

**METHODS, SYSTEMS, AND DEVICES FOR MANAGING TRANSACTIONS BETWEEN A
PLURALITY OF USERS**

Technical Field

[0001] The present disclosure relates generally to managing transactions, and more specifically, to methods, systems, devices, and logic for managing transactions between a plurality of users, including dynamically rating of users and dynamically matching of users.

Background

[0002] Various services and platforms are available today for facilitating transactions between users. Business-to-consumer (or B2C) platforms, for example, enable businesses (i.e., the seller) to transact goods and/or services with consumers (i.e., the buyer). Specifically, B2C platforms allow businesses to post and/or advertise goods and/or services for sale, while providing consumers with tools to search for and purchase such goods and/or services. Examples of B2C platforms include JD.com, TMall, Rakuten, Qoo10, Amazon, Shopee. Business-to-business (or B2B) platforms are another example of platforms that facilitate transactions. B2B platforms enable businesses to transact goods and/or services with other businesses. Examples of B2B platforms include Alibaba, IndiaMART, Made-in-China, Global Sources, DHgate.

[0003] When transactions are completed on such platforms, buyers are typically given an opportunity to submit ratings to the sellers based on the completed transactions. Such ratings are typically in the form of quantitative ratings (e.g., rating between 1-5, ratings based on a quantity of stars, ratings based on a quantity of dollar signs, etc.), qualitative ratings (e.g., excellent, very good, good, average, below average, poor, thumbs up/down, like/dislike, etc.), etc.

Brief Summary

[0004] It is recognized in the present disclosure that conventional approaches to facilitating transactions between users inherently suffer from problems.

[0005] For example, buyers on such platforms oftentimes face difficulties searching for what they are looking for due to, among other things, the significant quantity/selection, range of quality/reliability, etc. of available products, services, and/or sellers on such platforms, making it difficult for buyers to search for and/or decide on which products and/or services to purchase and which sellers to purchase from. As another example, certain ratings provided by buyers to sellers for previously completed transactions may not necessarily be an accurate rating of the seller. Such inaccurate ratings may affect future potential buyers' decisions on whether or not to buy the same, similar, or unrelated product and/or service from the seller. In yet another example, buyers who search

for and purchase a primary product and/or service from a seller may also require other secondary products and/or services from other sellers. Such secondary products and/or services may be based on the primary product and/or service, may be required to support the primary product and/or service, may be required in order to install, implement, and/or use the primary product and/or service, etc. In such situations, the buyer will then need to conduct separate new searches and purchases of each secondary product and/or service. It is recognized in the present disclosure that such separate searches and purchases of secondary products and/or services are not only time consuming and tedious, but may also be problematic. For example, certain secondary products and/or services may not be available (e.g., out of stock, not offered ,etc.); certain secondary products and/or services may have long lead times; certain secondary products and/or services may have unacceptably high prices/rates, etc. In such situations, the buyer may have very limited options regarding the required secondary product and/or service (e.g., pay more than expected or budgeted for the secondary products and/or services; delay installation, implementation, and/or usage of the primary product and/or service until the secondary products and/or services become available; find a replacement primary product and/or service; exchange or refund the primary product and/or service if a replacement primary product and/or service will be purchased; etc.). As another example, buyers who purchase primary products and/or services may not even be aware of or realise that one or more secondary products and/or services are required for the primary product and/or service until after the buyer purchases the primary product and/or service.

[0006] Present example embodiments relate generally to and/or comprise systems, subsystems, processors, devices, logic, methods, and processes for addressing conventional problems, including those described above and in the present disclosure, and more specifically, example embodiments relate to systems, subsystems, processors, devices, logic, methods, and processes for managing transactions between a plurality of users.

[0007] In an exemplary embodiment, a method of managing transactions between users is described. The method may be for use in dynamically generating a rating for a seller. The method may include identifying a first seller. The method may also include selecting, by a processor, a previous first seller transaction. The previous first seller transaction may be a transaction in which the first seller was selected, from among a plurality of available sellers, as a match to a buyer of the previous first seller transaction based on a predetermined matching criteria and a search query that was received, by the processor, from the buyer of the previous first seller transaction. The method may also include identifying, by the processor, a relevant date of the previous first seller transaction. The method may also include identifying, by the processor, an original first seller rating for the

previous first seller transaction. The original first seller rating may be a rating provided by the buyer to the first seller for the previous first seller transaction. The method may also include identifying, by the processor, a relevant state of the predetermined matching criteria. The relevant state may be a state of the predetermined matching criteria as of the relevant date of the previous first seller transaction. The method may also include obtaining, by the processor, a current state of the predetermined matching criteria. The current state may be a most recent state of the predetermined matching criteria. The method may also include comparing, by the processor, the relevant state to the current state. The method may also include generating, by the processor, a rating adjustment factor for the predetermined matching criteria when the current state is determined to be different from the relevant state. The rating adjustment factor may be generated based on at least the comparison between the current state and the relevant state. The method may also include generating, by the processor, an updated first seller rating for the previous first seller transaction when the current state is determined to be different from the relevant state. The updated first seller rating may be generated by transforming the original first seller rating for the previous first seller transaction based on at least the rating adjustment factor. The transforming of the original first seller rating may result in the updated first seller rating having a different rating value from the original first seller rating.

[0008] In another exemplary embodiment, a method of managing transactions between users is described. The method may be for use in dynamically generating a rating for a buyer. The method may include identifying a first buyer. The method may also include selecting, by a processor, a previous first buyer transaction. The previous first buyer transaction may be a transaction in which a seller was selected, from among a plurality of available sellers, as a match to the first buyer based on a predetermined matching criteria and a search query received, by the processor, from the first buyer. The method may also include identifying, by the processor, a relevant date of the previous first buyer transaction. The method may also include identifying, by the processor, an original first buyer rating for the previous first buyer transaction. The original first buyer rating may be a rating provided by the seller to the first buyer for the previous first buyer transaction. The method may also include identifying, by the processor, a relevant state of the predetermined matching criteria. The relevant state may be a state of the predetermined matching criteria as of the relevant date of the previous first buyer transaction. The method may also include obtaining, by the processor, a current state of the predetermined matching criteria. The current state may be a most recent state of the predetermined matching criteria. The method may also include comparing, by the processor, the relevant state to the current state. The method may also include generating, by the processor, a rating adjustment factor for the predetermined matching criteria when the comparing determines that the current state is

different from the relevant state. The rating adjustment factor may be generated based on at least the comparison between the current state and the relevant state. The method may also include generating, by the processor, an updated first buyer rating for the previous first buyer transaction when the comparing determines that the current state is different from the relevant state. The updated first buyer rating may be generated by transforming the original first buyer rating for the previous first buyer transaction based on at least the rating adjustment factor. The transforming of the original first buyer rating may result in the updated first buyer rating having a different rating value from the original first buyer rating.

[0009] In another exemplary embodiment, a method of managing transactions between users is described. The method may be for use in dynamically generating a rating for a seller. The method may include identifying a first seller. The method may also include selecting, by a processor, one or more candidate transactions. Each candidate transaction may be a transaction involving a buyer and a seller, wherein the seller of each candidate transaction is the first seller. The method may also include selecting, by the processor, one or more previous first seller transactions from among the one or more candidate transactions. Each previous first seller transaction may be a transaction in which the first seller was selected, from among a plurality of available sellers, as a match to a buyer of the previous first seller transaction based on one or more predetermined matching criterion and a search query received, by the processor, from the buyer of the previous first seller transaction. The one or more predetermined matching criterion may be selected, by the processor, for the previous first seller transaction. The method may also include processing, by the processor, each of the previous first seller transactions. The processing of each previous first seller transaction may include identifying a relevant date of the previous first seller transaction. The processing of each previous first seller transaction may also include identifying an original first seller rating for the previous first seller transaction. The original first seller rating may be a rating provided by the buyer to the first seller for the previous first seller transaction. The processing of each previous first seller transaction may also include identifying the one or more predetermined matching criterion. The processing of each previous first seller transaction may also include selecting one or more outdated predetermined matching criterion from among the one or more predetermined matching criterion. The processing of each previous first seller transaction may also include identifying a relevant state for each outdated predetermined matching criterion. The relevant state may be a state of the outdated predetermined matching criterion as of the relevant date of the previous first seller transaction. The processing of each previous first seller transaction may also include obtaining a current state for each outdated predetermined matching criterion. The current state may be a most recent state of the outdated

predetermined matching criterion. The processing of each previous first seller transaction may also include comparing the relevant state to the current state for each outdated predetermined matching criterion. The processing of each previous first seller transaction may also include generating a rating adjustment factor for the outdated predetermined matching criterion when the comparing determines that the current state is different from the relevant state. The rating adjustment factor may be generated based on at least the comparison between the current state and the relevant state. The processing of each previous first seller transaction may also include generating an aggregate rating adjustment factor for the one or more outdated predetermined matching criterion. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more outdated predetermined matching criterion. The processing of each previous first seller transaction may also include generating an updated first seller transaction rating for the previous first seller transaction. The updated first seller transaction rating may be generated by transforming the original first seller rating for the previous first seller transaction based on at least the aggregate rating adjustment factor. The transforming of the original first seller rating may result in the updated first seller transaction rating having a different rating value from the original first seller rating.

[0010] In another exemplary embodiment, a method of managing transactions between users is described. The method may be for use in dynamically generating a rating for a buyer. The method may include identifying a first buyer. The method may also include selecting, by a processor, one or more candidate transactions. Each candidate transaction may be a transaction involving a buyer and a seller, wherein the buyer is the first buyer. The method may also include selecting, by the processor, one or more previous first buyer transactions from among the one or more candidate transactions. Each previous first buyer transaction may be a transaction in which the seller was selected, from among a plurality of available sellers, as a match to the first buyer based on one or more predetermined matching criterion and a search query received, by the processor, from the first buyer of the previous first buyer transaction. The one or more predetermined matching criterion may be selected, by the processor, for the previous first buyer transaction. The method may also include processing, by the processor, each of the previous first buyer transactions. The processing of each previous first buyer transaction may include identifying a relevant date of the previous first buyer transaction. The processing of each previous first buyer transaction may also include identifying an original first buyer rating for the previous first buyer transaction. The original first buyer rating may be a rating provided by the seller to the first buyer for the previous first buyer transaction. The processing of each previous first buyer transaction may also include identifying the one or more predetermined matching criterion. The processing of each previous first buyer transaction may also include selecting one or more

outdated predetermined matching criterion from among the one or more predetermined matching criterion. The processing of each previous first buyer transaction may also include identifying a relevant state for each outdated predetermined matching criterion. The relevant state may be a state of the outdated predetermined matching criterion as of the relevant date of the previous first buyer transaction. The processing of each previous first buyer transaction may also include obtaining a current state for each outdated predetermined matching criterion. The current state may be a most recent state of the outdated predetermined matching criterion. The processing of each previous first buyer transaction may also include comparing the relevant state to the current state for each outdated predetermined matching criterion. The processing of each previous first buyer transaction may also include generating a rating adjustment factor for the outdated predetermined matching criterion when the comparing determines that the current state is different from the relevant state. The rating adjustment factor may be generated based on at least the comparison between the current state and the relevant state. The processing of each previous first buyer transaction may also include generating an aggregate rating adjustment factor for the one or more outdated predetermined matching criterion. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more outdated predetermined matching criterion. The processing of each previous first buyer transaction may also include generating an updated first buyer transaction rating for the previous first buyer transaction. The updated first buyer transaction rating may be generated by transforming the original first buyer rating based on at least the aggregate rating adjustment factor. The transforming of the original first buyer rating may result in the updated first buyer transaction rating having a different rating value from the original first buyer rating.

[0011] In another exemplary embodiment, a method of managing transactions between users is described. The method may be for use in matching users for a transaction based on dynamically generated ratings for one or more users. The method may include receiving, from a first buyer, a current search query. The method may also include processing, by a processor, the first buyer. The processing of the first buyer may include selecting, by the processor, one or more previous first buyer transactions. Each previous first buyer transaction being a transaction in which a seller was selected, from among a plurality of available sellers, as a match to the first buyer based on one or more predetermined matching criterion and a first previous search query received, by the processor, from the first buyer for the previous first buyer transaction. The one or more first predetermined matching criterion may be selected, by the processor, for the previous first buyer transaction. The processing of the first buyer may also include processing, by the processor, each of the previous first buyer transactions. The processing of each previous first buyer transaction may include identifying a first

relevant date of the previous first buyer transaction. The processing of each previous first buyer transaction may also include identifying an original first buyer rating for the previous first buyer transaction. The original first buyer rating may be a rating provided by the seller to the first buyer for the previous first buyer transaction. The processing of each previous first buyer transaction may also include identifying the one or more first predetermined matching criterion. The processing of each previous first buyer transaction may also include selecting one or more outdated first predetermined matching criterion from among the one or more first predetermined matching criterion. The processing of each previous first buyer transaction may also include identifying a first relevant state for each outdated first predetermined matching criterion. The first relevant state may be a state of the outdated first predetermined matching criterion as of the first relevant date. The processing of each previous first buyer transaction may also include obtaining a first current state for each outdated first predetermined matching criterion. The first current state may be a most recent state of the outdated first predetermined matching criterion. The processing of each previous first buyer transaction may also include comparing the first relevant state to the first current state for each outdated first predetermined matching criterion. The processing of each previous first buyer transaction may also include generating a first rating adjustment factor for the outdated first predetermined matching criterion when the comparing determines that the current state is different from the relevant state. The first rating adjustment factor may be generated based on at least the comparison between the first current state and the first relevant state. The processing of each previous first buyer transaction may also include generating a first aggregate rating adjustment factor for the one or more outdated first predetermined matching criterion. The first aggregate rating adjustment factor may be generated based on the first rating adjustment factors generated for the one or more outdated first predetermined matching criterion. The processing of each previous first buyer transaction may also include generating an updated first buyer transaction rating for the previous first buyer transaction. The updated first buyer transaction rating may be generated by transforming the original first buyer rating based on at least the first aggregate rating adjustment factor. The transforming of the original first buyer rating may result in the updated first buyer transaction rating having a different rating value from the original first buyer rating. The processing of the first buyer may also include generating, by the processor, an updated overall first buyer rating for the first buyer. The updated overall first buyer rating may be generated based on at least the updated first buyer transaction ratings generated for the one or more previous first buyer transactions. The method may also include selecting, by the processor, a plurality of candidate sellers based on at least the current search query. The method may also include obtaining, by the processor, a candidate seller rating for each candidate seller. The

method may also include selecting, by the processor, one or more matching sellers for the first buyer from among the plurality of candidate sellers. The selecting of the one or more matching sellers may be based on at least the updated overall first buyer rating for the first buyer and the candidate seller ratings of the candidate sellers.

[0012] In another exemplary embodiment, a method of managing transactions between users is described. The method may be for use in matching users for a transaction based on dynamically generated ratings for one or more users. The method may include receiving, from a first buyer, a current search query. The method may also include obtaining a first buyer rating for the first buyer. The method may also include selecting, by a processor, a plurality of candidate sellers based on at least the current search query. The method may also include processing, by the processor, each candidate seller. The processing of each candidate seller may include selecting, by the processor, one or more previous candidate seller transactions. Each previous candidate seller transaction may be a transaction in which the candidate seller was selected, from among a plurality of available sellers, as a match to a buyer of the previous candidate seller transaction based on one or more first predetermined matching criterion and a first previous search query received, by the processor, from the buyer of the previous candidate seller transaction. The one or more first predetermined matching criterion may be selected, by the processor, for the previous candidate seller transaction. The processing of each candidate seller may also include processing, by the processor, each of the previous candidate seller transactions. The processing of each previous candidate seller transaction may include identifying a first relevant date of the previous candidate seller transaction. The processing of each previous candidate seller transaction may also include identifying an original candidate seller rating for the previous candidate seller transaction. The original candidate seller rating may be a rating provided by the buyer to the candidate seller for the previous candidate seller transaction. The processing of each previous candidate seller transaction may also include identifying the one or more first predetermined matching criterion. The processing of each previous candidate seller transaction may also include selecting one or more outdated first predetermined matching criterion from among the one or more first predetermined matching criterion. The processing of each previous candidate seller transaction may also include identifying a first relevant state for each outdated first predetermined matching criterion. The first relevant state may be a state of the outdated first predetermined matching criterion as of the first relevant date. The processing of each previous candidate seller transaction may also include obtaining a first current state for each outdated first predetermined matching criterion. The first current state may be a most recent state of the outdated first predetermined matching criterion. The processing of each previous candidate seller transaction

may also include comparing the first relevant state to the first current state for each outdated first predetermined matching criterion. The processing of each previous candidate seller transaction may also include generating a first rating adjustment factor for the outdated first predetermined matching criterion when the comparing determines that the first current state is different from the first relevant state. The first rating adjustment factor may be generated based on at least the comparison between the first current state and the first relevant state. The processing of each previous candidate seller transaction may also include generating a first aggregate rating adjustment factor for the one or more outdated first predetermined matching criterion. The first aggregate rating adjustment factor may be generated based on the first rating adjustment factors generated for the one or more outdated first predetermined matching criterion. The processing of each previous candidate seller transaction may also include generating an updated candidate seller transaction rating for the previous candidate seller transaction. The updated candidate seller transaction rating may be generated by transforming the original candidate seller rating based on at least the first aggregate rating adjustment factor. The transforming of the original candidate seller rating may result in the updated candidate seller transaction rating having a different rating value from the original candidate seller rating. The processing of each candidate seller may also generating, by the processor, an updated candidate seller rating for the candidate seller. The updated candidate seller rating may be generated based on at least the updated candidate seller transaction ratings generated for the one or more previous candidate seller transactions. The method may also include selecting, by the processor, one or more matching sellers for the first buyer from among the plurality of candidate sellers. The selecting of the one or more matching sellers may be based on at least the first buyer rating for the first buyer and the updated candidate seller rating of the candidate sellers.

