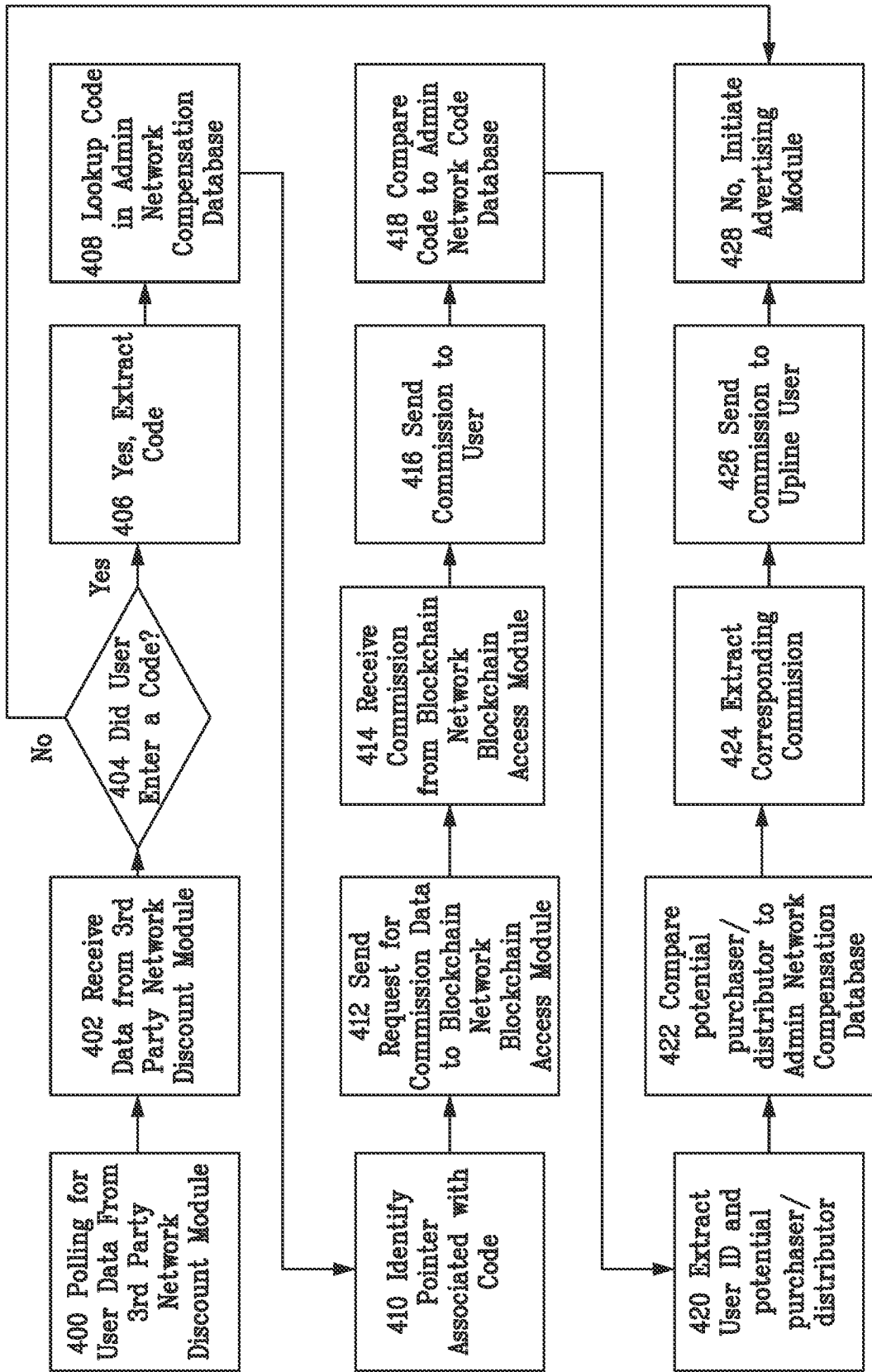


FIG. 4

5/23

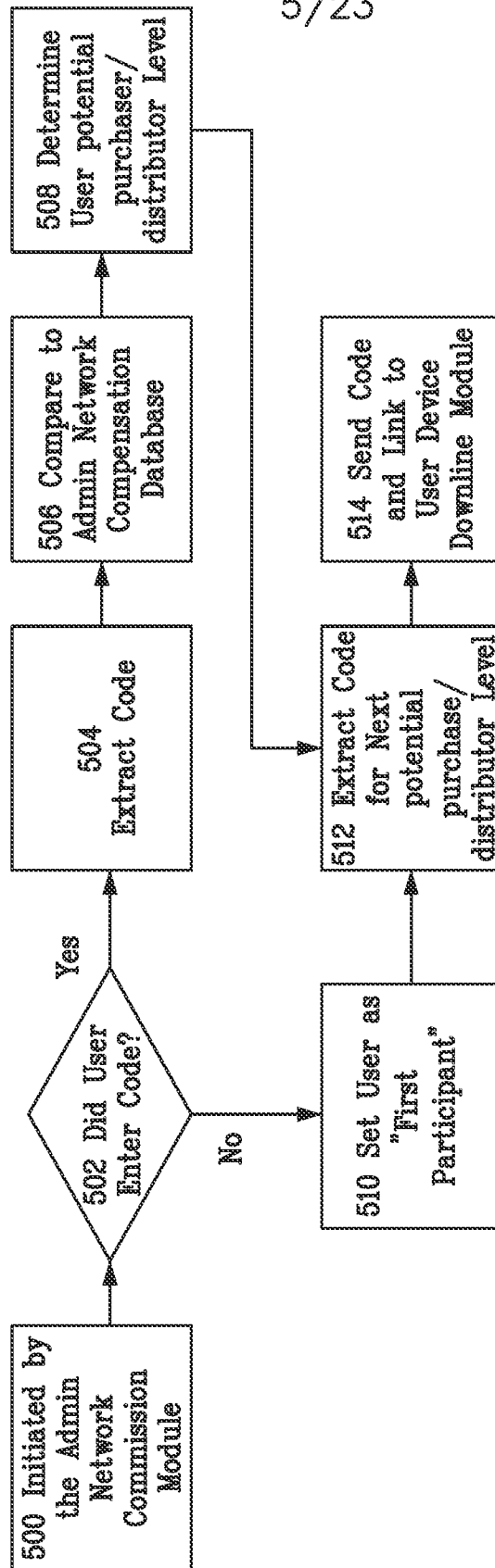


FIG. 5

6/23

3rd Party	ID	Item	Original Cost	Discount	Discount Cost	Pointer
Home Depot	654123	Drill	\$59.00	15%	\$50.15	654123--POINT1
Home Depot	789654	Table Saw	\$119.00	10%	\$107.10	654123--POINT2
Furniture Store	123789	Couch	\$999.00	10%	\$899.10	654123--POINT3
Pharmacy	456812	Cold Medicine	\$25.00	5%	\$23.75	654123--POINT4
~	~	~	~	~	~	~
~	~	~	~	~	~	~
~	~	~	~	~	~	~