[0013] In another exemplary embodiment, a method of managing transactions between users is described. The method may be for use in matching users for a transaction based on dynamically generated ratings for the buyer and seller. The method may include receiving, from a first buyer, a current search query. The method may also include processing, by a processor, the first buyer. The processing of the first buyer may include selecting, by the processor, one or more previous first buyer transactions. Each previous first buyer transaction may be a transaction in which a seller was selected, from among a plurality of available sellers, as a match to the first buyer based on one or more first predetermined matching criterion and a first previous search query received, by the processor, from the first buyer for the previous first buyer transaction. The one or more first predetermined matching criterion may be selected, by the processor, for the previous first buyer transaction. The processing of the first buyer may also include processing, by the processor, each of the previous first buyer

transactions. The processing of each previous first buyer transaction may include identifying a first relevant date of the previous first buyer transaction. The processing of each previous first buyer transaction may also include identifying an original first buyer rating for the previous first buyer transaction. The original first buyer rating may be a rating provided by the seller to the first buyer for the previous first buyer transaction. The processing of each previous first buyer transaction may also include identifying the one or more first predetermined matching criterion. The processing of each previous first buyer transaction may also include selecting one or more outdated first predetermined matching criterion from among the one or more first predetermined matching criterion. The processing of each previous first buyer transaction may also include identifying a first relevant state for each outdated first predetermined matching criterion. The first relevant state may be a state of the outdated first predetermined matching criterion as of the first relevant date. The processing of each previous first buyer transaction may also include obtaining a first current state for each outdated first predetermined matching criterion. The first current state may be a most recent state of the outdated first predetermined matching criterion. The processing of each previous first buyer transaction may also include comparing the first relevant state to the first current state for each outdated first predetermined matching criterion. The processing of each previous first buyer transaction may also include generating a first rating adjustment factor for the outdated first predetermined matching criterion when the comparing determines that the first current state is different from the first relevant state. The first rating adjustment factor may be generated based on at least the comparison between the first current state and the first relevant state. The processing of each previous first buyer transaction may also include generating a first aggregate rating adjustment factor for the one or more outdated first predetermined matching criterion. The first aggregate rating adjustment factor may be generated based on the first rating adjustment factors generated for the one or more outdated first predetermined matching criterion. The processing of each previous first buyer transaction may also include generating an updated first buyer transaction rating for the previous first buyer transaction. The updated first buyer transaction rating may be generated by transforming the original first buyer rating based on at least the first aggregate rating adjustment factor. The transforming of the original first buyer rating may result in the updated first buyer transaction rating having a different rating value from the original first buyer rating. The processing of the first buyer may also include generating, by the processor, an updated overall first buyer rating for the first buyer. The updated overall first buyer rating may be generated based on at least the updated first buyer transaction ratings generated for the one or more previous first buyer transactions. The method may also include selecting, by the processor, a plurality of candidate sellers based on the current search query. The method may also

include processing, by the processor, each candidate seller. The processing of each candidate seller may include selecting, by the processor, one or more previous candidate seller transactions. Each previous candidate seller transaction may be a transaction in which the candidate seller was selected, from among a plurality of available sellers, as a match to a buyer of the previous candidate seller transaction based on one or more second predetermined matching criterion and a second previous search query received, by the processor, from the buyer of the previous candidate seller transaction. The one or more second predetermined matching criterion may be selected, by the processor, for the previous candidate seller transaction. The processing of each candidate seller may also include processing, by the processor, each of the previous candidate seller transactions. The processing of each previous candidate seller transaction may include identifying a second relevant date of the previous candidate seller transaction. The processing of each previous candidate seller transaction may also include identifying an original candidate seller rating for the previous candidate seller transaction. The original candidate seller rating may be a rating provided by the buyer to the candidate seller for the previous candidate seller transaction. The processing of each previous candidate seller transaction may also include identifying the one or more second predetermined matching criterion. The processing of each previous candidate seller transaction may also include selecting one or more outdated second predetermined matching criterion from among the one or more second predetermined matching criterion. The processing of each previous candidate seller transaction may also include identifying a second relevant state for each outdated second predetermined matching criterion. The second relevant state may be a state of the outdated second predetermined matching criterion as of the second relevant date. The processing of each previous candidate seller transaction may also include obtaining a second current state for each outdated second predetermined matching criterion. The second current state may be a most recent state of the outdated second predetermined matching criterion. The processing of each previous candidate seller transaction may also include comparing the second relevant state to the second current state for each outdated second predetermined matching criterion. The processing of each previous candidate seller transaction may also include generating a second rating adjustment factor for the outdated second predetermined matching criterion when the comparing determines that the second current state is different from the second relevant state. The second rating adjustment factor may be generated based on at least the comparison between the second current state and the second relevant state. The processing of each previous candidate seller transaction may also include generating a second aggregate rating adjustment factor for the one or more outdated second predetermined matching criterion. The second aggregate rating adjustment factor may be generated based on the second rating adjustment factors generated for the one or more

outdated second predetermined matching criterion. The processing of each previous candidate seller transaction may also include generating an updated candidate seller transaction rating for the previous candidate seller transaction. The updated candidate seller transaction rating may be generated by transforming the original candidate seller rating based on at least the second aggregate rating adjustment factor. The transforming of the original candidate seller rating may result in the updated candidate seller transaction rating having a different rating value from the original candidate seller rating. The processing of each candidate seller may also include generating, by the processor, an updated candidate seller rating for the candidate seller. The updated candidate seller rating may be generated based on at least the updated candidate seller transaction ratings generated for the one or more previous candidate seller transactions. The method may also include selecting, by the processor, one or more matching sellers for the first buyer from among the plurality of candidate sellers. The selecting of the one or more matching sellers may be based on at least the updated overall first buyer rating for the first buyer and the updated candidate seller rating of the candidate sellers.

Brief Description of the Drawings

[0014] For a more complete understanding of the present disclosure, example embodiments, and their advantages, reference is now made to the following description taken in conjunction with the accompanying drawings, in which like reference numbers indicate like features, and:

[0015] **Figure 1** is an illustration of an example embodiment of a system for managing transactions;

[0016] **Figure 2** is an illustration of an example embodiment of a main processor;

[0017] **Figure 3A** is an illustration of an example embodiment of a seller processor;

[0018] **Figure 3B** is an illustration of an example embodiment of a previous candidate seller transaction processor;

[0019] **Figure 4A** is an illustration of an example embodiment of a buyer processor;

[0020] **Figure 4B** is an illustration of an example embodiment of a previous buyer transaction processor;

[0021] **Figure 5A** is an illustration of an example embodiment of a secondary seller processor;

[0022] **Figure 5B** is an illustration of an example embodiment of a previous candidate secondary seller transaction processor;

[0023] **Figure 6** is an illustration of an example embodiment of a transaction processor;

[0024] **Figure 7A** is an illustration of an example embodiment of a method of managing transactions;

[0025] **Figure 7B** is an illustration of an example embodiment of processing a search query;

[0026] **Figure 7C** is an illustration of an example embodiment of processing a buyer;

[0027] **Figure 7D** is an illustration of an example embodiment of processing a seller; and

[0028] **Figure 7E** is an illustration of an example embodiment of processing a secondary seller.

[0029] Example embodiments will now be described with reference to the accompanying drawings, which form a part of the present disclosure and which illustrate example embodiments which may be practiced. As used in the present disclosure and the appended claims, the terms "embodiment," "example embodiment," "exemplary embodiment," and "present embodiment" do not necessarily refer to a single embodiment, although they may, and various example embodiments may be readily combined and/or interchanged without departing from the scope or spirit of example embodiments. Furthermore, the terminology as used in the present disclosure and the appended claims is for the purpose of describing example embodiments only and is not intended to be limitations. In this respect, as used in the present disclosure and the appended claims, the term "in" may include "in" and "on," and the terms "a," "an," and "the" may include singular and plural references. Furthermore, as used in the present disclosure and the appended claims, the term "by" may also mean "from," depending on the context. Furthermore, as used in the present disclosure and the appended claims, the term "if" may also mean "when" or "upon," depending on the context. Furthermore, as used in the present disclosure and the appended claims, the words "and/or" may refer to and encompass any and all possible combinations of one or more of the associated listed items. Furthermore, as used in the present disclosure, a "**platform**", "**service**", "**system**", "**processor**", or the like, may be any platform, service, system, processor, computing device, and/or communication device for facilitating one or more actions and/or transactions between users, including the actions and/or transactions described in the present disclosure, and may include a virtual machine, computer, node, instance, host, or machine in a networked computing environment. Furthermore, as used in the present disclosure, a "**user**" may include a consumer, a business/company, a buyer, a seller, a secondary seller (who may also be considered as a seller), a platform, a service, a system, and/or a processor. In this regard, a user who is a buyer in one transaction may be a seller or secondary seller in another transaction. Similarly, a user who is a seller in one transaction may be a buyer or secondary seller in another transaction. Similarly, a user who is a secondary seller in one transaction may be a buyer or seller in another transaction. Similarly, a user who is a buyer on one platform may be transacting with a user who is seller on another platform, and vice versa. Similarly, a user who is a buyer on one platform may be transacting with a user who is secondary seller on another platform, and vice versa. Furthermore, as used in the present disclosure, a "**secondary seller**" is a user who provides secondary products and/or services. Furthermore, as used in the present disclosure, a

"**product**" may include a product and/or service, and similarly, a "**service**" may include a product and/or service. Furthermore, as used in the present disclosure, a "**previous transaction**" may be a completed transaction; an uncompleted transaction; a successful transaction; an unsuccessful transaction; a pending transaction; a completed optimal transaction (e.g., a completed transaction in which both the buyer and seller are satisfied); a completed non-optimal transaction (e.g., a completed transaction in which one or both of the buyer and seller are not satisfied); an action performed by a seller which may or may not have resulted in a transaction, but which resulted in a rating, feedback, comment, like/dislike, etc. for the action (e.g., a posting of a product and/or service for sale by a seller, which received likes and/or comments from users), an action performed by any user that resulted in a change in data for the action (e.g., such change in data may be from another user, another action, etc.), etc.

Detailed Description

[0030] Today, there are various services and platforms for facilitating transactions between users. It is recognized in the present disclosure that certain conventional approaches to facilitating transactions between users inherently suffer from problems.

[0031] As an illustrative example of problems encountered by users, while conventional approaches enable buyers to search for products and/or services offered by sellers, buyers oftentimes face difficulties in finding what they are looking for. For example, many platforms will have, at any given time, significant quantities and selection of available products, services, and/or sellers, making it difficult for buyers to search for and/or decide on which product and/or service to purchase and which seller to purchase from. Correspondingly, sellers also face difficulties in distinguishing themselves and/or their products and/or services from other sellers and other sellers' products and/or services. Furthermore, when a seller want to sell their products and/or services on more than one platform, the seller will need to register and create their own profiles for each of the platforms.

[0032] As another example, while many platforms make available ratings provided by buyers to sellers so as to assist future buyers in their seller selection process, such ratings may not necessarily provide a fair, accurate, up-to-date, and/or complete picture of the seller. Take, for example, ratings given by previous buyers to a seller for completed transactions involving entirely unrelated products and/or services as compared to the products and/or services being sought after by a new potential buyer. As a more specific example, in a situation where a seller produces and/or sells groceries and electronics, ratings provided by one or more previous buyers for certain produce (e.g., a fruit) may be entirely irrelevant and unrelated to electronic products offered by the seller (e.g., a fruit blender). In such situations, while the ratings given by the previous buyers for the completed transactions may (or

may not) be an accurate rating for the purchased products and/or services, it is possible (and likely) that such ratings are not accurate and relevant ratings for other unrelated products and/or services.

[0033] Inaccurate, not-up-to-date, and/or incomplete ratings may also include those ratings given by previous buyers to a seller in previous transactions that were completed some time ago (e.g., a month ago, a year ago, several years ago, etc., which may vary based on, among other things, the product and/or service, the seller, the jurisdiction/country, the platform, etc.). While the previous seller may have received certain ratings based on those previous transactions, one or more factors and/or criterion (controllable and/or uncontrollable) for the same products and/or services may have changed since the date of the previous transactions, making such ratings to be inaccurate, not up-to-date, and/or incomplete. Future potential buyers may subsequently base their decisions on whether or not to transact with the seller based on such inaccurate, not up-to-date, and/or incomplete ratings. Example factors and/or criterion that may change over time, such as between the time of a previous transaction and today, may include those pertaining to price, price per unit, applicable regulation, applicable legislation, SME rating by a credible source, changes in suppliers of sellers, status as a government-accredited supplier, changes in secondary sellers or charges levied by secondary sellers, host platform, changes in logistics partners, changes of one or more of the above in one platform but not another, different changes of one or more of the above in one platform compared to another platform, etc. In such situations, the ratings provided by previous buyers to the seller in the previous transactions may be inaccurate, not up-to-date, incomplete, and/or irrelevant to a potential buyer that is considering to buy the same products and/or services from the seller today.

[0034] As another illustrative example of problems encountered by users, oftentimes a buyer who searches for and/or purchases a product and/or service (referred to herein as a "**primary product and/or service**", or the like) may also require other products and/or services (referred to herein as a "**secondary product and/or service**", or the like) based on the primary product and/or service, to support and/or implement the primary product and/or service, etc. In such situations, the buyer will then need to conduct separate new searches and purchases of each secondary product and/or service, which is time consuming, tedious, and even problematic. For example, oftentimes the buyer may encounter undesirable situations in which such secondary products and/or services cannot be found, are unavailable (e.g., out of stock), have very long lead times, have unacceptably high prices or rates, have quality issues (e.g., seasonal products and/or services), etc. In such situations, the buyer may have very limited options. For example, the buyer may be required to pay more than expected or budgeted for the secondary products and/or services. As another example, the buyer may be required to delay installation, implementation, and/or usage of the primary product and/or service until the

secondary products and/or services become available. As another example, the buyer may be required to find replacement primary products and/or services that require different secondary products and/or services (but which will still require the buyer to perform separate new searches and purchases for the different secondary products and/or services, which may also encounter similar or the same problems as described above and in the present disclosure). As another example, the buyer may be required to refund and/or resell the primary product and/or service if a replacement primary product and/or service needs to be purchased.

[0035] Present example embodiments relate generally to and/or comprise systems, subsystems, processors, devices, logic, methods, and processes for addressing conventional problems, including those described above and in the present disclosure, and more specifically, example embodiments relate to systems, subsystems, processors, devices, logic, methods, and processes for managing transactions between a plurality of users.

[0036] Example embodiments of a system for managing transactions (e.g., system 100).

[0037] As an overview, an example embodiment of a system (e.g., system 100) for managing transactions between a plurality of users is illustrated in **FIGURE 1**. The system 100 is configurable or configured to perform one or more of a plurality of functions, operations, actions, methods, and/or processes, including those described in the present disclosure for the system 100, elements of the system 100, the main processor 200, elements of the main processor 200, the method 700, and/or actions of the method 700.

[0038] The system 100 includes and/or communicates with one or more main processors (e.g., main processor 200). The main processor 200 may include and/or be implemented and/or assisted by, in part or in whole, artificial intelligence, machine learning, and the like. The system 100 includes and/or communicates with one or more databases (e.g., database 150). Each database 150 may include known types and forms of databases, distributed ledgers (e.g., blockchain), etc. The main processor 200 is configurable or configured to communicate with the databases 150 and users 110, 120, 130, including one or more buyers (e.g., buyer 110), one or more sellers or candidate sellers (e.g., seller 120), one or more secondary sellers or candidate secondary sellers (e.g., secondary seller 130), and/or one or more other platforms and/or services (not shown), via one or more networks (e.g., network 140). It is to be understood in the present disclosure that the system 100 may implement a platform and/or service for managing transactions between users 110, 120, 130 (wherein each user 110, 120, and/or 130 may be a person, organization/corporation/company, a bot and/or machine, and/or another platform configurable or configured to manage transactions for its users).

[0039] As used in the present disclosure, when applicable, a reference to a system, processor, and/or element of a system and/or a processor used to perform processing may also refer to, apply to, and/or include a computing device, processor, server, system, cloud-based computing, or the like, and/or functionality of a processor, computing device, server, system, cloud-based computing, or the like. The system 100 and/or main processor 200 (and/or its elements, as described in the present disclosure) may be any processor, server, system, device, computing device, controller, microprocessor, microcontroller, microchip, semiconductor device, or the like, configurable or configured to perform, among other things, a processing and/or managing of information, data communications, generating of updated transaction ratings, generating of updated user ratings, generating of matches between users (including buyers, sellers, and/or secondary sellers), selective anonymizing of information (including information pertaining to users), selective de-anonymizing of information (including information pertaining to users), hashing of information, encryption and decryption of information, registering transactions in a distributed ledger (or DLT, such as blockchain), creating cryptocurrencies and/or digital tokens, creating digital signatures, and/or other actions described above and in the present disclosure. Alternatively or in addition, the system 100 and/or main processor 200 (and/or its elements, as described in the present disclosure) may include and/or be a part of a virtual machine, software, processor, computer, node, instance, host, or machine, including those in a networked computing environment. Furthermore, as used in the present disclosure, a network and/or cloud, including network 140, may be a collection of devices connected by communication channels that facilitate communications between devices and allow for devices to share resources. Such resources may encompass any types of resources for running instances including hardware (such as servers, clients, mainframe computers, networks, network storage, data sources, memory, central processing unit time, scientific instruments, and other computing devices), as well as software, software licenses, available network services, and other non-hardware resources, or a combination thereof. A network or cloud, including network 140, may include, but is not limited to, computing grid systems, peer to peer systems, mesh-type systems, distributed computing environments, cloud computing environment, etc. Such network or cloud, including network 140, may include hardware and software infrastructures configured to form a virtual organization comprised of multiple resources which may be in geographically disperse locations. Network, including network 140, may also refer to a communication medium between processes on the same device. Also as referred to herein, a network element, node, or server may be a device deployed to execute a program operating as a socket listener and may include software instances.

[0040] These and other elements of the system 100 will now be further described with reference to the accompanying drawings.

[0041] **The main processor (e.g., main processor 200).**

[0042] **FIGURE 2** illustrates a high level overview of an example embodiment of the main processor (e.g., main processor 200). The main processor 200 is configurable or configured to perform one or more of a plurality of functions, operations, actions, methods, and/or processes, including those described in the present disclosure for the system 100, the main processor 200, elements of the main processor 200, the method 700, and/or actions of the method 700. For example, the main processor 200 may have one or more specific processors configurable or configured to process users who are sellers 120 (or will perform the role of a seller 120), buyers 110 (or will perform the role of a buyer 110), and/or secondary sellers 130 (or will perform the role of a secondary seller 130). The main processor 200 may also have one or more specific processors configurable or configured to dynamically generate updated ratings for sellers or candidate sellers 120, buyers 110, and/or secondary sellers or candidate secondary sellers 130. The main processor 200 may also have one or more specific processors configurable or configured to dynamically match parties to a potential transaction, including generating candidate transactions and confirmed transactions.

[0043] As a brief overview of the main processor 200 from the standpoint of sellers, the main processor 200 is configurable or configured to dynamically generate a rating for a previous transaction conducted by the seller. The dynamically generated rating may be a real-time, current, most recent, adjusted, updated, and/or converted rating for the previous transaction by the seller (referred to herein as an **"updated seller transaction rating"**, **"updated first seller transaction rating"**, **"updated transaction rating"**, or the like). Such dynamically generated ratings may based on, among other things, original rating(s) for the previous transaction given to the seller by one or more other parties involved in the previous transaction (e.g., original ratings may include a rating given to the seller by a buyer for the previous transaction, a rating given to the seller by a secondary seller for the previous transaction, a rating given to the seller by a secondary seller for a transaction related to, corresponding to, and/or resulting from the previous transaction (referred to herein as a **"secondary transaction"**), or the like). For example, as will be further described in the present disclosure, if a previous transaction by the seller involved only one buyer (i.e., no other sellers and buyers), who provided a rating to the seller for the previous transaction (referred to herein as **"original rating"**, or the like), the updated seller transaction rating for the previous transaction may be generated by the main processor 200 by, among other things, transforming, adjusting, updating, and/or amending (referred to herein as **"transform"**, **"transforming"**, **"transformation"**, or the like) of the original rating. As

another example, as will be further described in the present disclosure, if a previous transaction by the seller involved one buyer and one secondary seller, each of whom provided a rating to the seller for the previous transaction, the updated seller transaction rating for the previous transaction may be generated by the main processor 200 by, among other things, transforming of the original ratings from the buyer and secondary seller, followed by combining (e.g., summation, average, normalize, weighted average, etc.) the transformed original ratings. In some example embodiments, dynamically generated ratings for a seller or candidate seller being considered for a potential new transaction may also be based on original rating(s) for previous transactions given to the seller, who was a buyer in the previous transaction, by a seller in the previous transaction and/or a secondary seller in the previous transaction. In example embodiments, dynamically generated ratings (or updated ratings, as described in the present disclosure) have a different rating value (i.e., updated ratings) than their corresponding original ratings.

[0044] It is recognized in the present disclosure that dynamically generating an updated rating (e.g., transforming an original rating into an updated rating, which may be an updated transaction rating for a transaction conducted by the seller and/or an updated seller rating for the seller based on one or more previous transactions conducted by the seller) may provide for a more accurate rating of a seller in one or more ways. For example, the original rating for a previous transaction may be an old and/or outdated rating based on issues, factors, values, etc. (e.g., matching criterion, as described in the present disclosure) that have changed and/or have become outdated since the relevant date of the previous transaction. In such an example, example embodiments are configured to transform the original rating into an updated seller rating, taking into account the changed and/or outdated issues, factors, values, etc. As another example, the original rating for the previous transaction may be a rating provided by a different, separate, unrelated, etc. platform and/or service which may provide for different types, forms, standards, ranges, etc. of ratings as compared to the current platform and/or service. As a more specific example, a seller who is looking to transact and/or is a candidate to be matched to a potential new transaction on platform X (which allows users to rate each other on a scale of 1-5) may have an original rating from another unrelated platform Y (which allows users to rate each other as "excellent", "very good", "satisfactory but expensive", "satisfactory but delivery time could be better", "below average", "poor", etc.). In such an example, example embodiments are configured to transform the original rating into an updated seller rating, taking into account the difference in ratings between the platforms.

[0045] The main processor 200 is also configurable or configured to dynamically generate an overall rating for the seller, including generating a real-time, current, most recent, adjusted, and/or

updated rating for the seller (referred to herein as an **"updated seller rating"**, **"updated first seller rating"**, **"updated rating"**, or the like). Such dynamically generated ratings may be based on, among other things, one or more of the updated seller transaction ratings for one or more previous transactions by the seller. For example, as will be further described in the present disclosure, if the seller has only been previously involved in one previous transaction (i.e., no other previous transactions in which the seller acted as or played the role of a seller), the updated seller rating may be based on the updated seller transaction rating for the previous transaction. As another example, if the seller has been previously involved in a plurality of previous transactions, the updated seller rating may be based on the updated seller transaction ratings for the plurality of previous transactions. In some example embodiments, one or more previous transactions may not be used (or may carry less or no weight) in generating the updated seller rating. For example, if the updated seller rating is being generated for a buyer of a potential new transaction but a previous transaction for the seller pertained to entirely unrelated products and/or services, different source and/or destination locations, vastly different quantities, and/or any other factors and/or issues that render the previous transaction to be unrelated to, insignificant in view of, entirely different from, and/or incomparable to the potential new transaction, the updated seller transaction rating generated by the main processor 200 for such previous transaction may not be used (or may carry less or no weight) in generating the updated seller rating.

[0046] As a brief overview of the main processor 200 from the standpoint of buyers, the main processor 200 is configurable or configured to dynamically generate a rating for a previous transaction conducted by the buyer. The dynamically generated rating may be a real-time, current, most recent, adjusted, updated, and/or converted rating for the previous transaction by the buyer (referred to herein as an **"updated buyer transaction rating"**, **"updated first buyer transaction rating"**, **"updated transaction rating"**, or the like). Such dynamically generated ratings may be based on, among other things, original rating(s) for the previous transaction given to the buyer by one or more other parties involved in the previous transaction (e.g., a rating given to the buyer by a seller for the previous transaction, a rating given to the buyer by a secondary seller for the previous transaction, a rating given to the buyer by a secondary seller for a secondary transaction, etc.). For example, as will be further described in the present disclosure, if a previous transaction by the buyer involved only one seller, who provided an original rating to the buyer, the updated buyer transaction rating generated by the main processor 200 for the previous transaction may involve, among other things, a transforming of the original rating. As another example, as will be further described in the present disclosure, if a previous transaction by the buyer involved one seller and one secondary seller, each of whom

provided a rating to the buyer based on the previous transaction, the updated buyer transaction rating generated by the main processor 200 for the previous transaction may involve, among other things, a transforming of the original ratings from the seller and secondary seller, followed by combining the transformed original ratings. In some example embodiments, dynamically generated ratings for a buyer of a potential new transaction may also be based on original rating(s) for previous transactions given to the buyer, who was a seller in the previous transaction, by a buyer in the previous transaction and/or a secondary seller in the previous transaction. In example embodiments, dynamically generated ratings (or updated ratings, as described in the present disclosure) have a different rating value (i.e., updated ratings) than their corresponding original ratings.

[0047] It is recognized in the present disclosure that dynamically generating an updated rating (e.g., transforming an original rating into an updated rating, which may be an updated transaction rating for a transaction conducted by the buyer and/or an updated buyer rating for the buyer based on one or more previous transactions conducted by the buyer) may provide for a more accurate rating of a buyer in one or more ways. For example, the original rating for a previous transaction may be an old and/or outdated rating based on issues, factors, values, etc. (e.g., matching criterion, as described in the present disclosure) that have changed and/or have become outdated since the relevant date of the previous transaction. In such an example, example embodiments are configured to transform the original rating into an updated buyer rating, taking into account the changed and/or outdated issues, factors, values, etc. As another example, the original rating for the previous transaction may be a rating provided by a different, separate, unrelated, etc. platform and/or service which may provide for different types, forms, standards, ranges, etc. of ratings as compared to the current platform and/or service. As a more specific example, a buyer who is looking to transact on platform A1 (which allows users to rate each other on a scale of 1-5) may have an original rating from another unrelated platform B1 (which allows users to rate each other in a different way, such as "excellent", "very good", "satisfactory but expensive", "satisfactory but delivery time could be better", "below average", "poor", etc.). In such an example, example embodiments are configured to transform the original rating into an updated buyer rating, taking into account the difference in ratings between the platforms.

[0048] The main processor 200 is also configurable or configured to dynamically generate an overall rating for the buyer, including generating a real-time, current, most recent, adjusted, and/or updated rating for the buyer (referred to herein as an **"updated buyer rating"**, **"updated first buyer rating"**, **"updated rating"**, or the like). Such dynamically generated ratings may be based on, among other things, one or more of the updated buyer transaction ratings for one or more previous transactions by the buyer. For example, as will be further described in the present disclosure, if the

buyer has only been previously involved in one previous transaction, the updated buyer rating may be based on the updated buyer transaction rating for the previous transaction. As another example, if the buyer has been previously involved in a plurality of previous transactions, the updated buyer rating may be based on the updated buyer transaction ratings for the plurality of previous transactions. In some example embodiments, one or more previous transactions may not be used (or may carry less or no weight) in generating the updated buyer rating. For example, if the updated buyer rating is being generated for a potential new transaction but a previous transaction for the buyer pertained to entirely unrelated products and/or services, different source and/or destination locations, vastly different quantities, and/or any other factors and/or issues that render the previous transaction to be unrelated to, insignificant in view of, entirely different from, and/or incomparable to the potential new transaction, the updated buyer transaction rating generated by the main processor 200 for such previous transaction may not be used (or may carry less or no weight) in generating the updated buyer rating.

[0049] As a brief overview of the main processor 200 from the standpoint of secondary sellers, the main processor 200 is configurable or configured to dynamically generate a rating for a previous transaction by the secondary seller (as a secondary seller, and in some embodiments, as a seller as well). The dynamically generated rating may be a real-time, current, most recent, adjusted, updated, and/or converted rating for the previous transaction by the secondary seller (referred to herein as an **"updated secondary seller transaction rating"**, **"updated first secondary seller transaction rating"**, **"updated transaction rating"**, or the like). Such dynamically generated ratings may be based on, among other things, original rating(s) for the previous transaction given to the secondary seller by one or more other parties involved in the previous transaction (e.g., a rating given to the secondary seller by a buyer for the previous transaction or a secondary transaction, a rating given to the secondary seller by a seller for the previous transaction or a secondary transaction, etc.). For example, as will be further described in the present disclosure, if a previous transaction by the secondary seller involved one buyer and one seller, each of whom provided a rating to the secondary seller based on the previous transaction, the updated secondary seller transaction rating generated by the main processor 200 for the previous transaction may involve, among other things, a transforming of the original ratings from the buyer and seller, followed by combining the transformed original ratings. In some example embodiments, dynamically generated ratings for a secondary seller or candidate secondary seller being considered for a potential new transaction may also be based on original rating(s) for previous transactions given to the secondary seller, who was a buyer in the previous transaction, by a seller in the previous transaction and/or a secondary seller in the previous transaction.

In example embodiments, dynamically generated ratings (or updated ratings, as described in the present disclosure) have a different rating value (i.e., updated ratings) than their corresponding original ratings.

[0050] It is recognized in the present disclosure that dynamically generating an updated rating (e.g., transforming an original rating into an updated rating, which may be an updated transaction rating for a transaction conducted by the secondary seller and/or an updated secondary seller rating for the secondary seller based on one or more previous transactions conducted by the secondary seller) may provide for a more accurate rating of a secondary seller in one or more ways. For example, the original rating for a previous transaction may be an old and/or outdated rating based on issues, factors, values, etc. (e.g., matching criterion, as described in the present disclosure) that have changed and/or have become outdated since the relevant date of the previous transaction. In such an example, example embodiments are configured to transform the original rating into an updated secondary seller rating, taking into account the changed and/or outdated issues, factors, values, etc. As another example, the original rating for the previous transaction may be a rating provided by a different, separate, unrelated, etc. platform and/or service which may provide for different types, forms, standards, ranges, etc. of ratings as compared to the current platform and/or service. As a more specific example, a secondary seller who is looking to transact and/or is a candidate to be matched to a potential new transaction on platform A (which allows users to rate each other on a scale of 1-5) may have an original rating from another unrelated platform B (which allows users to rate each other as "excellent", "very good", "satisfactory but expensive", "satisfactory but delivery time could be better", "below average", "poor", etc.). In such an example, example embodiments are configured to transform the original rating into an updated secondary seller rating, taking into account the difference in ratings between the platforms.

[0051] The main processor 200 is also configurable or configured to dynamically generate an overall rating for the secondary seller, including generating a real-time, current, most recent, adjusted, and/or updated rating for the secondary seller (referred to herein as an **"updated secondary seller rating"**, **"updated first secondary seller rating"**, **"updated rating"**, or the like). Such dynamically generated ratings may be based on, among other things, one or more of the updated secondary seller transaction ratings for one or more previous transactions by the secondary seller. For example, as will be further described in the present disclosure, if the secondary seller has only been previously involved in one previous transaction, the updated secondary seller rating may be based on the updated secondary seller transaction rating for the previous transaction. As another example, if the secondary seller has been previously involved in a plurality of previous transactions, the updated secondary

seller rating may be based on the updated secondary seller transaction ratings for the plurality of previous transactions. In some example embodiments, one or more previous transactions may not be used (or may carry less or no weight) in generating the updated secondary seller rating. For example, if the updated secondary seller rating is being generated for a buyer of a potential new transaction but a previous transaction for the secondary seller pertained to entirely unrelated products and/or services, different source and/or destination locations, vastly different quantities, and/or any other factors and/or issues that render the previous transaction to be unrelated to, insignificant in view of, entirely different from, and/or incomparable to the potential new transaction, the updated secondary seller transaction rating generated by the main processor 200 for such previous transaction may not be used (or may carry less or weight) in generating the updated secondary seller rating.

[0052] As a brief overview of the main processor 200 from the standpoint of initiating/generating, facilitating, and/or managing transactions, the main processor 200 is configurable or configured to dynamically select one or more parties for a potential new transaction and/or dynamically generate recommendations and/or matches of one or more parties to a potential new transaction. For example, when a buyer for a potential new transaction is looking for a particular product and/or service (e.g., via submitting of a search query), the main processor 200 may be configurable or configured to match the buyer with one or more sellers or candidate sellers. The main processor 200 may also be configurable or configured to match the buyer and/or one or more sellers (who are matched, by the main processor 200, to the buyer) to one or more secondary sellers. In this regard, one or more secondary products and/or services to be offered by such secondary sellers may or may not be included in the search query submitted by the buyer. For example, a search query submitted by a buyer for a potential new transaction may expressly include queries on primary product(s) and/or service(s) and secondary product(s) and/or service(s) required for such primary product(s) and/or service(s). As another example, a search query submitted by a buyer for a potential new transaction may not include anything pertaining to secondary product(s) and/or service(s). In such an example, example embodiments of the main processor 200 are configurable or configured to generate recommendations and/or matches of secondary product(s) and/or service(s) for the potential new transaction based on, among other things, the search query received from the buyer, information from the search query processor 210, information pertaining to the buyer (e.g., as generated by the search query processor 210 and/or buyer processor 400), and/or information pertaining to one or more candidate sellers (e.g., as generated by the search query processor 210 and/or seller processor 300).