FIG. 6

7/23

Srd Party	ID	Item	Sphere of Influence Level	Pointer	Code/Link
Vonn's	654123	Cold Medicine	First Participant	654123-POINT1	N/A
Vonn's	654123	Cold Medicine	2	654123-POINT2	654123-S012
Vonn's	654123	Cold Medicine	3	654123-POINT3	654123-S013
Vonn's	654123	Cold Medicine	4	654123-POINT4	654123-S014
~	~	~	~	~	~
~	~	~	~	~	~
~	~	~	~	~	~

FIG. 7

8/23

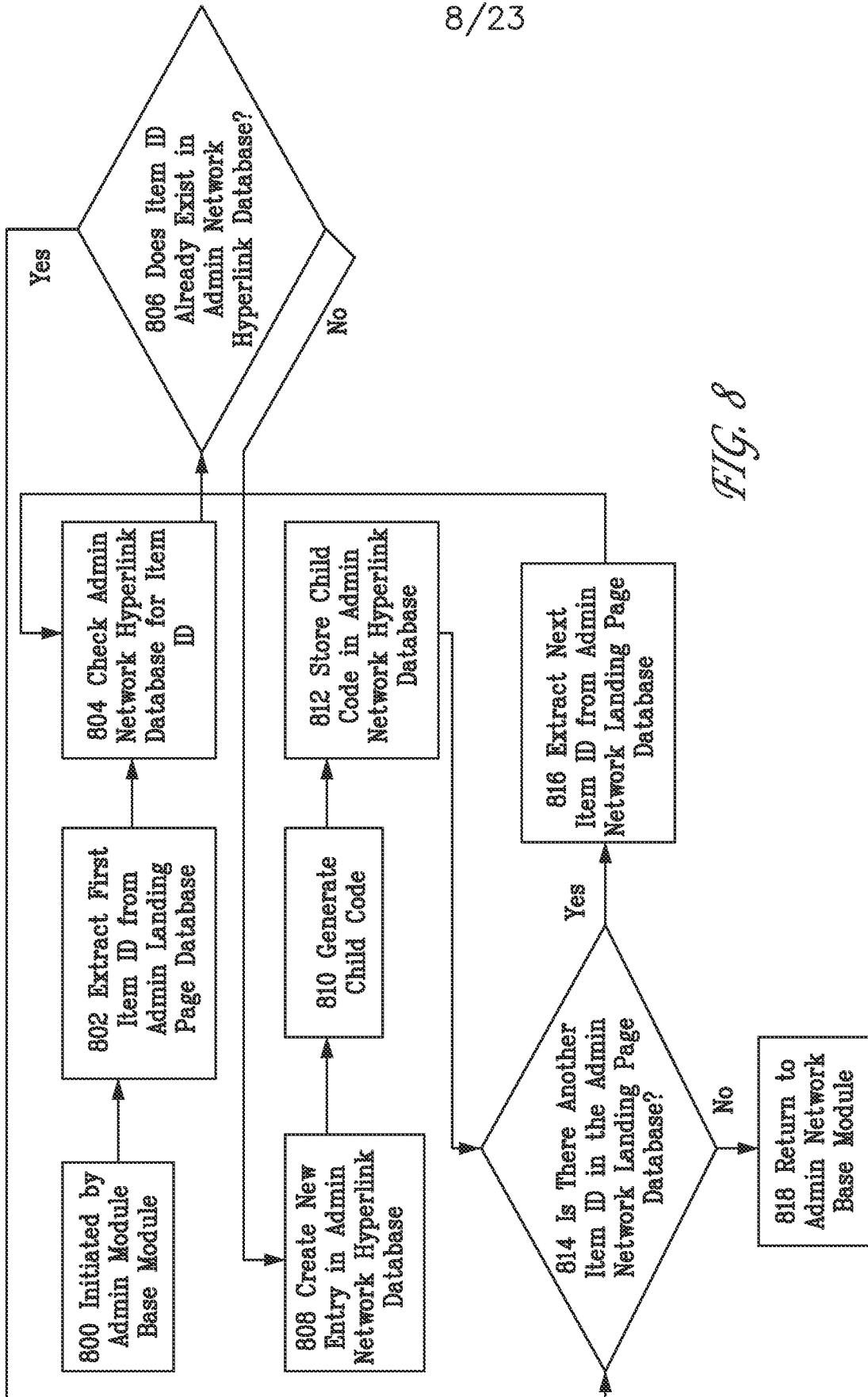


FIG. 8

9/23

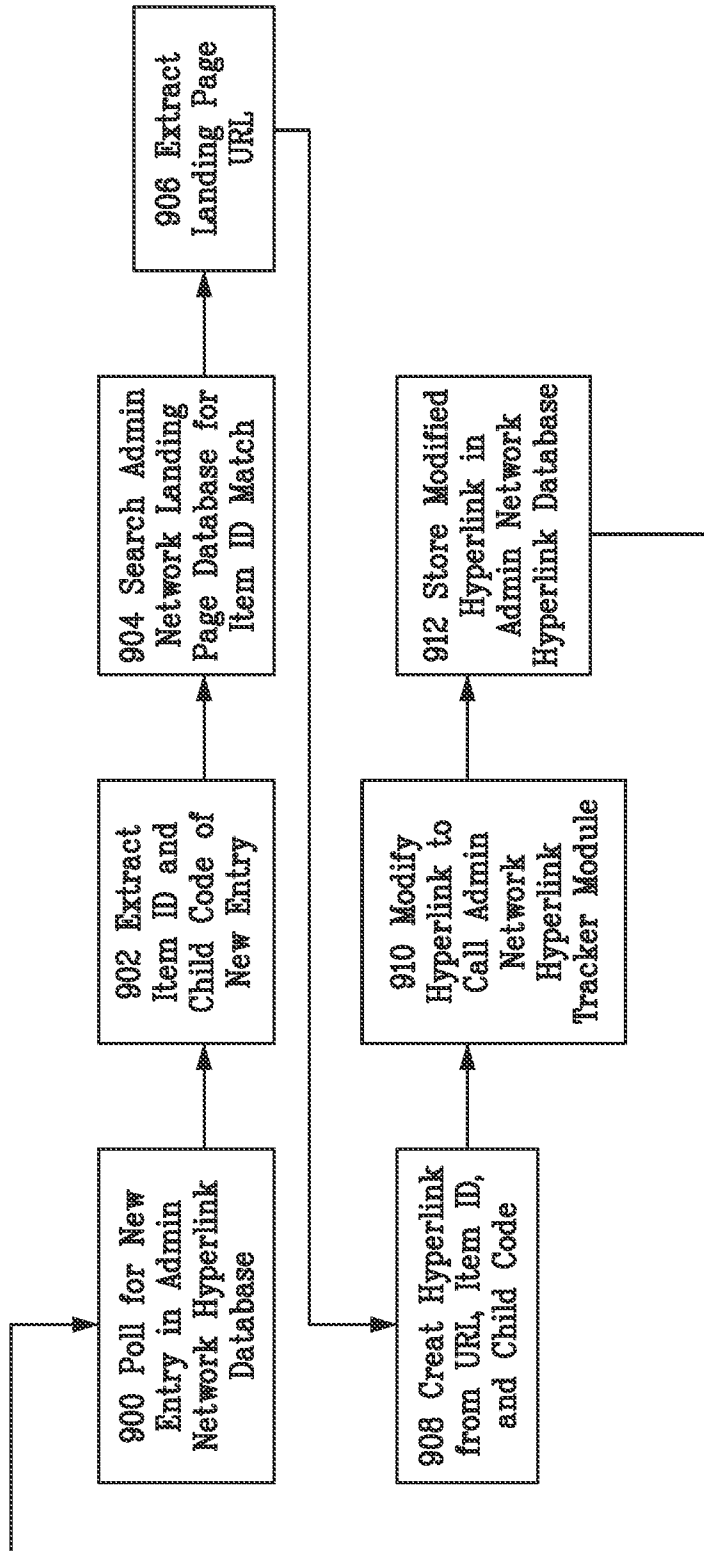


FIG. 9

10/23

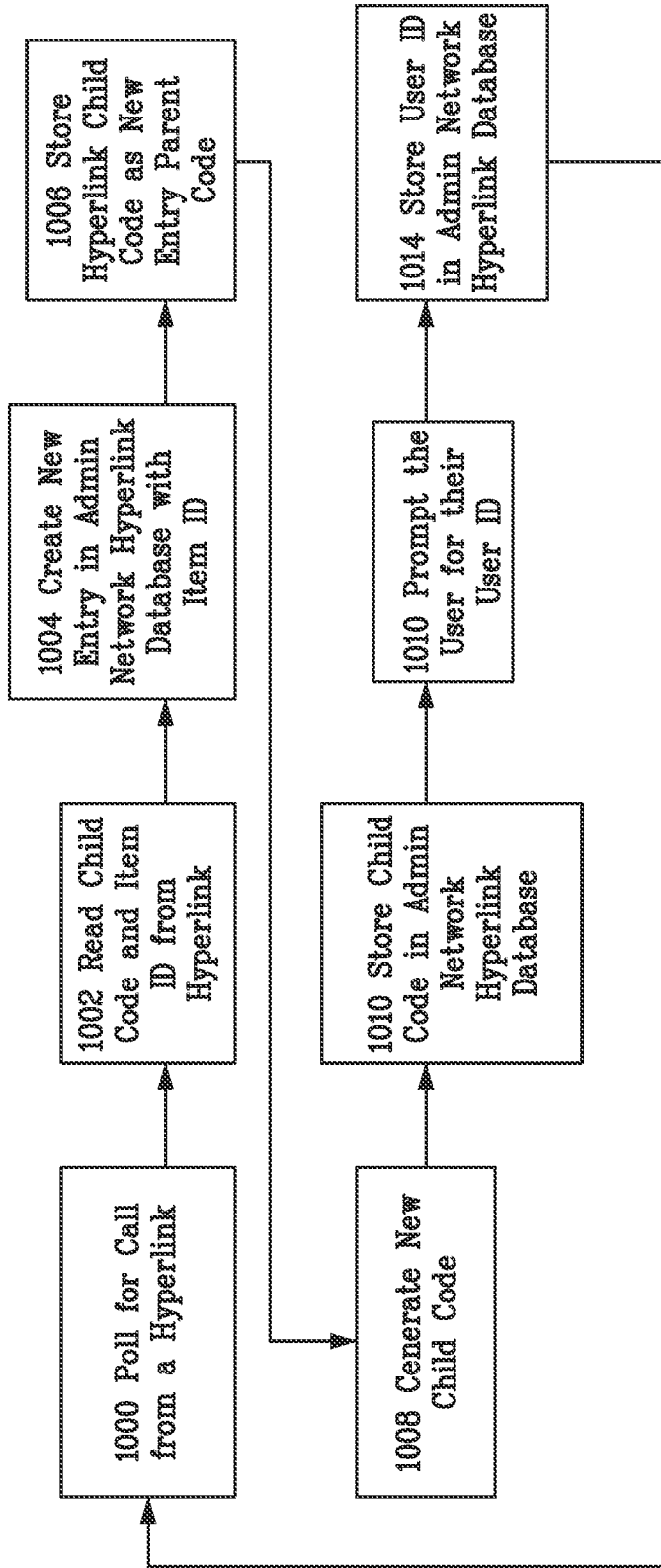


FIG. 10

Item	Item Name	Parent Code	Child Code	User ID	Hyperlink
456812	Cold Medicine	N/A	ai9ufy6HE4	Kwik	https://kwik.vons.com/pharmacy/coldmedicine/?kwikcode=456812ai9ufy6HE4
456812	Cold Medicine	ai9ufy6HE4	LmPwRmESpH	HF4875	https://kwik.vons.com/pharmacy/coldmedicine/?kwikcode=456812LmPwRmESpH
456812	Cold Medicine	LmPwRmESpH	H24sI23Dxx	YD9483	https://kwik.vons.com/pharmacy/coldmedicine/?kwikcode=456812H24sI23Dxx
123789	Couch	N/A	sZa2q6jDuo	Kwik	https://kwik.bobsfurniture.com/.../?kwikcode=123789sZa2q6jDuo
123789	Couch	sZa2q6jDuo	lvOodgpFsJ5	N/A	https://kwik.bobsfurniture.com/.../?kwikcode=123789lvOodgpFsJ5
123789	Couch	sZa2q6jDuo	ogV1LAwT50	MF1192	https://kwik.bobsfurniture.com/.../?kwikcode=123789ogV1LAwT50
654123	Drill	N/A	eyySAh0ijh	Kwik	https://kwik.homedepot.com/.../?kwikcode=654123eyySAh0ijh
654123	Drill	eyySAh0ijh	D5Tn6nQq70	HG9873	https://kwik.homedepot.com/.../?kwikcode=654123D5Tn6nQq70
654123	Drill	N/A	EejblOK3Uu	JD4483	https://kwik.homedepot.com/.../?kwikcode=654123EejblOK3Uu
789654	Table Saw	N/A	WLW2AaMQ6Q	Kwik	https://kwik.homedepot.com/.../?kwikcode=789654WLW2AaMQ6Q
789654	Table Saw	WLW2AaMQ6Q	g0sm5HFVMC	N/A	https://kwik.homedepot.com/.../?kwikcode=789654g0sm5HFVMC