[0053] It is to be understood that, although example embodiments are described in the present disclosure as being directed to potential new transactions that are initiated by a search query submitted

by a buyer, example embodiments may also be directed to potential new transactions that are initiated by a search query submitted by a seller (or secondary seller) without departing from the teachings of the present disclosure. For example, a seller having a primary product and/or service to sell may submit, to the search query processor 210, a search query to search for one or more buyers or candidate buyers who are searching for and/or may be interested to buy such primary product and/or service. As another example, a secondary seller having a secondary product and/or service to sell may submit, to the search query processor 210, a search query to search for one or more buyers or candidate buyers and/or one or more sellers or candidate sellers who are searching for and/or may be interested to buy such secondary product and/or service.

[0054] In example embodiments, the matching of a buyer with one or more sellers may be based on, among other things, the updated buyer rating for the buyer and the updated seller rating for a plurality of potential sellers (referred to herein as "**candidate sellers**", or the like). The matching of the buyer and/or one or more sellers (who are matched, by the main processor 200, to the buyer) to the one or more secondary sellers may be based on, among other things, the updated buyer rating for the buyer, the updated seller rating for the one or more sellers, and/or the updated secondary seller rating for a plurality of potential secondary sellers (referred to herein as "**candidate secondary sellers**", or the like). For example, as will be further described in the present disclosure, a buyer may be matched to a seller by processing a best match between an updated buyer rating of the buyer and an updated seller ratings of one or more candidate seller. As another example, a buyer may be matched to a seller by first determining whether one or more secondary sellers are required. If it is determined that one or more secondary sellers are required, the buyer may be matched to the seller by matching an updated buyer rating of the buyer, updated seller ratings of one or more candidate sellers, and updated secondary seller ratings of one or more candidate secondary sellers. As another example, as will be further described in the present disclosure, a secondary seller may be matched to a buyer by processing a best match between an updated secondary seller rating of the secondary seller and an updated buyer rating of buyer. As another example, as will be further described in the present disclosure, a secondary seller may be matched to a buyer by processing a best match between an updated secondary seller rating of the secondary seller, an updated buyer rating of the buyer, and updated seller ratings of one or more candidate sellers. As another example, as will be further described in the present disclosure, a secondary seller may be matched to a seller by processing a best match between an updated secondary seller rating of the secondary seller and an updated seller rating of seller. As another example, as will be further described in the present disclosure, a secondary seller

may be matched to a seller by processing a best match between an updated secondary seller rating of the secondary seller, an updated seller rating of the seller, and updated buyer rating of the buyer.

[0055] Example embodiments of the main processor 200 are configurable or configured to include and/or communicate with one or more specific processors for performing one or more of the functions, operations, actions, methods, and/or processes described above and in the present disclosure. For example, the main processor 200 may include and/or communicate with a search query processor (e.g., search query processor 210). The main processor 200 may also include and/or communicate with a seller processor (e.g., seller processor 300). The main processor 200 may also include and/or communicate with a buyer processor (e.g., buyer processor 400). The main processor 200 may also include and/or communicate with a secondary seller processor (e.g., secondary seller processor 500). The main processor 200 may also include and/or communicate with a matching processor (e.g., matching processor 600). The main processor 200 may also include and/or communicate with a transaction processor (e.g., transaction processor 650). It is to be understood in the present disclosure that example embodiments of the main processor 200 may include or not include one or more of the specific processors described above and in the present disclosure, may include additional specific processors not described in the present disclosure, may include specific processors performing functions, operations, actions, methods, and/or processes in different sequences and/or combinations than described in the present disclosure, and/or one or more of the specific processors described above and in the present disclosure may be combinable into a single specific processor and/or divided into two or more specific processors. These and other elements of the main processor 200 will now be further described with reference to the accompanying drawings.

[0056] The search query processor (e.g., search query processor 210).

[0057] In an example embodiment, the main processor 200 includes a search query processor (e.g., search query processor 210). The search query processor 210 is configurable or configured to perform one or more functions, operations, actions, methods, and/or processes described above and in the present disclosure, including the search query processing actions 702, as illustrated in Figures 7A and 7B. For example, the search query processor 210 may be configurable or configured to receive one or more search queries from one or more users 110 (i.e., the buyer). The search query processor 210 may also receive one or more search queries from users 120 and/or 130 when such users are a buyer in a potential transaction.

[0058] The search query processor 210 is also configurable or configured to identify the buyer 110. In identifying the buyer, the search query processor 210 may obtain information from the search query itself, and may also obtain additional information from a user profile of the buyer 110. The

user profile of the buyer 110 may include information provided by the buyer 110 (e.g., during setup and updating of the buyer's account) and/or generated by the search query processor 210 and/or other elements of the main processor 210. The user profile of the buyer 110 may include information such as the buyer's name or company name, type of organization, jurisdictions/countries of operation, preferred currency, shipping addresses, billing addresses, preferred forms of payment, business registration number, date of incorporation, list of affiliated companies, etc. The user profile of the buyer 110 may be stored in one or more databases 150, and the search query processor 210 and/or one or more other elements of the main processor 200 may be configurable or configured to control the database 150 (e.g., add received search queries to the database 150, amend information stored in the database 150, and/or delete information stored in the database 150).

[0059] The search query processor 210 is also configurable or configured to identify one or more pieces of information in the search query, which may be used for initiating a preliminary search for potentially matching sellers. For example, the one or more information in the search query may include one or more search query terms (e.g., key words) of a desired primary product and/or service submitted by the buyer. The one or more pieces of information in the search query may also include a category, industry, minimum/maximum units, minimum/maximum delivery lead times, payment terms, etc. The search query processor 210 may also be configurable or configured to identify one or more constraints for the desired primary products and/or services. Such one or more constraints may be identified, by the search query processor 210, from the received search query and/or via an analysis of the user profile of the buyer 110 (e.g., seller must be from certain countries, seller must have certain credentials or qualifications, sellers must not be in any legitimate public blacklists, sellers must be minimally 5 years in business, sellers must contribute to certain Corporate Social Responsibility goals e.g. female entrepreneurs or NGOs, etc.).

[0060] After the search query processor 210 has identified the buyer 110, identified one or more information in the search query, and/or identified one or more constraints, as described above and in the present disclosure, the search query processor 210 is configurable or configured to provide one or more of the identified information to the seller processor 300, buyer processor 400, secondary seller processor 500, matching processor 600, and/or transaction processor 650.

[0061] The seller processor (e.g., seller processor 300).

[0062] **FIGURE 3** illustrates an example embodiment of the seller processor (e.g., seller processor 300). The seller processor 300 is configurable or configured to perform one or more functions, operations, actions, methods, and/or processes described above and in the present disclosure, including the seller actions 720 and 730, as illustrated in Figures 7A and 7D.

[0063] The seller processor 300 may include a candidate seller selector 310. The seller processor 300 may also include a previous candidate seller transaction selector 320. The seller processor 300 may also include a previous candidate seller transaction processor 330. The seller processor 300 may also include an updated candidate seller rating processor 340. In example embodiments, an output of one or more elements of the seller processor 300 may be provided as an input to one or more elements of the buyer processor 400, one or more elements of the secondary seller processor 500, one or more elements of the matching processor 600, and/or one or more elements of the transaction processor 650.

[0064] The elements of the seller processor 300 will now be further described with reference to the accompanying drawings.

[0065] The candidate seller selector (e.g., candidate seller selector 310).

[0066] In an example embodiment, the seller processor 300 includes a candidate seller selector (e.g., candidate seller selector 310). The candidate seller selector 310 is configurable or configured to receive one or more identified information from the search query processor 210. For example, the candidate seller selector 310 may receive one or more pieces of information identified in the search query, including the search query terms, category, industry, etc. The candidate seller selector 310 may also receive one or more identified constraints. The candidate seller selector 310 may also receive information from the buyer processor 400 and/or secondary seller processor 500.

[0067] The candidate seller selector 310 may perform a search, in one or more databases 150, for one or more candidate sellers 120 who may be a potential match to the buyer 110 based on one or more pieces of information received. For example, if the information received from the search query processor 210 includes search query terms "medical-grade titanium screw assemblies" and constraints "from Singapore, Japan, or Korea only" and "deliver to Thailand", the candidate seller selector 310 may perform a search, in one or more databases 150, for one or more candidate sellers 120 that are based in Singapore, Japan, or Korea only, who supply medical-grade titanium screw assemblies, and who can ship to Thailand. As another example, the information received from the search query processor 210 may include search query terms "medical-grade titanium screw assemblies" and constraints "from Singapore, Japan, or Korea only" and "deliver to Thailand"; the information received from the buyer processor 400 may include additional information about the buyer 110 that the buyer processor 400 has processed (e.g., original ratings for the buyer, experience or history of the buyer in performing transactions, credit rating of the buyer, etc.); and the information received from the secondary seller processor 500 may include an identification of available secondary products and/or services that will likely be required for the primary products and/or services identified in the

search query. In such example, the candidate seller selector 310 may perform a search, in one or more databases 150, for one or more candidate sellers 120 that are based in Singapore, Japan, or Korea only, who supply medical-grade titanium screw assemblies, who can ship to Thailand, who may be an appropriate or suitable match to the buyer based on the additional information about the buyer 110 that the buyer processor 400 has processed, and whose primary products and/or services may require the available secondary products and/or services identified by the secondary seller processor 500.

[0068] The candidate seller selector 310 may select one or more candidate sellers 120 based on the abovementioned search, and provide the selected one or more candidate sellers 120 to the previous candidate seller transaction selector 320.

[0069] The previous candidate seller transaction selector (e.g., previous candidate seller transaction selector 320).

[0070] In an example embodiment, the seller processor 300 includes a previous candidate seller transaction selector (e.g., previous candidate seller transaction selector 320). The previous candidate seller transaction selector 320 is configurable or configured to receive one or more identified information from the candidate seller selector 310. For example, the previous candidate seller transaction selector 320 may receive information pertaining to the one or more candidate sellers 120 selected by the candidate seller selector 310. The previous candidate seller transaction selector 320 may also receive information from the search query processor 210, the buyer processor 400, and/or secondary seller processor 500.

[0071] The previous candidate seller transaction selector 320 may perform, for each candidate seller, a search in one or more databases 150 for one or more previous transactions conducted by the candidate seller (referred to herein as "**previous candidate seller transactions**", or the like). Such previous transactions conducted by the candidate seller may be limited to previous transactions in which the candidate seller was the seller in the previous transaction.

[0072] In example embodiments, the searching of one or more previous transactions conducted by the candidate seller may be limited to previous transactions in which the candidate seller was selected, from a plurality of available sellers, as a match to a buyer of the previous transaction based on: a search query that was submitted by the buyer of the previous transaction; and a matching criterion used in the previous transaction to match the buyer of the previous transaction with the candidate seller. The previous transaction may include one or more relevant dates, which may be a date on which the candidate seller was matched to the buyer of the previous transaction, a date on which the previous transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.) or one or more dates (e.g., the most

relevant date, the latest date, etc.) on which transactions are concluded (e.g., in situations when a previous transaction includes multiple transactions that conclude on separate dates) (referred to herein as "**relevant date**", or the like). In example embodiments, the matching criterion for the previous transaction (and for some or all transactions processed by the main processor 200) may be a predetermined matching criterion (e.g., based on product and/or service, category of product and/or service, industry, etc.) and/or a dynamically generated matching criterion generated based on an analysis, by one or more elements of the main processor 200, of, among other things, the buyer and/or candidate seller (referred to herein as "**predetermined matching criterion**", "**matching criterion**", or the like). As non-limiting examples, the matching criterion may be any criteria selected based on the received search query (e.g., information received from the search query processor 210), the candidate seller (e.g., information received from the previous candidate seller transaction selector 320 and/or other elements of the seller processor 300), and/or the buyer of the previous transaction (e.g., information receivable from the buyer processor 400 pertaining to the buyer of the previous transaction). For example, the matching criterion may include, but is not limited to, a profile of the candidate seller on the relevant date; a profile of the buyer of the previous transaction on the relevant date; a preference of the candidate seller on the relevant date; a preference of the buyer of the previous transaction on the relevant date; a credit rating of the candidate seller on the relevant date; a credit rating of the buyer of the previous transaction on the relevant date; a price, price range, and/or unit price on the relevant date; an original rating provided by the buyer to the candidate seller; an original rating provided by the buyer to one or more secondary sellers; an original rating provided by the candidate seller to the buyer; an original rating provided by the candidate seller to one or more secondary sellers; a dynamically generated or updated candidate seller rating based on an original rating provided by the buyer to the candidate seller, as described in the present disclosure; a dynamically generated or updated candidate seller rating based on an original rating provided by a secondary seller to the candidate seller, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the candidate seller to the buyer, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by a secondary seller to the buyer, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the buyer to a secondary seller, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the candidate seller to a secondary seller, as described in the present disclosure; etc.

[0073] In some example embodiments, the searching of one or more previous transactions conducted by the candidate seller may also include previous transactions in which the candidate seller was selected, from a plurality of available sellers, as a match to a secondary seller of the previous transaction based on: the search query that was submitted by the buyer of the previous transaction; and a matching criterion used in the previous transaction to match the buyer of the previous transaction with the secondary seller. In example embodiments, the matching criterion for the previous transaction (and for some or all transactions processed by the main processor 200) may be similar to or the same as the matching criterion described above and in the present disclosure.

[0074] The previous candidate seller transaction selector 320 may select one or more previous candidate seller transactions for each candidate seller based on the abovementioned search, and provide the selected one or more previous candidate seller transactions to the previous candidate seller transaction processor 330.

[0075] The previous candidate seller transaction processor (e.g., previous candidate seller transaction processor 330).

[0076] In an example embodiment, the seller processor 300 includes a previous candidate seller transaction processor (e.g., previous candidate seller transaction processor 330). The previous candidate seller transaction processor 330 may be configurable or configured to receive information pertaining to the one or more candidate sellers 120 selected by the candidate seller selector 310. The previous candidate seller transaction processor 330 may also be configurable or configured to receive information pertaining to one or more previous candidate seller transactions selected by the previous candidate seller transaction selector 320. The previous candidate seller transaction processor 330 may also receive information from the search query processor 210, the buyer processor 400, and/or secondary seller processor 500.

[0077] The previous candidate seller transaction processor 330 is configurable or configured to perform a processing of each of the one or more previous candidate seller transactions selected by the previous candidate seller transaction selector 320. For example, if the previous candidate seller transaction selector 320 selected 5 previous candidate seller transactions, the previous candidate seller transaction processor 330 will perform a processing of the 5 previous candidate seller transactions. The processing, by the previous candidate seller transaction processor 330, of each previous candidate seller transaction includes identifying the relevant date of the previous candidate seller transaction. The processing, by the previous candidate seller transaction processor 330, may also include identifying one or more original ratings given to the candidate seller for the previous candidate seller transaction. For example, the previous candidate seller transaction processor 330 may identify an

original rating given by the buyer of the previous candidate seller transaction to the candidate seller for the previous candidate seller transaction (e.g., on or after the relevant date). The previous candidate seller transaction processor 330 may also identify an original rating given by a secondary seller (if any) of the previous candidate seller transaction to the candidate seller for the previous candidate seller transaction (or for a secondary transaction to the previous candidate seller transaction).

[0078] The processing, by the previous candidate seller transaction processor 330, may also include identifying one or more matching criterion for the previous candidate seller transaction. As described above and in the present disclosure, a matching criterion for a given transaction is a criterion used to match the buyer of the transaction to the seller for the transaction. Accordingly, the processing, by the previous candidate seller transaction processor 330, may include identifying the one or more matching criterion used to match the buyer of the previous candidate seller transaction to the candidate seller for the previous candidate seller transaction. The processing, by the previous candidate seller transaction processor 330, may also include identifying the one or more matching criterion used to match the buyer of the previous candidate seller transaction to a secondary seller for the previous candidate seller transaction (or for the secondary transaction to the previous candidate seller transaction).

[0079] The processing, by the previous candidate seller transaction processor 330, may also include selecting one or more matching criterion (referred to herein as "**outdated matching criterion**", or the like) that matches at least the following: the matching criterion has a "**relevant state**", which is a state of the matching criterion as of the relevant date; the matching criterion has a "**current state**", which is a most recent state of the matching criterion (e.g., a real-time state or state as of the date/time that the previous candidate seller transaction processor 330 performs the abovementioned processing of the matching criterion); and the relevant state is different from the current state. In some example embodiments, the previous candidate seller transaction processor 330 may perform an identification of the relevant state and current state of all identified matching criterion for the previous candidate seller transaction. For each matching criterion (or outdated matching criterion), the previous candidate seller transaction processor 330 may then compare the relevant state to the current state. In example embodiments when the previous candidate seller transaction processor 330 determines that the relevant state is different from the current state, the previous candidate seller transaction processor 330 may be configurable or configured to generate a rating adjustment factor for the matching criterion (or outdated matching criterion). The rating adjustment factor for the matching criterion (or outdated matching criterion) may be based on at least the comparison between

the relevant state and the current state. The rating adjustment factor is a quantitative factor used to represent the difference between the relevant state and current state of the matching criterion (or outdated matching criterion). For example, if the previous candidate seller transaction processor 330 selects 3 matching criterion (or outdated matching criterion), the previous candidate seller transaction processor 330 may generate a rating adjustment factor for each of the 3 selected matching criterion (or outdated matching criterion), or a total of 3 generated rating adjustment factors.