789654	Table Saw	g0sm5HFVMC	z4jjna7t3c	VY0093	https://kwik.homedepot.com/.../?kwikcode=789654z4jjna7t3c

FIG. 11

Item	Item Name	3rd Party	Landing Page URL
654123	Drill	Home Depot	https://www.homedepot.com/..
789654	Table Saw	Home Depot	https://www.homedepot.com/..
123789	Couch	Furniture Store	https://www.bobsfurniture.com
456812	Cold Medicine	Pharmacy	https://www.vons.com/...

FIG. 12

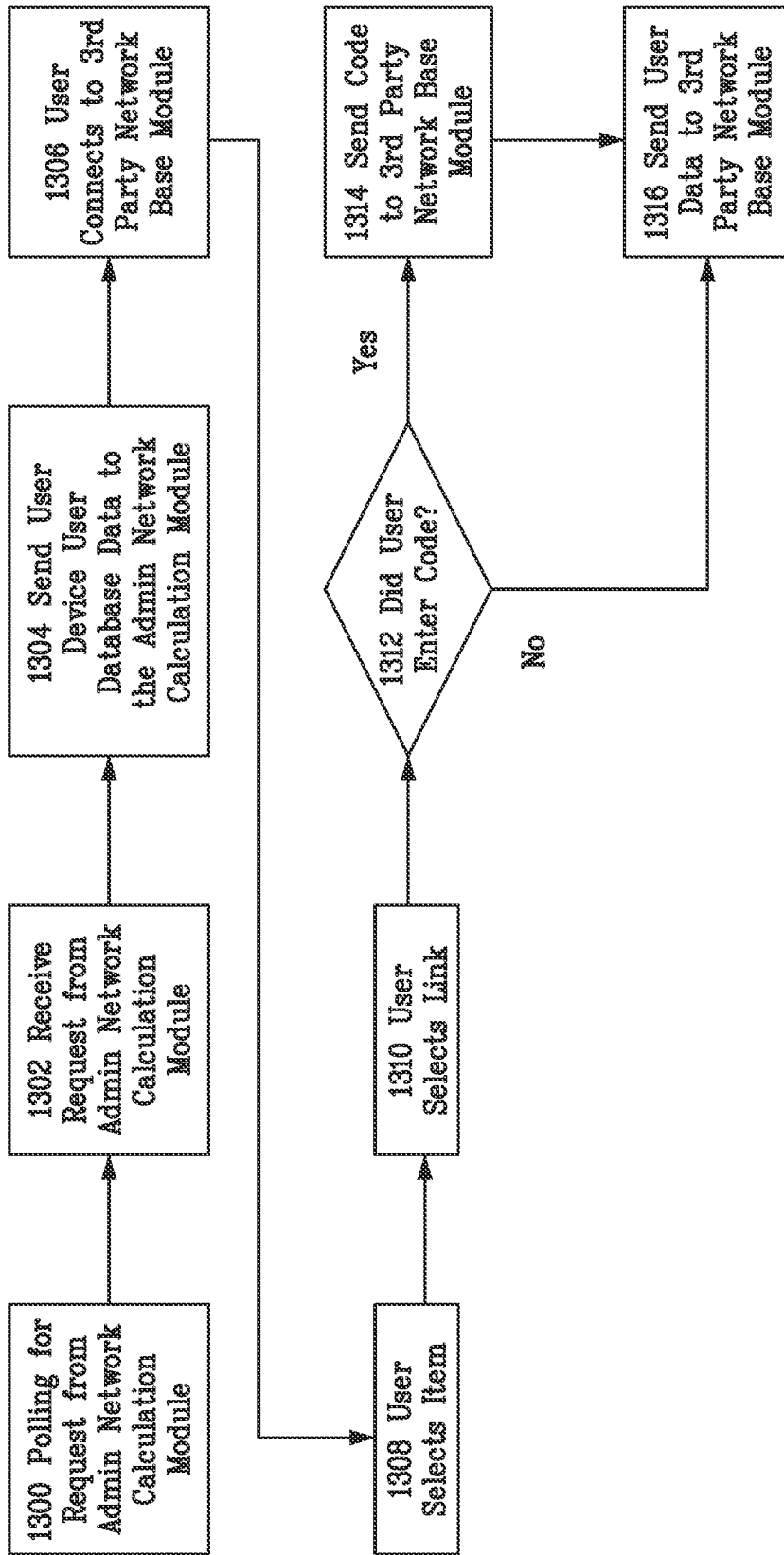


FIG. 13

User ID	Followers ID	Code for Followers	Followers E-mail	Followers Phone	Followers Address
JS1234	HY8569	654123-SO12	HY8569@gmail.com	781-654-8972	123 Main Street, Boston, MA
JS1234	IT8527	654123-SO12	IT8527@yahoo.com	231-456-7891	58 Elm Street, Burlington, VT
JS1234	RW4569	654123-SO12	RW4569@gmail.com	654-987-3217	96 2nd Ave, Salt Lake City, UT
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

14/23

FIG. 14

15/23

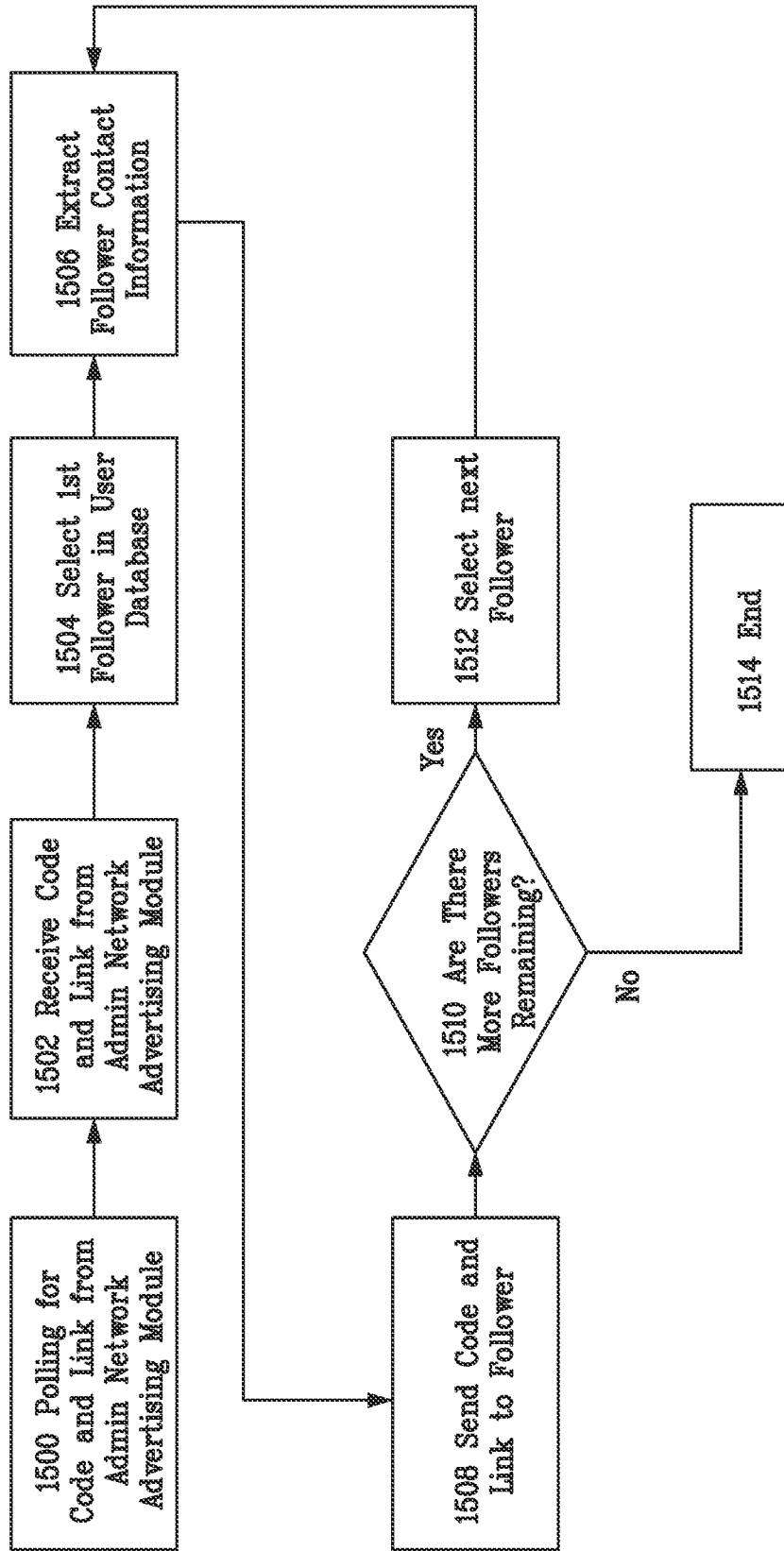


FIG. 15

16/23

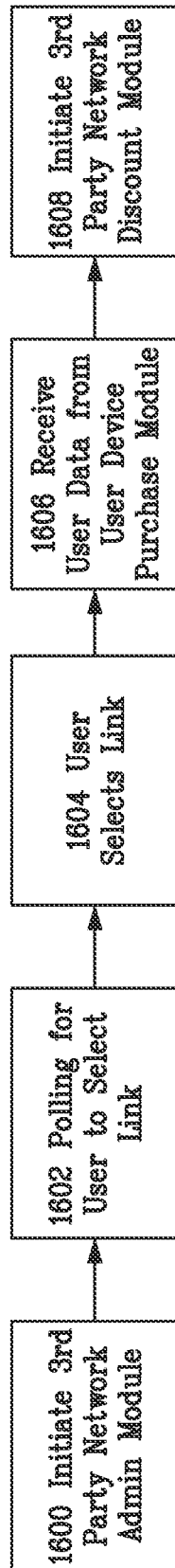


FIG. 16

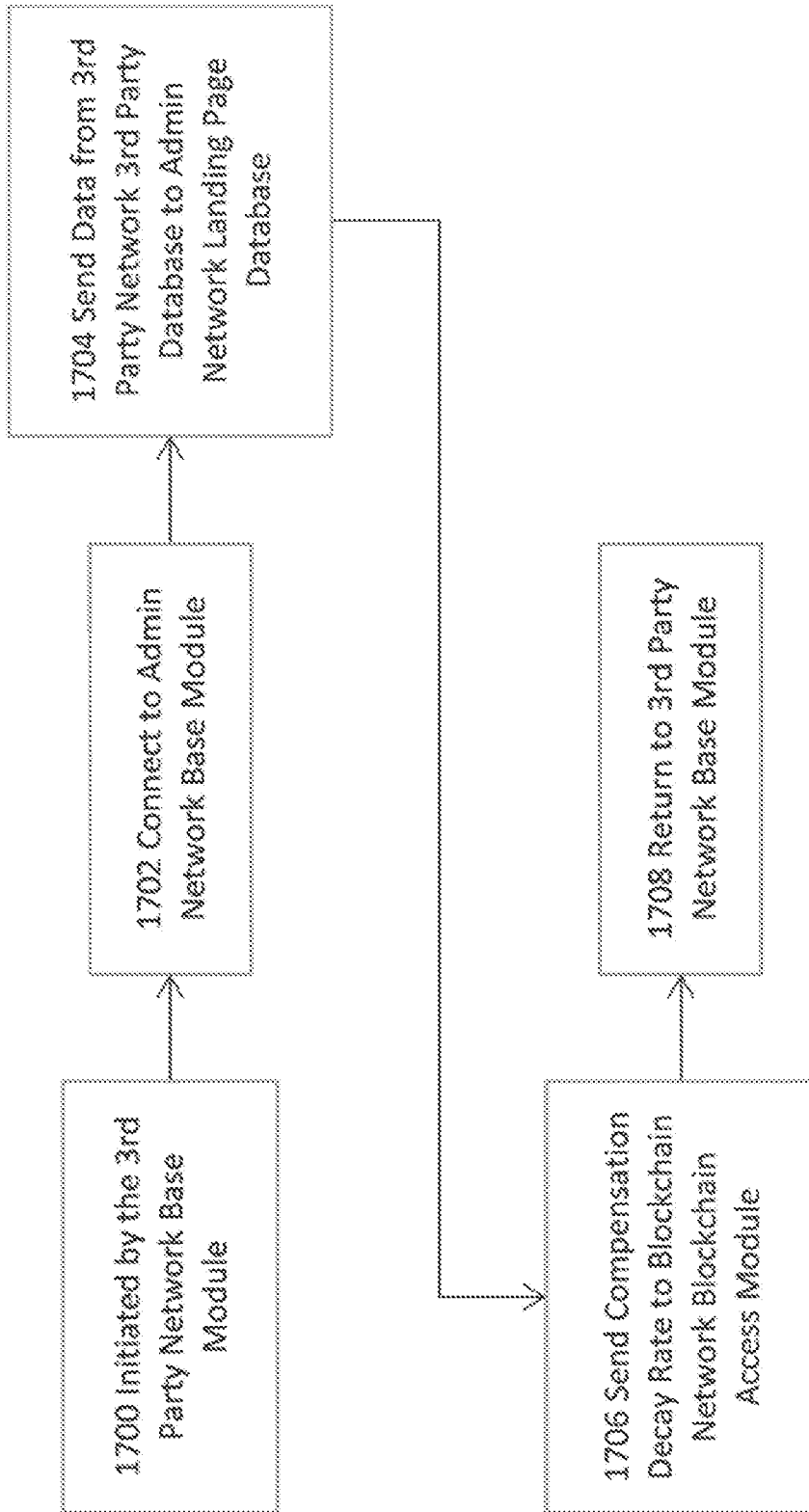


FIG. 17

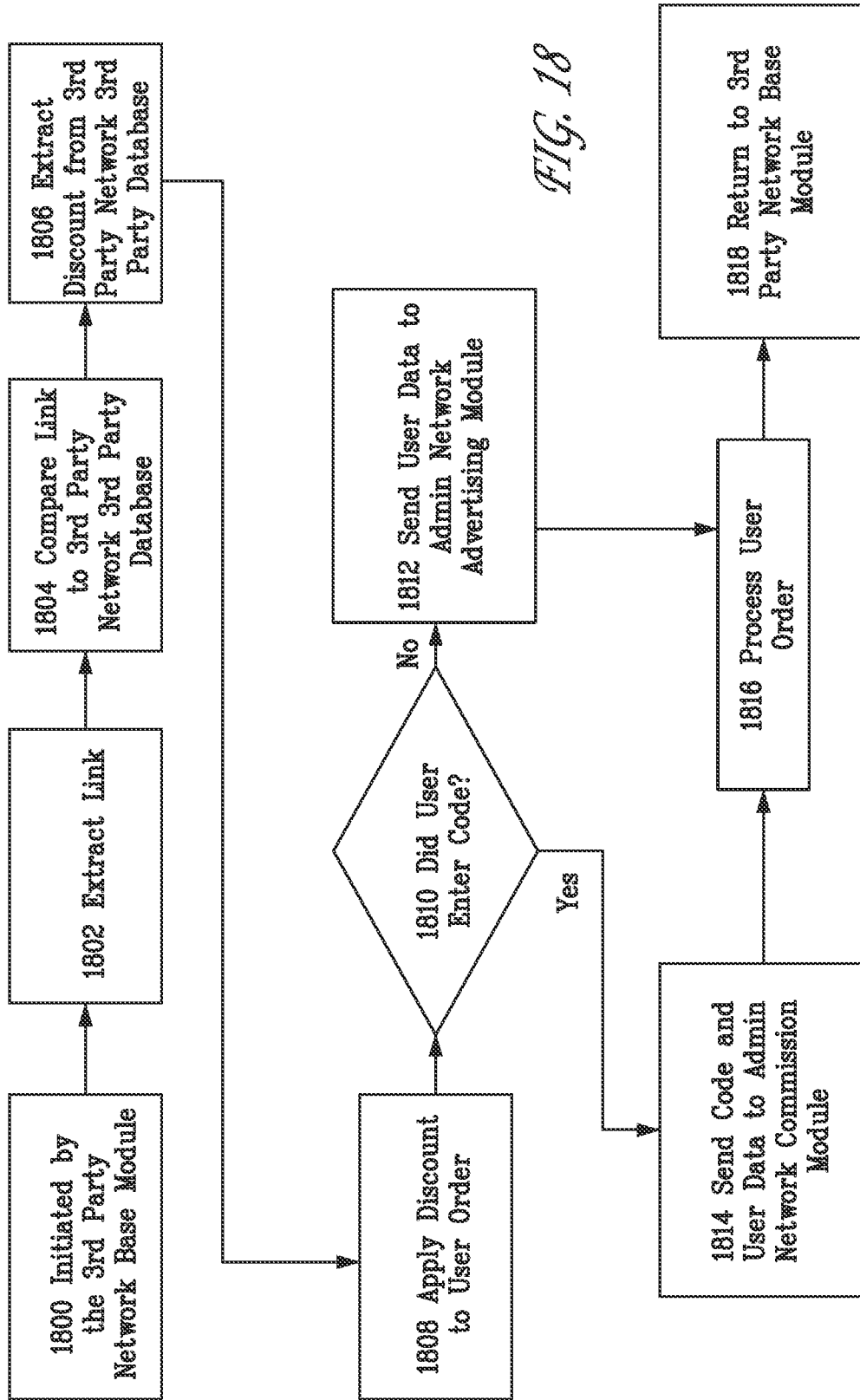


FIG. 18

ID	Item	Original Cost	Discount	Discount Cost	Compensation Decay Rate	Topline Commission	Landing Page URL
654123	Drill	\$59.00	15%	\$9.15	50%	\$3.31	https://www.homedepot.com