[0080] In example embodiments, the processing, by the previous candidate seller transaction processor 330, may also include generating an aggregate rating adjustment factor for each of the previous candidate seller transactions. The aggregate rating adjustment factor is an aggregate of the rating adjustment factors generated for each previous candidate seller transaction. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more matching criterion (or outdated matching criterion) of each previous candidate seller transaction. The aggregate rating adjustment factor may be an average, weighted average, etc. of some or all rating adjustment factors generated for the matching criterion of each previous candidate seller transaction. For example, if the previous candidate seller transaction processor 330 generates 3 rating adjustment factors for a previous candidate seller transaction, the aggregate rating adjustment factor may be generated based on the 3 generated rating adjustment factors.

[0081] The processing, by the previous candidate seller transaction processor 330, may also include generating an updated candidate seller transaction rating for each of the previous candidate seller transactions. The updated candidate seller transaction rating represents an update or adjustment of the original ratings given to the candidate sellers for the previous candidate seller transaction. The updated candidate seller transaction rating may be generated by transforming the one or more original ratings given to the candidate seller for the previous candidate seller transaction. The transforming of each original rating given to the candidate seller (which may be an original rating given by the buyer of the previous candidate seller transaction or an original rating given by the secondary seller of the previous candidate seller transaction) may be based on at least the aggregate rating adjustment factor for the previous candidate seller transaction. In this regard, the transforming of each original rating results in the updated candidate seller transaction rating having a different rating value from the original rating.

[0082] The previous candidate seller transaction processor 330 is configurable or configured to provide the generated updated candidate seller transaction rating for each previous candidate seller transaction to the updated candidate seller rating processor 340.

[0083] The updated candidate seller rating processor (e.g., updated candidate seller rating processor 340).

[0084] In an example embodiment, the seller processor 300 includes an updated candidate seller rating processor (e.g., updated candidate seller rating processor 340). The updated candidate seller rating processor 340 is configurable or configured to receive the updated candidate seller transaction rating for each previous candidate seller transaction from the previous candidate seller transaction processor 330. As described above and in the present disclosure, the updated candidate seller transaction rating represents an update or adjustment of the original ratings given to the candidate sellers for the previous candidate seller transaction. The updated candidate seller rating processor 340 may also receive information from the search query processor 210, the buyer processor 400, and/or secondary seller processor 500.

[0085] The updated candidate seller rating processor 340 is configurable or configured to generate an updated candidate seller rating for the candidate seller. The updated candidate seller rating represents an update or adjustment of the overall rating of the candidate seller. The updated candidate seller rating may be generated based on at least the updated candidate seller transaction ratings generated for the one or more previous candidate seller transactions. The updated candidate seller rating may be an average, weighted average, etc. of some or all of the updated candidate seller transaction ratings generated for the candidate seller. For example, if the previous candidate seller transaction processor 330 generates an updated candidate seller transaction rating for 5 previous candidate seller transactions, the updated candidate seller rating may be generated based on the 5 updated candidate seller transaction ratings.

[0086] In example embodiments, the main processor 200 matches buyers of potential new transactions (as per search queries received from the buyer) with candidate sellers based on, among other things, the updated candidate seller rating. For example, as described in the present disclosure, the main processor 200 matches the buyer of a potential new transaction to one or more candidate sellers by matching an updated buyer rating (as generated by the updated buyer rating processor 440 of the buyer processor 400, as described in the present disclosure) of the buyer with one or more best matching updated candidate seller ratings.

[0087] The buyer processor (e.g., buyer processor 400).

[0088] **FIGURE 4** illustrates an example embodiment of the buyer processor (e.g., buyer processor 400). The buyer processor 400 may be configurable or configured to perform one or more functions, operations, actions, methods, and/or processes described above and in the present disclosure, including the buyer actions 710, as illustrated in Figures 7A and 7C.

[0089] The buyer processor 400 may include a previous buyer transaction selector 420. The buyer processor 400 may also include a previous buyer transaction processor 430. The buyer processor 400 may also include an updated buyer rating processor 440. In example embodiments, an output of one or more elements of the buyer processor 400 may be provided as an input to one or more elements of the seller processor 300, one or more elements of the secondary seller processor 500, one or more elements of the matching processor 600, and/or one or more elements of the transaction processor 650.

[0090] The elements of the buyer processor 400 will now be further described with reference to the accompanying drawings.

[0091] The previous buyer transaction selector (e.g., previous buyer transaction selector 420).

[0092] In an example embodiment, the buyer processor 400 includes a previous buyer transaction selector (e.g., previous buyer transaction selector 420). The previous buyer transaction selector 420 is configurable or configured to receive information from the search query processor 210, the seller processor 300, and/or secondary seller processor 500.

[0093] The previous buyer transaction selector 420 may perform a search in one or more databases 150 for one or more previous transactions conducted by the buyer (referred to herein as "**previous buyer transactions**", or the like). Such previous transactions conducted by the buyer may be limited to previous transactions in which the buyer was the buyer in the previous transaction.

[0094] In example embodiments, the searching of one or more previous transactions conducted by the buyer may be limited to previous transactions in which a seller was selected, from a plurality of available sellers, as a match to the buyer based on: a search query that was submitted by the buyer for the previous transaction; and a matching criterion used in the previous transaction to match the buyer with the seller of the previous transaction. The previous transaction may include one or more relevant dates, which may be a date on which the buyer was matched to the seller of the previous transaction or a date on which the previous transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.) or one or more dates (e.g., the most relevant date, the latest date, etc.) on which transactions are concluded (e.g., in situations when a previous transaction includes multiple transactions that conclude on separate dates), as described in the present disclosure. In example embodiments, the matching criterion for the previous transaction (and for some or all transactions processed by the main processor 200) may be a predetermined matching criterion (e.g., based on product and/or service, category of product and/or service, industry, etc.) and/or a dynamically generated matching criterion generated based on an analysis, by one or more elements of the main processor 200, of, among other things, the

seller and/or buyer, as described in the present disclosure. For example, the matching criterion may include, but is not limited to, a profile of the seller of the previous transaction on the relevant date; a profile of the buyer on the relevant date; a preference of the seller of the previous transaction on the relevant date; a preference of the buyer on the relevant date; a credit rating of the seller of the previous transaction on the relevant date; a credit rating of the buyer on the relevant date; a price, price range, and/or unit price on the relevant date; an original rating provided by the buyer to the seller; an original rating provided by the buyer to one or more secondary sellers; an original rating provided by the seller to the buyer; an original rating provided by the seller to one or more secondary sellers; a dynamically generated or updated seller rating based on an original rating provided by the buyer to the seller, as described in the present disclosure; a dynamically generated or updated seller rating based on an original rating provided by a secondary seller to the seller, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the seller to the buyer, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by a secondary seller to the buyer, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the buyer to a secondary seller, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the seller to a secondary seller, as described in the present disclosure; etc.

[0095] In some example embodiments, the searching of one or more previous transactions conducted by the buyer may also include previous transactions in which a seller was selected, from a plurality of available sellers, as a match to a secondary seller of the previous transaction (or a secondary transaction related to the previous transaction) based on: the search query that was submitted by the buyer for the previous transaction; and a matching criterion used in the previous transaction to match the seller of the previous transaction with the secondary seller. In example embodiments, the matching criterion for the previous transaction (and for some or all transactions processed by the main processor 200) may be similar to or the same as the matching criterion described above and in the present disclosure.

[0096] The previous buyer transaction selector 420 may select one or more previous buyer transactions based on the abovementioned search, and provide the selected one or more previous buyer transactions to the previous buyer transaction processor 430.

[0097] The previous buyer transaction processor (e.g., previous buyer transaction processor 430).

[0098] In an example embodiment, the buyer processor 400 includes a previous buyer transaction processor (e.g., previous buyer transaction processor 430). The previous buyer transaction processor 430 may be configurable or configured to receive information pertaining to one or more previous buyer transactions selected by the previous buyer transaction selector 420. The previous buyer transaction processor 430 may also receive information from the search query processor 210, the seller processor 300, and/or secondary seller processor 500.

[0099] The previous buyer transaction processor 430 is configurable or configured to perform a processing of each of the one or more previous buyer transactions selected by the previous buyer transaction selector 420. For example, if the previous buyer transaction selector 420 selected 5 previous buyer transactions, the previous buyer transaction processor 430 will perform a processing of the 5 previous buyer transactions. The processing, by the previous buyer transaction processor 430, of each previous buyer transaction includes identifying the one or more relevant dates/times of the previous buyer transaction. The processing, by the previous buyer transaction processor 430, may also include identifying one or more original ratings given to the buyer for the previous buyer transaction. For example, the previous buyer transaction processor 430 may identify an original rating given by the seller of the previous buyer transaction to the buyer for the previous buyer transaction (e.g., on or after the relevant date). The previous buyer transaction processor 430 may also identify an original rating given by a secondary seller (if any) of the previous buyer transaction to the buyer for the previous buyer transaction (or for a secondary transaction to the previous buyer transaction).

[00100] The processing, by the previous buyer transaction processor 430, may also include identifying one or more matching criterion for the previous buyer transaction. As described above and in the present disclosure, a matching criterion for a given transaction is a criterion used to match the buyer of the transaction to the seller for the transaction. Accordingly, the processing, by the previous buyer transaction processor 430, may include identifying the one or more matching criterion used to match the seller of the previous buyer transaction to the buyer for the previous buyer transaction. The processing, by the previous buyer transaction processor 430, may also include identifying the one or more matching criterion used to match the seller of the previous buyer transaction to a secondary seller for the previous buyer transaction (or for the secondary transaction to the previous buyer transaction).

[00101] The processing, by the previous buyer transaction processor 430, may also include selecting one or more matching criterion (referred to herein as an "**outdated matching criterion**", or the like) that matches at least the following: the matching criterion has a "**relevant state**", which is a state of the matching criterion as of the relevant date; the matching criterion has a "**current state**",

which is a most recent state of the matching criterion (e.g., a real-time state or state as of the date/time that the previous buyer transaction processor 430 performs the abovementioned processing of the matching criterion); and the relevant state is different from the current state. In some example embodiments, the previous buyer transaction processor 430 may perform an identification of the relevant state and current state of all identified matching criterion for the previous buyer transaction. For each matching criterion (or outdated matching criterion), the previous buyer transaction processor 430 may then compare the relevant state to the current state. In example embodiments when the previous buyer transaction processor 430 determines that the relevant state is different from the current state, the previous buyer transaction processor 430 may be configurable or configured to generate a rating adjustment factor for the matching criterion (or outdated matching criterion). The rating adjustment factor for the matching criterion (or outdated matching criterion) may be based on at least the comparison between the relevant state and the current state. The rating adjustment factor is a quantitative factor used to represent the difference between the relevant state and current state of the matching criterion (or outdated matching criterion). For example, if the previous buyer transaction processor 430 selects 3 matching criterion (or outdated matching criterion), the previous buyer transaction processor 430 may generate a rating adjustment factor for each of the 3 selected matching criterion (or outdated matching criterion), or a total of 3 generated rating adjustment factors.

[00102] In example embodiments, the processing, by the previous buyer transaction processor 430, may also include generating an aggregate rating adjustment factor for each of the previous buyer transactions. The aggregate rating adjustment factor is an aggregate of the rating adjustment factors generated for each previous buyer transaction. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more matching criterion (or outdated matching criterion) of each previous buyer transaction. The aggregate rating adjustment factor may be an average, weighted average, etc. of some or all rating adjustment factors generated for the matching criterion of each previous buyer transaction. For example, if the previous buyer transaction processor 430 generates 3 rating adjustment factors for a previous buyer transaction, the aggregate rating adjustment factor may be generated based on the 3 generated rating adjustment factors.

[00103] The processing, by the previous buyer transaction processor 430, may also include generating an updated buyer transaction rating for each of the previous buyer transactions. The updated buyer transaction rating represents an update or adjustment of the original ratings given to the buyer for the previous buyer transaction. The updated buyer transaction rating may be generated by transforming the one or more original ratings given to the buyer for the previous buyer transaction.

The transforming of each original rating given to the buyer (which may be an original rating given by the seller of the previous buyer transaction or an original rating given by the secondary seller of the previous buyer transaction) may be based on at least the aggregate rating adjustment factor for the previous buyer transaction. In this regard, the transforming of each original rating results in the updated buyer transaction rating having a different rating value from the original rating.

[00104] The previous buyer transaction processor 430 is configurable or configured to provide the generated updated buyer transaction rating for each previous buyer transaction to the updated buyer rating processor 440.

[00105] *The updated buyer rating processor (e.g., updated buyer rating processor 440).*

[00106] In an example embodiment, the buyer processor 400 includes an updated buyer rating processor (e.g., updated buyer rating processor 440). The updated buyer rating processor 440 is configurable or configured to receive the updated buyer transaction rating for each previous buyer transaction from the previous buyer transaction processor 430. As described above and in the present disclosure, the updated buyer transaction rating represents an update or adjustment of the original ratings given to the buyer for the previous buyer transaction. The updated buyer rating processor 440 may also receive information from the search query processor 210, the seller processor 300, and/or secondary seller processor 500.

[00107] The updated buyer rating processor 440 is configurable or configured to generate an updated buyer rating for the buyer. The updated buyer rating represents an update or adjustment of the overall rating of the buyer. The updated buyer rating may be generated based on at least the updated buyer transaction ratings generated for the one or more previous buyer transactions. The updated buyer rating may be an average, weighted average, etc. of some or all of the updated buyer transaction ratings generated for the buyer. For example, if the previous buyer transaction processor 430 generates an updated buyer transaction rating for 5 previous buyer transactions, the updated buyer rating may be generated based on the 5 updated buyer transaction ratings.

[00108] In example embodiments, the main processor 200 matches buyers of potential new transactions (as per search queries received from the buyer) with candidate sellers based on, among other things, the updated buyer rating. For example, as described in the present disclosure, the main processor 200 matches the buyer of a potential new transaction to one or more candidate sellers by matching the updated buyer rating (as generated by the updated buyer rating processor 440 of the buyer processor 400) of the buyer with one or more best matching updated candidate seller ratings (as generated by the updated candidate seller rating processor 340 of the seller processor 300, as described in the present disclosure).

[00109] The secondary seller processor (e.g., secondary seller processor 500).

[00110] **FIGURE 5** illustrates an example embodiment of the secondary seller processor (e.g., secondary seller processor 500). The secondary seller processor 500 may be configurable or configured to perform one or more functions, operations, actions, methods, and/or processes described above and in the present disclosure, including the secondary seller actions 740 and 750, as illustrated in Figures 7A and 7E. Examples of secondary products and/or services offered by secondary sellers may include, but are not limited to, payment processing, financing, banking/insurance, cleaning and settlement services, logistics, arbitration, escrow, electronic trade documentation and clearance, warehousing, foreign currency exchange, KYC services, industry specific news services, online courses, conferences, standards and technology updates, government regulations, etc.

[00111] The secondary seller processor 500 may include a candidate secondary seller selector 510. The secondary seller processor 500 may also include a previous candidate secondary seller transaction selector 520. The secondary seller processor 500 may also include a previous candidate secondary seller transaction processor 530. The secondary seller processor 500 may also include an updated candidate secondary seller rating processor 540. In example embodiments, an output of one or more elements of the secondary seller processor 500 may be provided as an input to one or more elements of the seller processor 300, one or more elements of the buyer processor 400, one or more elements of the matching processor 600, and/or one or more elements of the transaction processor 650.

[00112] The elements of the secondary seller processor 500 will now be further described with reference to the accompanying drawings.

[00113] The candidate secondary seller selector (e.g., candidate secondary seller selector 510).

[00114] In an example embodiment, the secondary seller processor 500 includes a candidate secondary seller selector (e.g., candidate secondary seller selector 510). The candidate secondary seller selector 510 is configurable or configured to receive one or more identified information from the search query processor 210. For example, the candidate secondary seller selector 510 may receive one or more pieces of information identified in the search query, including the search query terms, category, industry, etc. The candidate secondary seller selector 510 may also receive one or more identified constraints. The candidate secondary seller selector 510 may also receive information from the seller processor 300 and/or buyer processor 400.

[00115] The candidate secondary seller selector 510 may perform a search, in one or more databases 150, for one or more candidate secondary sellers 130 who may be a potential match to the buyer 110 and/or one or more candidate sellers 120 (e.g., in situations where the candidate sellers are being selected concurrently with the candidate secondary sellers) based on one or more pieces of

information received. For example, if the information received from the search query processor 210 includes search query terms "medical-grade titanium screw assemblies" and constraints "from Singapore, Japan, or Korea only" and "deliver to Thailand", who supply medical-grade titanium screw assemblies, and who can ship to Thailand and "deliver to Singapore, Japan, or Korea only", the candidate secondary seller selector 510 may perform a search, in one or more databases 150, for one or more candidate secondary sellers 120 that are based in Singapore, Japan or Korea only, who supply calibrators, holders, and/or disinfecting fluids/wipes for the medical-grade titanium screw assemblies as a secondary product and/or service, and who can ship to Thailand.

[00116] The candidate secondary seller selector 510 may select one or more candidate secondary sellers 130 based on the abovementioned search, and provide the selected one or more candidate secondary sellers 130 to the previous candidate secondary seller transaction selector 520.

[00117] The previous candidate secondary seller transaction selector (e.g., previous candidate secondary seller transaction selector 520).