789654	Table Saw	\$119.00	10%	\$11.90	50%	\$5.79	https://www.homedepot.com
123789	Couch	\$999.00	10%	\$99.90	30%	\$12.45	https://www.bobsfurniture.com
456812	Cold Medicine	\$25.00	5%	\$23.75	50%	\$0.55	https://www.vans.com/...

19/23

FIG. 19

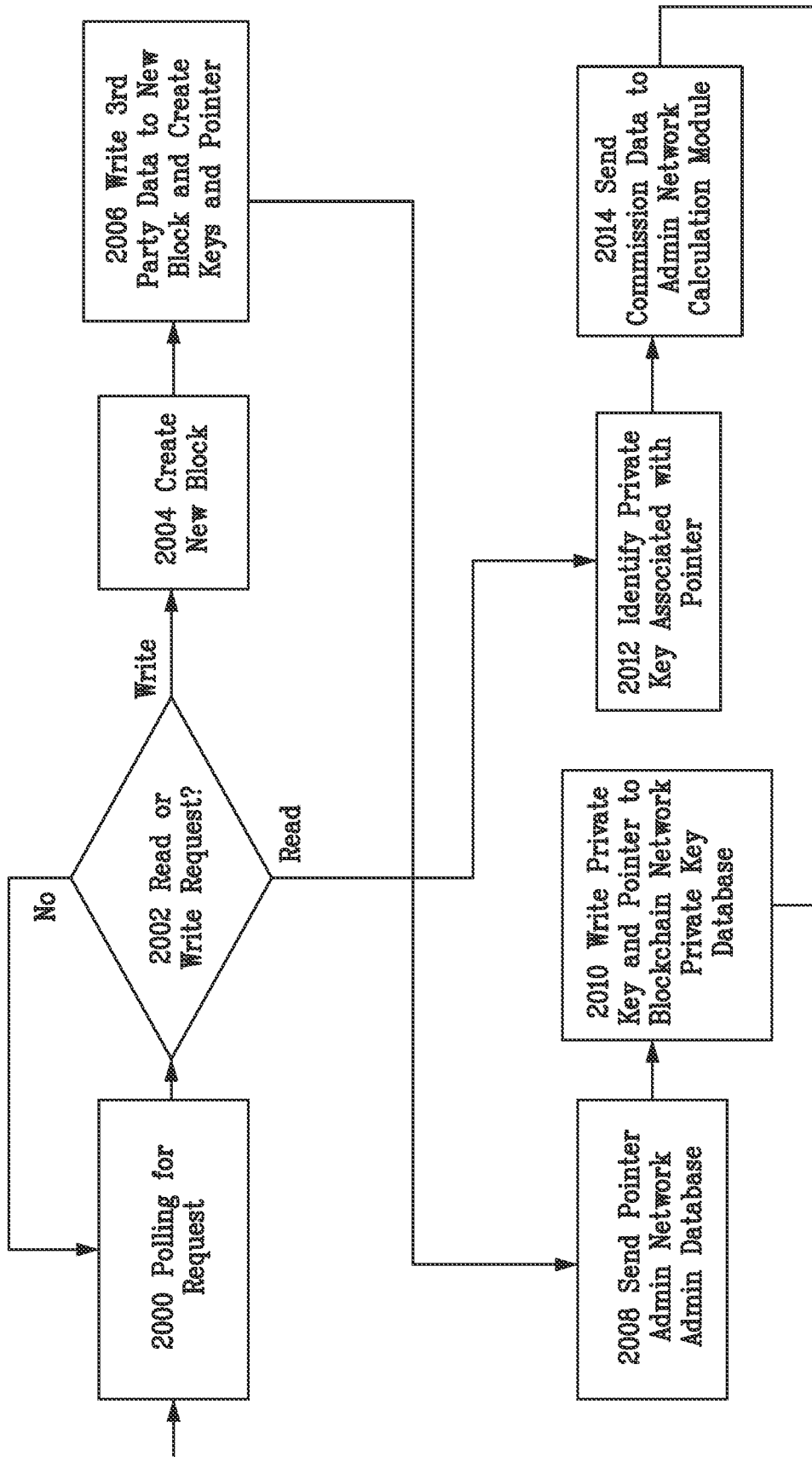


FIG. 20

Pointer	Private Key
654123-POINT1	C802 0301 0001
654123-POINT2	4003 C266 E2CD
654123-POINT3	2881 D673 CA2B
654123-POINT4	C744 2654 C0DD
654123-POINT5	922B F01B 2F40
654123-POINT6	BC8F BAFA 362F
654123-POINT7	F01B 2F40 C744

FIG. 21

Block	Public Key	Commission Chain
1	3048 0241 00C9	
3	18FA CF8D EE2D	0.55
6	EFD5 FD37 89B9	0.55/0.27
9	EO69 EA97 FC20	0.55/0.27/0.14
12	5E35 F577 EE31	0.55/0.27/0.14/0.07
15	5E35 F577 EE31	0.55/0.27/0.14/0.07/0.03
18	C4FB C6E4 4811	0.55/0.27/0.14/0.07/0.03/0.02