[00118] In an example embodiment, the secondary seller processor 500 includes a previous candidate secondary seller transaction selector (e.g., previous candidate secondary seller transaction selector 520). The previous candidate secondary seller transaction selector 520 is configurable or configured to receive one or more identified information from the candidate secondary seller selector 510. For example, the previous candidate secondary seller transaction selector 520 may receive information pertaining to the one or more candidate secondary sellers 130 selected by the candidate secondary seller selector 510. The previous candidate secondary seller transaction selector 520 may also receive information from the search query processor 210, the seller processor 300, and/or buyer processor 400.

[00119] The previous candidate secondary seller transaction selector 520 may perform, for each candidate secondary seller, a search in one or more databases 150 for one or more previous transactions conducted by the candidate secondary seller (referred to herein as "**previous candidate secondary seller transactions**", or the like). Such previous transactions conducted by the candidate secondary seller may be limited to previous transactions in which the candidate secondary seller was the secondary seller and/or seller in the previous transaction.

[00120] In example embodiments, the searching of one or more previous transactions conducted by the candidate secondary seller may be limited to previous transactions in which the candidate secondary seller was selected, from a plurality of available sellers, as a match to a buyer of the previous transaction based on: a search query that was submitted by the buyer of the previous transaction; and a matching criterion used in the previous transaction to match the buyer of the

previous transaction with the candidate secondary seller. The previous transaction may include one or more relevant dates, which may be a date on which the candidate secondary seller was matched to the buyer of the previous transaction or a date on which the previous transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.) or one or more dates (e.g., the most relevant date, the latest date, etc.) on which transactions are concluded (e.g., in situations when a previous transaction includes multiple transactions that conclude on separate dates), as described in the present disclosure. . In example embodiments, the matching criterion for the previous transaction (and for some or all transactions processed by the main processor 200) may be a predetermined matching criterion (e.g., based on product and/or service, category of product and/or service, industry, etc.) and/or a dynamically generated matching criterion generated based on an analysis, by one or more elements of the main processor 200, of, among other things, the buyer, seller, and/or candidate secondary seller as described in the present disclosure. As non-limiting examples, the matching criterion may be any criteria selected based on the received search query (e.g., information received from the search query processor 210), the candidate secondary seller (e.g., information received from the previous candidate secondary seller transaction selector 520 and/or other elements of the secondary seller processor 500), and/or the buyer of the previous transaction (e.g., information receivable from the buyer processor 400 pertaining to the buyer of the previous transaction). For example, the matching criterion may include, but is not limited to, a profile of the candidate secondary seller on the relevant date; a profile of the buyer of the previous transaction on the relevant date; a preference of the candidate secondary seller on the relevant date; a preference of the buyer of the previous transaction on the relevant date; a credit rating of the candidate secondary seller on the relevant date; a credit rating of the buyer of the previous transaction on the relevant date; a price, price range, and/or unit price on the relevant date; an original rating provided by the buyer to the seller; an original rating provided by the buyer to the candidate secondary seller; an original rating provided by the seller to the buyer; an original rating provided by the seller to the candidate secondary seller; a dynamically generated or updated seller rating based on an original rating provided by the buyer to the seller, as described in the present disclosure; a dynamically generated or updated seller rating based on an original rating provided by the candidate secondary seller to the seller, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the seller to the buyer, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the candidate secondary seller to the buyer, as described in the present disclosure; a dynamically generated or updated candidate secondary seller rating based on an original

rating provided by the buyer to the candidate secondary seller, as described in the present disclosure; a dynamically generated or updated candidate secondary seller rating based on an original rating provided by the seller to the candidate secondary seller, as described in the present disclosure; etc.

[00121] The previous candidate secondary seller transaction selector 520 may select one or more previous candidate secondary seller transactions for each candidate secondary seller based on the abovementioned search, and provide the selected one or more previous candidate secondary seller transactions to the previous candidate secondary seller transaction processor 530.

[00122] The previous candidate secondary seller transaction processor (e.g., previous candidate secondary seller transaction processor 530).

[00123] In an example embodiment, the secondary seller processor 500 includes a previous candidate secondary seller transaction processor (e.g., previous candidate secondary seller transaction processor 530). The previous candidate secondary seller transaction processor 530 may be configurable or configured to receive information pertaining to the one or more candidate secondary sellers 130 selected by the candidate secondary seller selector 510. The previous candidate secondary seller transaction processor 530 may also be configurable or configured to receive information pertaining to one or more previous candidate secondary seller transactions selected by the previous candidate secondary seller transaction selector 520. The previous candidate secondary seller transaction processor 530 may also receive information from the search query processor 210, the seller processor 300, and/or buyer processor 400.

[00124] The previous candidate secondary seller transaction processor 530 is configurable or configured to perform a processing of each of the one or more previous candidate secondary seller transactions selected by the previous candidate secondary seller transaction selector 520. For example, if the previous candidate secondary seller transaction selector 520 selected 5 previous candidate secondary seller transactions, the previous candidate secondary seller transaction processor 530 will perform a processing of the 5 previous candidate secondary seller transactions. The processing, by the previous candidate secondary seller transaction processor 530, of each previous candidate secondary seller transaction includes identifying the relevant date of the previous candidate secondary seller transaction. The processing, by the previous candidate secondary seller transaction processor 530, may also include identifying one or more original ratings given to the candidate secondary seller for the previous candidate secondary seller transaction. For example, the previous candidate secondary seller transaction processor 530 may identify an original rating given by the buyer of the previous candidate secondary seller transaction to the candidate secondary seller for the previous candidate secondary seller transaction (e.g., on or after the relevant date). The previous

candidate secondary seller transaction processor 530 may also identify an original rating given by a seller of the previous candidate secondary seller transaction (or a previous transaction that is a primary or related transaction to the previous candidate secondary seller transaction) to the candidate secondary seller for the previous candidate secondary seller transaction (or for a previous transaction that is a primary or related transaction to the previous candidate secondary seller transaction).

[00125] The processing, by the previous candidate secondary seller transaction processor 530, may also include identifying one or more matching criterion for the previous candidate secondary seller transaction. As described above and in the present disclosure, a matching criterion for a given transaction is a criterion used to match a buyer of the transaction to a secondary seller for the transaction. Accordingly, the processing, by the previous candidate secondary seller transaction processor 530, may include identifying the one or more matching criterion used to match the buyer of the previous candidate secondary seller transaction to the candidate secondary seller for the previous candidate secondary seller transaction. The processing, by the previous candidate secondary seller transaction processor 530, may also include identifying the one or more matching criterion used to match the buyer of the previous candidate secondary seller transaction (or a previous transaction that is a primary or related transaction to the previous candidate secondary seller transaction) to a seller for the previous candidate seller transaction (or for a previous transaction that is a primary or related transaction to the previous candidate secondary seller transaction).

[00126] The processing, by the previous candidate secondary seller transaction processor 530, may also include selecting one or more matching criterion (referred to herein as an "**outdated matching criterion**", or the like) that matches at least the following: the matching criterion has a "**relevant state**", which is a state of the matching criterion as of the relevant date; the matching criterion has a "**current state**", which is a most recent state of the matching criterion (e.g., a real-time state or state as of the date/time that the previous candidate secondary seller transaction processor 530 performs the abovementioned processing of the matching criterion); and the relevant state is different from the current state. In some example embodiments, the previous candidate secondary seller transaction processor 530 may perform an identification of the relevant state and current state of all identified matching criterion for the previous candidate secondary seller transaction. For each matching criterion (or outdated matching criterion), the previous candidate secondary seller transaction processor 530 may then compare the relevant state to the current state. In example embodiments when the previous candidate secondary seller transaction processor 530 determines that the relevant state is different from the current state, the previous candidate secondary seller transaction processor 530 may be configurable or configured to generate a rating adjustment factor for the matching

criterion (or outdated matching criterion). The rating adjustment factor for the matching criterion (or outdated matching criterion) may be based on at least the comparison between the relevant state and the current state. The rating adjustment factor is a quantitative factor used to represent the difference between the relevant state and current state of the matching criterion (or outdated matching criterion). For example, if the previous candidate secondary seller transaction processor 530 selects 3 matching criterion (or outdated matching criterion), the previous candidate secondary seller transaction processor 530 may generate a rating adjustment factor for each of the 3 selected matching criterion (or outdated matching criterion), or a total of 3 generated rating adjustment factors.

[00127] In example embodiments, the processing, by the previous candidate secondary seller transaction processor 530, may also include generating an aggregate rating adjustment factor for each of the previous candidate secondary seller transactions. The aggregate rating adjustment factor is an aggregate of the rating adjustment factors generated for each previous candidate secondary seller transaction. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more matching criterion (or outdated matching criterion) of each previous candidate secondary seller transaction. The aggregate rating adjustment factor may be an average, weighted average, etc. of some or all rating adjustment factors generated for the matching criterion of each previous candidate secondary seller transaction. For example, if the previous candidate secondary seller transaction processor 530 generates 3 rating adjustment factors for a previous candidate secondary seller transaction, the aggregate rating adjustment factor may be generated based on the 3 generated rating adjustment factors.

[00128] The processing, by the previous candidate secondary seller transaction processor 530, may also include generating an updated candidate secondary seller transaction rating for each of the previous candidate secondary seller transactions. The updated candidate secondary seller transaction rating represents an update or adjustment of the original ratings given to the candidate secondary sellers for the previous candidate secondary seller transaction. The updated candidate secondary seller transaction rating may be generated by transforming the one or more original ratings given to the candidate secondary seller for the previous candidate secondary seller transaction. The transforming of each original rating given to the candidate secondary seller (which may be an original rating given by the buyer of the previous candidate secondary seller transaction or an original rating given by the seller of the previous candidate secondary seller transaction (or a previous transaction that is a primary or related transaction to the previous candidate secondary seller transaction)) may be based on at least the aggregate rating adjustment factor for the previous candidate secondary seller

transaction. In this regard, the transforming of each original rating results in the updated candidate secondary seller transaction rating having a different rating value from the original rating.

[00129] The previous candidate secondary seller transaction processor 530 is configurable or configured to provide the generated updated candidate secondary seller transaction rating for each previous candidate secondary seller transaction to the updated candidate secondary seller rating processor 540.

[00130] The updated candidate secondary seller rating processor (e.g., updated candidate secondary seller rating processor 540).

[00131] In an example embodiment, the secondary seller processor 500 includes an updated candidate secondary seller rating processor (e.g., updated candidate secondary seller rating processor 540). The updated candidate secondary seller rating processor 540 is configurable or configured to receive the updated candidate secondary seller transaction rating for each previous candidate secondary seller transaction from the previous candidate secondary seller transaction processor 530. As described above and in the present disclosure, the updated candidate secondary seller transaction rating represents an update or adjustment of the original ratings given to the candidate secondary sellers for the previous candidate secondary seller transaction. The updated candidate secondary seller rating processor 540 may also receive information from the search query processor 210, the seller processor 300, and/or buyer processor 400.

[00132] The updated candidate secondary seller rating processor 540 is configurable or configured to generate an updated candidate secondary seller rating for the candidate secondary seller. The updated candidate secondary seller rating represents an update or adjustment of the overall rating of the candidate secondary seller. The updated candidate secondary seller rating may be generated based on at least the updated candidate secondary seller transaction ratings generated for the one or more previous candidate secondary seller transactions. The updated candidate secondary seller rating may be an average, weighted average, etc. of some or all of the updated candidate secondary seller transaction ratings generated for the candidate secondary seller. For example, if the previous candidate secondary seller transaction processor 530 generates an updated candidate secondary seller transaction rating for 5 previous candidate secondary seller transactions, the updated candidate secondary seller rating may be generated based on the 5 updated candidate secondary seller transaction ratings.

[00133] In example embodiments, the main processor 200 matches buyers of potential new transactions (as per search queries received from the buyer) with candidate secondary sellers based on, among other things, the updated candidate secondary seller rating. For example, as described in

the present disclosure, the main processor 200 matches the buyer of a potential new transaction to one or more candidate secondary sellers by matching an updated buyer rating (as generated by the updated buyer rating processor 440 of the buyer processor 400, as described in the present disclosure) of the buyer with one or more best matching updated candidate secondary seller ratings. It is to be understood that the matching processor 200 may also match sellers or candidate sellers of potential new transactions with candidate secondary sellers, as described in the present disclosure

[00134] The matching processor (e.g., matching processor 600).

[00135] In an example embodiment, the main processor 200 includes the matching processor (e.g., matching processor 600). The matching processor 600 is configurable or configured to perform one or more functions, operations, actions, methods, and/or processes described above and in the present disclosure, including the creating of one or more candidate transactions (e.g., action 760), the anonymizing of information for the one or more candidate transactions (e.g., action 770), and the providing of the anonymized one or more candidate transactions to the buyer 110, one or more candidate sellers, and/or one or more candidate secondary sellers (e.g., action 780), as illustrated in Figure 7A.

[00136] The matching processor 600 is configurable or configured to receive a plurality of information from the search query processor 210, the buyer processor 300, the seller processor 400, and the secondary seller processor 500. For example, the matching processor 600 may receive one or more pieces of information identified in the search query, including the search query terms, category, industry, etc., from the search query processor 210. The matching processor 600 may also receive one or more identified constraints from the search query processor 210. The matching processor 600 may also receive one or more selected candidate sellers, along with an updated candidate seller rating for each selected candidate seller, from the seller processor 300 (e.g., from the updated candidate seller rating processor 340). In this regard, the selected candidate sellers may be selected, by the seller processor 300, based on the highest updated candidate seller rating. Alternatively or in addition, the selected candidate sellers may be selected, by the seller processor 300, based on the closest match to the buyer's updated buyer rating, etc. Other selection criterion are also contemplated without departing from the teachings of the present disclosure. The matching processor 600 may also receive the updated buyer rating from the buyer processor 300 (e.g., from the updated buyer rating processor 440). The matching processor 600 may also receive one or more selected candidate secondary sellers, along with an updated candidate secondary seller rating for each selected candidate secondary seller, from the secondary seller processor 500 (e.g., from the updated candidate secondary seller rating processor 540). In this regard, the selected candidate secondary

sellers may be selected, by the secondary seller processor 500, based on the highest updated candidate secondary seller rating. Alternatively or in addition, the selected candidate secondary sellers may be selected, by the secondary seller processor 500, based on the closest match to the buyer's updated buyer rating, the candidate seller's updated candidate seller rating, etc. Other selection criterion are also contemplated without departing from the teachings of the present disclosure.

[00137] In an example embodiment, the matching processor 600 is configurable to select one or more matching candidate sellers for the buyer. The one or more matching candidate sellers are selected, by the matching processor 600, from among the one or more candidate sellers provided by the updated candidate seller rating processor 340. The matching processor 600 selects the one or more matching candidate sellers based on at least the updated buyer rating of the buyer and the updated candidate seller rating of the candidate sellers provided by the updated candidate seller rating processor 340. In situations where the matching processor 600 receives selected candidate secondary sellers and updated candidate secondary seller ratings from the secondary seller processor 500, the matching processor 600 may select the one or more matching candidate sellers based on at least the updated buyer rating of the buyer, the updated candidate seller rating of the candidate sellers, and the updated candidate secondary seller rating of the candidate secondary sellers. Furthermore, the matching processor 600 may select the one or more matching candidate secondary sellers based on at least the updated buyer rating of the buyer, the updated candidate seller rating of the candidate sellers, and the updated candidate secondary seller rating of the candidate secondary sellers.

[00138] After the matching processor 600 selects the one or more matching candidate sellers (and the one or more matching candidate secondary sellers) for the buyer, the matching processor 600 generates one or more candidate transactions between the buyer, one or more of the matching candidate sellers, and/or one or more of the candidate secondary sellers.

[00139] In some embodiments, the matching processor 600 may perform an anonymization process, including the anonymizing of certain information in the one or more candidate transactions. Example information that may be anonymized for the candidate transactions include information that may identify the parties, contact information of the parties, etc. The anonymizing of certain information in the one or more candidate transactions enables, among other things, personal or confidential information of the parties to be protected until the candidate transaction is a confirmed transaction; control of future transactions that may result from the candidate transactions.

[00140] After performing the anonymization process so as to create anonymized candidate transactions, the matching processor 600 is configurable or configured to provide the anonymized candidate transactions to the buyer, the one or more matching candidate sellers, and the one or more

matching candidate secondary sellers. In this regard, each of these users are then provided with an option on whether or not to proceed with and/or commit to one or more of the anonymized candidate transactions. After proceeding with and/or committing to one or more of the anonymized candidate transactions, the matching processor 600 may de-anonymize some or all of the anonymized information in the anonymized candidate transactions (e.g., over time, after certain actions or milestones are completed, after certain payments are made, etc.).

[00141] The transaction processor (e.g., transaction processor 650).

[00142] In an example embodiment, the main processor 200 includes the transaction processor (e.g., transaction processor 650). The transaction processor 650 is configurable or configured to perform one or more functions, operations, actions, methods, and/or processes described above and in the present disclosure. As illustrated in **FIGURE 6**, the transaction processor 650 includes a transaction creator (e.g., transaction creator 652) and a transaction status tracking processor (e.g., transaction status tracking processor 654). The transaction creator 652 is configurable or configured to create confirmed transactions. Such confirmed transactions may be created once the buyer, the one or more matching candidate sellers, and the one or more matching candidate secondary sellers in a candidate transaction has confirmed that they will proceed with and/or commit to the candidate transaction (e.g., action 790). After the confirmed transactions are created, the transaction status tracking processor 654 may be configurable or configured to, among other things, track the status of the confirmed transaction, perform further de-anonymizing of the anonymized information (as anonymized by the matching processor 600), perform analysis of the progress and results of the confirmed transaction, obtain ratings by a party in the confirmed transaction regarding another party, store information in one or more databases 150, etc.

[00143] In situations where a confirmed transaction becomes a failed transaction (e.g., the confirmed transaction is cancelled, abandoned, terminated, etc.) or a poor-performing and/or non-optimal transaction, the transaction processor 650 is configurable or configured to perform an analysis or assessment of the transaction so as to identify one or more reasons for the bad result. In an example embodiment, the transaction processor 650 and/or one or more elements of the main processor 200, including elements of the main processor 200 having artificial intelligence, machine learning, and the like, are configurable or configured to receive and apply such reasons for the bad results of the confirmed transactions so as to improve, among other things, the dynamically generated ratings for the buyer, candidate sellers, and/or candidate secondary sellers; the matching criterion, including the dynamically generated matching criterion; the selection of candidate sellers for matching with the buyer; the selection of candidate secondary sellers for matching with the buyer; the matching of the

buyer with the matching candidate seller(s); the matching of the buyer with the matching candidate secondary seller(s); the matching of the matching candidate seller with the matching candidate secondary seller; the anonymization and/or de-anonymization processes; etc. In example embodiments, the transaction processor 650 may be configurable or configured to re-perform the rating and/or matching processes, as described above and in the present disclosure, for the buyer in the failed transactions based on the bad results (e.g., learn from the mistakes). In example embodiments, the transaction processor 650 may be configurable or configured to provide the bad results of the confirmed transactions to a sandbox and/or developers to develop value-added services or solutions to address the gaps which prevented the transactions from being fulfilled or to enhance efficiency and reduce friction for future similar transactions.

[00144] Example embodiments of a method of managing transactions (e.g., method 700).

[00145] As an overview, an example embodiment of a method (e.g., method 700) of managing transactions between a plurality of users is illustrated in **FIGURE 7A**. The system 100, the main processor 200, and/or one or more elements of the system 100 and/or main processor 200 may be configurable or configured to perform one or more of the functions, operations, actions, and/or processes of method 700, including those described in the present disclosure.

[00146] Referring to Figure 7A, the method 700 includes processing a search query (e.g., action 702). The search query may be a search query received from a buyer of a potential new transaction. The search query may be received and processed by the main processor 200 (e.g., the search query processor 210). The method 700 further includes processing the buyer (e.g., action 710). As described in the present disclosure, the processing of the buyer may include dynamically generating an updated rating for the buyer. Such updated rating for the buyer may be based on previous transactions conducted by the buyer in which the buyer was the buyer/purchaser in the previous transaction. More specifically, the updated ratings for the buyer may be based on the original ratings provided, by the seller of the previous transaction, to the buyer. In some embodiments, the updated rating for the buyer may also be based on previous transactions conducted by the buyer in which the buyer was the seller in the previous transaction. More specifically, the updated ratings for the buyer may also be based on the original ratings provided, by the purchaser of the previous transaction, to the buyer (who was the seller in the previous transaction). The method 700 further includes selecting one or more candidate sellers based on the search query (e.g., action 720). The one or more candidate sellers may be selected from among a plurality of available sellers based on the search query. The method 700 further includes processing each candidate seller (e.g., action 730). As described in the present disclosure, the processing of each candidate seller may include dynamically generating an

updated rating for the candidate seller. Such updated rating for the candidate seller may be based on previous transactions conducted by the candidate seller in which the candidate seller was the seller in the previous transaction. More specifically, the updated ratings for the candidate seller may be based on the original ratings provided, by the buyer of the previous transaction, to the candidate seller. In some embodiments, the updated rating for the candidate seller may also be based on previous transactions conducted by the candidate seller in which the candidate seller was the buyer/purchaser in the previous transaction. More specifically, the updated ratings for the candidate seller may also be based on the original ratings provided, by the seller of the previous transaction, to the candidate seller (who was the buyer in the previous transaction). The method 700 further includes selecting one or more candidate secondary sellers (e.g., action 740). The one or more candidate secondary sellers may be selected from among a plurality of available sellers based on the search query. The method 700 further includes processing each candidate secondary seller (e.g., action 750). As described in the present disclosure, the processing of each candidate secondary seller may include dynamically generating an updated rating for the candidate secondary seller. Such updated rating for the candidate secondary seller may be based on previous transactions conducted by the candidate secondary seller in which the candidate secondary seller was the seller or secondary seller in the previous transaction. More specifically, the updated ratings for the candidate secondary seller may be based on the original ratings provided, by the buyer of the previous transaction, to the candidate secondary seller. In some embodiments, the updated rating for the candidate seller may also be based on previous transactions conducted by the candidate seller in which the candidate seller was the buyer/purchaser in the previous transaction. More specifically, the updated ratings for the candidate secondary seller may also be based on the original ratings provided, by the seller of the previous transaction, to the candidate secondary seller (who was the buyer in the previous transaction). The method 700 further includes generating one or more candidate transactions (e.g., action 760). As described in the present disclosure, candidate transactions include proposed transactions in which the buyer is matched to one or more candidate sellers, and may include matching of the buyer and/or one or more candidate sellers to one or more candidate secondary sellers. The method 700 further includes anonymizing certain information for the one or more candidate transactions (e.g., action 770). As described in the present disclosure, such anonymizing of certain information may be performed before the candidate transactions are provided to the buyer, one or more candidate sellers, and one or more candidate secondary sellers. The method 700 further includes providing the one or more anonymized candidate transactions to the buyer, candidate seller(s), and candidate secondary seller(s) (e.g., action 780). The

method 700 further includes generating a confirmed transaction and tracking the status of the confirmed transaction (e.g., action 790).

[00147] Example embodiments of the method 700 may include or not include one or more of the actions described above and in the present disclosure, may include additional actions, operations, and/or functionality, may be performed in different sequences and/or combinations, and/or one or more of the actions, operations, and/or functionality may be combinable into a single action, operation, and/or functionality and/or divided into two or more actions, operations, and/or functionalities. The method 700 of processing and/or managing transactions, and actions and elements thereof, will now be further explained with reference to the accompanying figures.

[00148] Processing the search query (e.g., action 702).

[00149] In an example embodiment, the method 700 includes receiving and processing a search query from a buyer of a potential new transaction (e.g., action 702). As illustrated in **FIGURE 7B**, the processing of the search query may include identifying the buyer (e.g., action 702a). The processing of the search query may also include identifying one or more pieces of information in the search query (e.g., action 702b). The processing of the search query may also include identifying one or more constraints (e.g., action 702c). As described in the present disclosure, the processing of the search query may be performed by an example embodiment of the search query processor 210.

[00150] Identifying the buyer and information in the search query (e.g., actions 702a, 702b).

[00151] In an example embodiment, the buyer may be identified in one or more of a plurality of ways. For example, the buyer may be identified by obtaining information pertaining to the buyer from the search query itself (e.g., a name of the buyer, a user ID of the buyer, etc.). Additional information pertaining to the buyer may also be obtained from a user profile of the buyer 110 and/or any other data source having information pertaining to the buyer 110 (e.g., government databases, third party databases, etc.). Such additional information may include, for example, the buyer's name or company name, type of organization, jurisdictions/countries of operation, preferred currency, shipping address, billing address, preferred forms of payment, credit rating, years of incorporation, board of directors, industry sector(s), etc.

[00152] In an example embodiment, the one or more pieces of information identified in the search query (e.g., action 702b) may be used for initiating a preliminary search for potentially matching sellers (i.e., a search for candidate sellers). For example, the one or more information in the search query may include one or more search query terms (e.g., key words) of a desired primary product and/or service submitted by the buyer. The one or more pieces of information in the search query

may also include a category, industry, quantity, quality, services level agreement (SLA), delivery time, etc.

[00153] Identifying one or more constraints (e.g., action 702c).

[00154] In processing the search query, one or more constraints may also be identified for the proposed new transaction (e.g., action 702c). Such constraints may be identified in one or more of a plurality of ways. For example, the constraints may be identified from the received search query and/or via an analysis of the user profile of the buyer 110 and/or any other data source having information pertaining to the buyer 110. Examples of constraints may include country of origin requirements for the seller and/or secondary seller, credentials or qualification requirements for the seller and/or secondary seller, minimum credit rating for the seller and/or secondary seller, white lists, blacklists, etc.

[00155] Processing the buyer (e.g., action 710).

[00156] In an example embodiment, the method 700 includes processing the buyer (e.g., action 710). The processing of the buyer may be based on and/or use results from, among other things, the processing of the search query. As described in the present disclosure, the processing of the buyer may be performed by an example embodiment of the buyer processor 400.

[00157] As illustrated in **FIGURE 7C**, the processing of the buyer (e.g., action 710) includes the following actions.

[00158] Selecting one or more previous transactions (e.g., action 711).

[00159] As a first step, the processing of the buyer (e.g., action 710) may include performing a search for one or more previous transactions conducted by the buyer as described in the present disclosure. . Such previous buyer transactions may be previous transactions in which the buyer was the buyer/purchaser in the previous transaction. In some embodiments, the previous buyer transactions may also include previous transactions in which the buyer was a seller in the previous transaction.

[00160] In example embodiments, a previous transaction may be selected as a previous buyer transaction for the buyer when the previous transaction is a transaction in which a seller was selected, from a plurality of available sellers, as a match to the buyer based on: a search query that was submitted by the buyer for the previous transaction; and one or more matching criterion used in the previous transaction to match the buyer to the seller of the previous transaction. As described in the present disclosure, the matching criterion for the previous buyer transaction may be a predetermined matching criterion (e.g., based on product and/or service, category of product and/or service, industry, etc.) and/or a dynamically generated matching criterion generated based on an analysis of, among

other things, the seller and/or buyer as described in the present disclosure. For example, the matching criterion may include, but is not limited to, a profile of the seller of the previous buyer transaction as of the relevant date; a profile of the buyer as of the relevant date; a preference of the seller of the previous buyer transaction as of the relevant date; a preference of the buyer as of the relevant date; a credit rating of the seller of the previous buyer transaction as of the relevant date; a credit rating of the buyer as of the relevant date; a price, price range, and/or unit price as of the relevant date; an original rating provided by the buyer to the seller; an original rating provided by the buyer to one or more secondary sellers; an original rating provided by the seller to the buyer; an original rating provided by the seller to one or more secondary sellers; a dynamically generated or updated seller rating based on an original rating provided by the buyer to the seller, as described in the present disclosure; a dynamically generated or updated seller rating based on an original rating provided by a secondary seller to the seller, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the seller to the buyer, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by a secondary seller to the buyer, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the buyer to a secondary seller, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the seller to a secondary seller, as described in the present disclosure; etc.

[00161] The previous buyer transaction may include one or more relevant dates, which may be a date on which the buyer was matched to the seller of the previous buyer transaction or a date on which the previous buyer transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.) or one or more dates (e.g., the most relevant date, the latest date, etc.) on which transactions are concluded (e.g., in situations when a previous transaction includes multiple transactions that conclude on separate dates) (, as described in the present disclosure.

[00162] In some example embodiments, the searching of one or more previous buyer transactions may also include previous transactions in which a seller was selected, from a plurality of available sellers, as a match to a secondary seller that has already been selected for the previous transaction (or a secondary transaction related to the previous transaction). Such matching may be performed in a similar or same manner as the matching of the buyer to the seller of the previous transaction, as described in the present disclosure.

[00163] Based on the searching, as described above and in the present disclosure, one or more previous buyer transactions are selected for further processing, as further described below and in the present disclosure.

[00164] Identifying a relevant date of the previous transaction (e.g., action 712).

[00165] For each previous buyer transaction, the relevant date of the previous buyer transaction is identified. The relevant date of the previous buyer transaction may be a date on which the buyer was matched to the seller of the previous buyer transaction. The relevant date of the previous buyer transaction may also be a date on which the previous buyer transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.).

[00166] Identifying an original rating given to the buyer from each party in the previous transaction (e.g., action 713).

[00167] In an example embodiment, one or more original ratings given to the buyer for the previous buyer transaction is identified for each previous buyer transaction. For example, for each previous buyer transaction, an original rating given by the seller of the previous buyer transaction to the buyer for the previous buyer transaction may be identified. For each previous buyer transaction, an original rating given by a secondary seller (if any) of the previous buyer transaction to the buyer for the previous buyer transaction (or for a secondary transaction to the previous buyer transaction) may also be identified.

[00168] Identifying one or more matching criterion used in the previous transaction (e.g., action 714).

[00169] For each previous buyer transaction, one or more matching criterion used in the previous buyer transaction is identified. As described in the present disclosure, a matching criteria for a given transaction is a criteria that was used to match the buyer to the seller of the transaction for the given transaction. One or more matching criterion used to match the seller of the previous buyer transaction to a secondary seller for the previous buyer transaction (or for the secondary transaction to the previous buyer transaction) may also be identified.

[00170] Selecting one or more outdated matching criterion from among the one or more matching criterion (e.g., action 715).

[00171] Based on the one or more matching criterion identified, one or more matching criterion (referred to herein as an "**outdated matching criterion**", or the like) are selected that satisfy the following: the matching criterion has a "**relevant state**", which is a state of the matching criterion as of the relevant date; the matching criterion has a "**current state**", which is a most recent state of the

matching criterion (e.g., a real-time state or state as of the date/time that the previous buyer transaction processor 430 performs the abovementioned processing of the matching criterion); and the relevant state is different from the current state. In some example embodiments, the relevant state and current state of all identified matching criterion may be identified.

[00172] Generating an updated rating for the buyer for the previous transaction (e.g., action 716).

[00173] In example embodiments when the relevant state is different from the current state, a rating adjustment factor is generated for the matching criterion (or outdated matching criterion). The rating adjustment factor for the matching criterion (or outdated matching criterion) may be based on at least the comparison between the relevant state and the current state. The rating adjustment factor is a quantitative factor that represents how an original rating (e.g., a rating given to the buyer from a seller) may be adjusted or updated to be more accurate today in view of the difference between the relevant state and current state of the matching criterion (or outdated matching criterion).

[00174] In example embodiments, an aggregate rating adjustment factor is generated for each of the previous buyer transactions. The aggregate rating adjustment factor is an aggregate of the rating adjustment factors generated for each previous buyer transaction. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more matching criterion (or outdated matching criterion) of each previous buyer transaction. The aggregate rating adjustment factor may be an average, weighted average, etc. of some or all rating adjustment factors generated for the matching criterion of each previous buyer transaction. For example, if the previous buyer transaction processor 430 generates 3 rating adjustment factors for a previous buyer transaction, the aggregate rating adjustment factor may be generated based on the 3 generated rating adjustment factors.

[00175] After generating the aggregate rating adjustment factor, an updated buyer transaction rating is generated for each of the previous buyer transactions. The updated buyer transaction rating for a previous buyer transaction represents an update or adjustment of the original ratings given to the buyer for the previous buyer transaction. The updated buyer transaction rating may be generated by transforming the one or more original ratings given to the buyer for the previous buyer transaction. The transforming of each original rating given to the buyer (which may be an original rating given by the seller of the previous buyer transaction or an original rating given by the secondary seller of the previous buyer transaction) may be based on at least the aggregate rating adjustment factor for the previous buyer transaction. In this regard, the transforming of each original rating results in the updated buyer transaction rating having a different rating value from the original rating.

[00176] Generating an updated overall rating for the buyer (e.g., action 717).

[00177] In an example embodiment, an updated buyer rating is generated for the buyer. The updated buyer rating represents an update or adjustment of the overall rating of the buyer. The updated buyer rating may be generated based on at least the updated buyer transaction ratings generated for the one or more previous buyer transactions. The updated buyer rating may be an average, weighted average, etc. of some or all of the updated buyer transaction ratings generated for the buyer. For example, if updated buyer transaction ratings were generated for 5 previous buyer transactions, the updated buyer rating may be generated based on the 5 updated buyer transaction ratings.

[00178] After the updated buyer rating is generated for the buyer, the buyer may be matched with one or more candidate sellers based on, among other things, the updated buyer rating. For example, as described in the present disclosure, the buyer of a potential new transaction may be matched to one or more candidate sellers by matching the updated buyer rating (e.g., as generated by the updated buyer rating processor 440 of the buyer processor 400) of the buyer to one or more best matching updated candidate seller ratings (e.g., as generated by the updated candidate seller rating processor 340 of the seller processor 300, as described in the present disclosure).

[00179] Selecting one or more candidate sellers based on the search query (e.g., action 720).