FIG. 22B

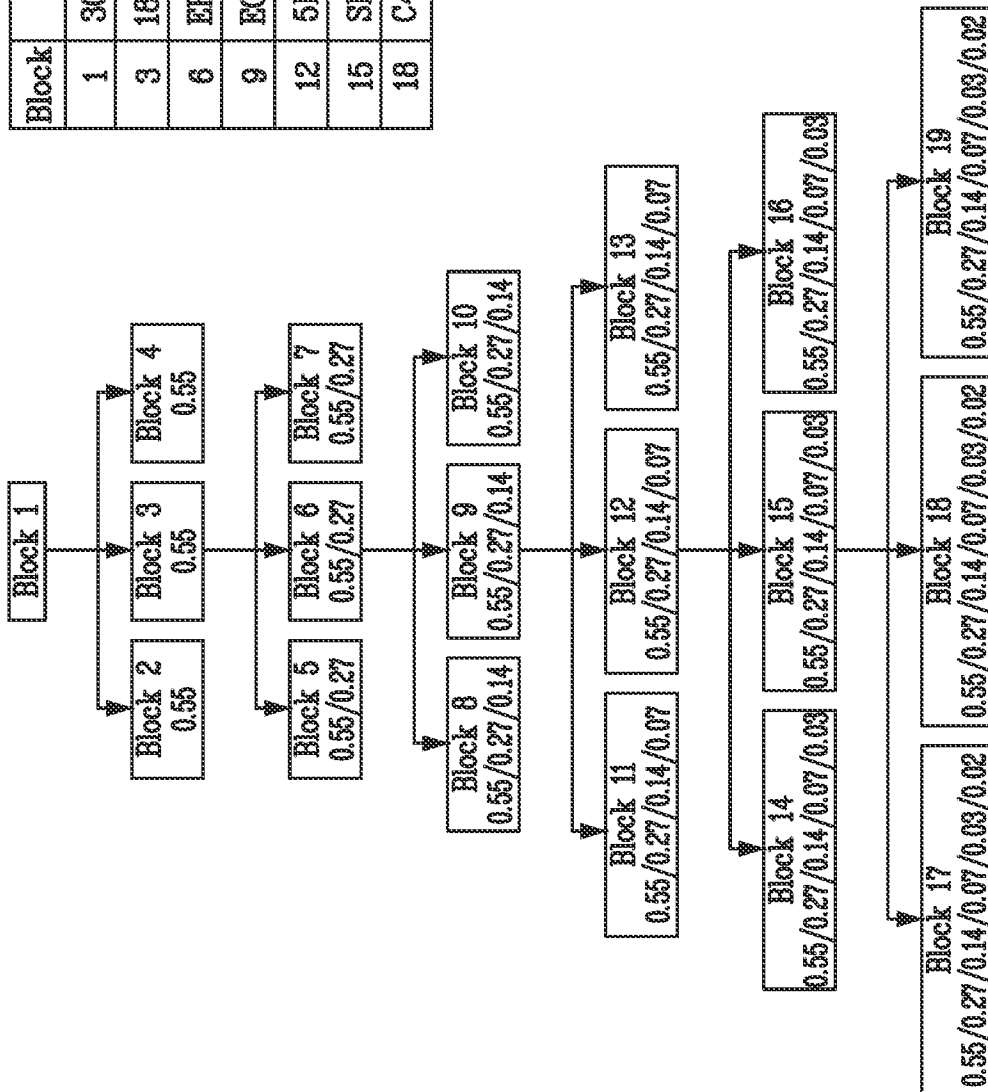


FIG. 22A

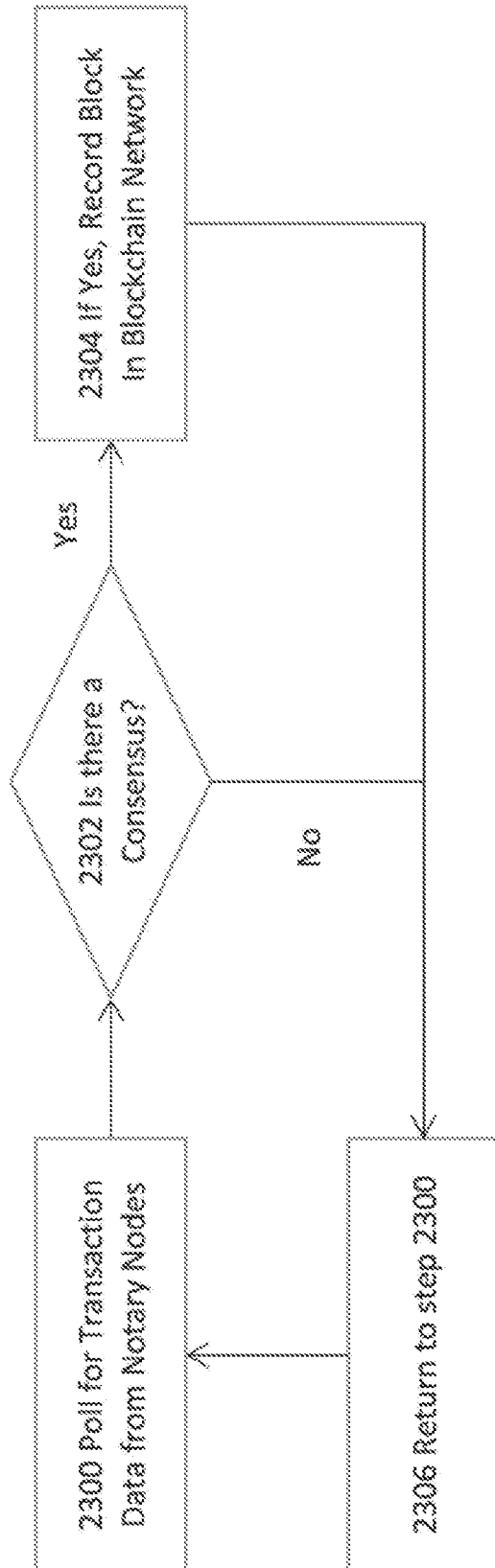


FIG. 23