[00180] In an example embodiment, a search may be performed for one or more candidate sellers 120 who may be a potential match to the buyer 110 based on one or more pieces of information received. For example, if the information identified from the search query includes search query terms "medical-grade titanium screw assemblies" and constraints "from Singapore, Japan, or Korea only" and "deliver to Thailand", a search may be performed for one or more candidate sellers 120 that are based in Singapore, Japan, or Korea only, who supply medical-grade titanium screw assemblies, and who can ship to Thailand. As another example, the information identified from the search query may include search query terms "medical-grade titanium screw assemblies" and constraints "from Singapore, Japan, or Korea only" and "deliver to Thailand"; the information received from the processing of the buyer (e.g., action 710) may include additional information about the buyer 110 (e.g., original ratings for the buyer, experience or history of the buyer in performing transactions, credit rating of the buyer, etc.); and the information received from the processing of the secondary seller (e.g., action 750) may include an identification of available secondary products and/or services that will likely be required for the primary products and/or services identified in the search query. In such example, a search may be performed for one or more candidate sellers 120 that are based in Singapore, Japan, or Korea only, who supply medical-grade titanium screw assemblies, who can ship to Thailand, who may be an appropriate or suitable match to the buyer based on the additional

information about the buyer 110 that the buyer processor 400 has processed, and whose primary products and/or services may require the available secondary products and/or services identified by the processing of the secondary seller (e.g., action 750).

[00181] One or more candidate sellers 120 may be selected based on the abovementioned search for further processing, as further described below and in the present disclosure.

[00182] Processing each candidate seller (e.g., action 730).

[00183] In an example embodiment, the method 700 includes processing each candidate seller (e.g., action 730). As described in the present disclosure, the processing of each candidate seller may be performed by an example embodiment of the seller processor 300.

[00184] As illustrated in **FIGURE 7D**, the processing of each candidate seller (e.g., action 730) includes the following actions.

[00185] Selecting one or more previous transactions (e.g., action 731).

[00186] As a first step, the processing of each candidate seller (e.g., action 730) may include performing a search for one or more previous transactions conducted by the candidate seller (referred to herein as "**previous candidate seller transactions**", or the like). Such previous candidate seller transactions may be previous transactions in which the candidate seller was the seller in the previous transaction. In some embodiments, the previous candidate seller transactions may also include previous transactions in which the candidate seller was a buyer in the previous transaction.

[00187] In example embodiments, a previous transaction may be selected as a previous candidate seller transaction for the candidate seller when the previous transaction is a transaction in which the candidate seller was selected, from a plurality of available sellers, as a match to a buyer of the previous transaction based on: a search query that was submitted by the buyer of the previous transaction; and one or more matching criterion used in the previous transaction to match the buyer of the previous transaction to the candidate seller for the previous transaction. As described in the present disclosure, the matching criterion for the previous candidate seller transaction may be a predetermined matching criterion (e.g., based on product and/or service, category of product and/or service, industry, etc.) and/or a dynamically generated matching criterion generated based on an analysis of, among other things, the buyer and/or candidate seller as described in the present disclosure. For example, the matching criterion may include, but is not limited to, a profile of the candidate seller as of the relevant date; a profile of the buyer of the previous candidate seller transaction as of the relevant date; a preference of the candidate seller as of the relevant date; a preference of the buyer of the previous candidate seller transaction as of the relevant date; a credit rating of the candidate seller as of the relevant date; a credit rating of the buyer of the previous candidate seller transaction as of the relevant

date; a price, price range, and/or unit price as of the relevant date; an original rating provided by the buyer to the candidate seller; an original rating provided by the buyer to one or more secondary sellers; an original rating provided by the candidate seller to the buyer; an original rating provided by the candidate seller to one or more secondary sellers; a dynamically generated or updated candidate seller rating based on an original rating provided by the buyer to the candidate seller, as described in the present disclosure; a dynamically generated or updated candidate seller rating based on an original rating provided by a secondary seller to the candidate seller, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the candidate seller to the buyer, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by a secondary seller to the buyer, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the buyer to a secondary seller, as described in the present disclosure; a dynamically generated or updated secondary seller rating based on an original rating provided by the candidate seller to a secondary seller, as described in the present disclosure; etc.

[00188] The previous candidate seller transaction may include one or more relevant dates, which may be a date on which the buyer of the previous candidate seller transaction was matched to the candidate seller or a date on which the previous candidate seller transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.) or one or more dates (e.g., the most relevant date, the latest date, etc.) on which transactions are concluded (e.g., in situations when a previous transaction includes multiple transactions that conclude on separate dates) as described in the present disclosure.

[00189] In some example embodiments, the searching of one or more previous candidate seller transactions may also include previous transactions in which the candidate seller was selected, from a plurality of available sellers, as a match to a secondary seller that has already been selected for the previous transaction (or a secondary transaction related to the previous transaction). Such matching may be performed in a similar or same manner as the matching of the buyer to the seller of the previous transaction, as described in the present disclosure.

[00190] Based on the searching, as described above and in the present disclosure, one or more previous candidate seller transactions are selected for further processing, as further described below and in the present disclosure.

[00191] Identifying a relevant date of the previous transaction (e.g., action 732).

[00192] For each previous candidate seller transaction, the relevant date of the previous candidate seller transaction is identified. The relevant date of the previous candidate seller transaction may be

a date on which the buyer was matched to the candidate seller of the previous candidate seller transaction. The relevant date of the previous candidate seller transaction may also be a date on which the previous candidate seller transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.).

[00193] Identifying an original rating given to the candidate seller from each party in the previous transaction (e.g., action 733).

[00194] In an example embodiment, one or more original ratings given to the candidate seller for the previous candidate seller transaction is identified for each previous candidate seller transaction. For example, for each previous candidate seller transaction, an original rating given by the buyer of the previous candidate seller transaction to the candidate seller for the previous candidate seller transaction may be identified. For each previous candidate seller transaction, an original rating given by a secondary seller (if any) of the previous candidate seller transaction (or for a secondary transaction to the previous candidate seller transaction) to the candidate seller for the previous candidate seller transaction (or for a secondary transaction to the previous candidate seller transaction) may also be identified.

[00195] Identifying one or more matching criterion used in the previous transaction (e.g., action 734).

[00196] For each previous candidate seller transaction, one or more matching criterion used in the previous candidate seller transaction is identified. As described in the present disclosure, a matching criteria for a given transaction is a criteria that was used to match the buyer to the seller of the transaction for the given transaction. One or more matching criterion used to match the candidate seller of the previous candidate seller transaction to a secondary seller for the previous candidate seller transaction (or for the secondary transaction to the previous candidate seller transaction) may also be identified.

[00197] Selecting one or more outdated matching criterion from among the one or more matching criterion (e.g., action 735).

[00198] Based on the one or more matching criterion identified, one or more matching criterion (referred to herein as an "**outdated matching criterion**", or the like) are selected that satisfy the following: the matching criterion has a "**relevant state**", which is a state of the matching criterion as of the relevant date; the matching criterion has a "**current state**", which is a most recent state of the matching criterion (e.g., a real-time state or state as of the date/time that the previous candidate seller transaction processor 330 performs the abovementioned processing of the matching criterion); and

the relevant state is different from the current state. In some example embodiments, the relevant state and current state of all identified matching criterion may be identified.

[00199] Generating an updated rating for the candidate seller for the previous transaction (e.g., action 736).

[00200] In example embodiments when the relevant state is different from the current state, a rating adjustment factor is generated for the matching criterion (or outdated matching criterion). The rating adjustment factor for the matching criterion (or outdated matching criterion) may be based on at least the comparison between the relevant state and the current state. The rating adjustment factor is a quantitative factor that represents how an original rating (e.g., a rating given to the candidate seller from a buyer) may be adjusted or updated to be more accurate today in view of the difference between the relevant state and current state of the matching criterion (or outdated matching criterion).

[00201] In example embodiments, an aggregate rating adjustment factor is generated for each of the previous candidate seller transactions. The aggregate rating adjustment factor is an aggregate of the rating adjustment factors generated for each previous candidate seller transaction. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more matching criterion (or outdated matching criterion) of each previous candidate seller transaction. The aggregate rating adjustment factor may be an average, weighted average, etc. of some or all rating adjustment factors generated for the matching criterion of each previous candidate seller transaction. For example, if the previous candidate seller transaction processor 330 generates 3 rating adjustment factors for a previous candidate seller transaction, the aggregate rating adjustment factor may be generated based on the 3 generated rating adjustment factors.

[00202] After generating the aggregate rating adjustment factor, an updated candidate seller transaction rating is generated for each of the previous candidate seller transactions. The updated candidate seller transaction rating for a previous candidate seller transaction represents an update or adjustment of the original ratings given to the candidate seller for the previous candidate seller transaction. The updated candidate seller transaction rating may be generated by transforming the one or more original ratings given to the candidate seller for the previous candidate seller transaction. The transforming of each original rating given to the candidate seller (which may be an original rating given by the buyer of the previous candidate seller transaction or an original rating given by the secondary seller of the previous candidate seller transaction) may be based on at least the aggregate rating adjustment factor for the previous candidate seller transaction. In this regard, the transforming of each original rating results in the updated candidate seller transaction rating having a different rating value from the original rating.

[00203] Generating an updated overall rating for the candidate seller (e.g., action 737).

[00204] In an example embodiment, an updated candidate seller rating is generated for the candidate seller. The updated candidate seller rating represents an update or adjustment of the overall rating of the candidate seller. The updated candidate seller rating may be generated based on at least the updated candidate seller transaction ratings generated for the one or more previous candidate seller transactions. The updated candidate seller rating may be an average, weighted average, etc. of some or all of the updated candidate seller transaction ratings generated for the candidate seller. For example, if updated candidate seller transaction ratings were generated for 5 previous candidate seller transactions, the updated candidate seller rating may be generated based on the 5 updated candidate seller transaction ratings.

[00205] After the updated candidate seller rating is generated for the candidate seller, the candidate seller may be matched with the buyer based on, among other things, the updated candidate seller rating. For example, as described in the present disclosure, the buyer of a potential new transaction may be matched to one or more candidate sellers by matching the updated buyer rating (e.g., as generated by the updated buyer rating processor 440 of the buyer processor 400) of the buyer to one or more best matching updated candidate seller ratings (e.g., as generated by the updated candidate seller rating processor 340 of the seller processor 300, as described in the present disclosure).

[00206] Selecting one or more candidate secondary sellers (e.g., action 740).

[00207] In an example embodiment, a search may be performed for one or more candidate secondary sellers 130 who may be a potential match to the buyer 110 and/or seller 120 based on one or more pieces of information received. For example, if the information identified from the search query includes search query terms "medical-grade titanium screw assemblies and constraints "from Singapore, Japan or Korea only" and "deliver to Thailand", a search may be performed for one or more candidate secondary sellers 130 that are based in Singapore, Japan, or Korea, who supply holders or disinfectant wipes/fluid as a secondary product and/or service to medical-grade titanium screw assemblies, and who can ship to Thailand.

[00208] Examples of secondary products and/or services offered by secondary sellers may include, but are not limited to, payment processing, financing, banking/insurance, cleaning and settlement services, logistics, arbitration, escrow, electronic trade documentation and clearance, warehousing, foreign currency exchange KYC services, industry specific news services, online courses, conferences, standards and technology updates, government regulations, etc.

[00209] One or more candidate secondary sellers 130 may be selected based on the abovementioned search for further processing, as further described below and in the present disclosure.

[00210] Processing each candidate secondary seller (e.g., action 750).

[00211] In an example embodiment, the method 700 includes processing each candidate secondary seller (e.g., action 750). As described in the present disclosure, the processing of each candidate secondary seller may be performed by an example embodiment of the secondary seller processor 500.

[00212] As illustrated in **FIGURE 7E**, the processing of each candidate secondary seller (e.g., action 750) includes the following actions.

[00213] Selecting one or more previous transactions (e.g., action 751).

[00214] As a first step, the processing of each candidate secondary seller (e.g., action 750) may include performing a search for one or more previous transactions conducted by the candidate secondary seller (referred to herein as "**previous candidate secondary seller transactions**", or the like). Such previous candidate secondary seller transactions may be previous transactions in which the candidate secondary seller was the seller or secondary seller in the previous transaction. In some embodiments, the previous candidate secondary seller transactions may also include previous transactions in which the candidate secondary seller was a buyer in the previous transaction.

[00215] In example embodiments, a previous transaction may be selected as a previous candidate secondary seller transaction for the candidate secondary seller when the previous transaction is a transaction in which the candidate secondary seller was selected, from a plurality of available secondary sellers, as a match to a buyer and/or seller of the previous transaction based on: a search query that was submitted by the buyer of the previous transaction; and one or more matching criterion used in the previous transaction to match the buyer and/or seller of the previous transaction to the candidate secondary seller for the previous transaction (or secondary transaction to the previous transaction). As described in the present disclosure, the matching criterion for the previous candidate secondary seller transaction may be a predetermined matching criterion (e.g., based on product and/or service, category of product and/or service, industry, etc.) and/or a dynamically generated matching criterion generated based on an analysis of, among other things, the buyer, seller, and/or candidate secondary seller as described in the present disclosure. For example, the matching criterion may include, but is not limited to, a profile of the candidate secondary seller as of the relevant date; a profile of the buyer and/or seller of the previous candidate secondary seller transaction as of the relevant date; a preference of the candidate secondary seller as of the relevant date; a preference of the buyer and/or seller of the previous candidate secondary seller transaction as of the relevant date;

a credit rating of the candidate secondary seller as of the relevant date; a credit rating of the buyer and/or seller of the previous candidate secondary seller transaction as of the relevant date; a price, price range, and/or unit price as of the relevant date; an original rating provided by the buyer to the seller; an original rating provided by the buyer to the candidate secondary seller; an original rating provided by the seller to the buyer; an original rating provided by the seller to the candidate secondary seller; a dynamically generated or updated seller rating based on an original rating provided by the buyer to the seller, as described in the present disclosure; a dynamically generated or updated seller rating based on an original rating provided by the candidate secondary seller to the seller, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the seller to the buyer, as described in the present disclosure; a dynamically generated or updated buyer rating based on an original rating provided by the candidate secondary seller to the buyer, as described in the present disclosure; a dynamically generated or updated candidate secondary seller rating based on an original rating provided by the buyer to the candidate secondary seller, as described in the present disclosure; a dynamically generated or updated candidate secondary seller rating based on an original rating provided by the seller to the candidate secondary seller, as described in the present disclosure; etc.

[00216] The previous candidate secondary seller transaction may include one or more relevant dates, which may be a date on which the buyer and/or seller of the previous candidate secondary seller transaction was matched to the candidate secondary seller or a date on which the previous candidate secondary seller transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.) or one or more dates (e.g., the most relevant date, the latest date, etc.) on which transactions are concluded (e.g., in situations when a previous transaction includes multiple transactions that conclude on separate dates), as described in the present disclosure

[00217] Based on the searching, as described above and in the present disclosure, one or more previous candidate secondary seller transactions are selected for further processing, as further described below and in the present disclosure.

[00218] Identifying a relevant date of the previous transaction (e.g., action 752).

[00219] For each previous candidate secondary seller transaction, the relevant date of the previous candidate secondary seller transaction is identified. The relevant date of the previous candidate secondary seller transaction may be a date on which the buyer and/or seller was matched to the candidate secondary seller of the previous candidate secondary seller transaction. The relevant date of the previous candidate secondary seller transaction may also be a date on which the previous

candidate secondary seller transaction was concluded (which may include the following concluded statuses: completed, closed, finalized, failed, abandoned, withdrawal, etc.).

[00220] Identifying an original rating given to the candidate secondary seller from each party in the previous transaction (e.g., action 753).

[00221] In an example embodiment, one or more original ratings given to the candidate secondary seller for the previous candidate secondary seller transaction is identified for each previous candidate secondary seller transaction. For example, for each previous candidate secondary seller transaction, an original rating given by the buyer and/or seller of the previous candidate secondary seller transaction to the candidate secondary seller for the previous candidate secondary seller transaction may be identified.

[00222] Identifying one or more matching criterion used in the previous transaction (e.g., action 754).

[00223] For each previous candidate secondary seller transaction, one or more matching criterion used in the previous candidate secondary seller transaction is identified. As described in the present disclosure, a matching criteria for a given transaction is a criteria that was used to match the buyer and/or seller to the secondary seller of the transaction for the given transaction.

[00224] Selecting one or more outdated matching criterion from among the one or more matching criterion (e.g., action 755).

[00225] Based on the one or more matching criterion identified, one or more matching criterion (referred to herein as an "**outdated matching criterion**", or the like) are selected that satisfy the following: the matching criterion has a "**relevant state**", which is a state of the matching criterion as of the relevant date; the matching criterion has a "**current state**", which is a most recent state of the matching criterion (e.g., a real-time state or state as of the date/time that the previous candidate secondary seller transaction processor 530 performs the abovementioned processing of the matching criterion); and the relevant state is different from the current state. In some example embodiments, the relevant state and current state of all identified matching criterion may be identified.

[00226] Generating an updated rating for the candidate secondary seller for the previous transaction (e.g., action 756).

[00227] In example embodiments when the relevant state is different from the current state, a rating adjustment factor is generated for the matching criterion (or outdated matching criterion). The rating adjustment factor for the matching criterion (or outdated matching criterion) may be based on at least the comparison between the relevant state and the current state. The rating adjustment factor is a quantitative factor that represents how an original rating (e.g., a rating given to the candidate

secondary seller from a buyer) may be adjusted or updated to be more accurate today in view of the difference between the relevant state and current state of the matching criterion (or outdated matching criterion).

[00228] In example embodiments, an aggregate rating adjustment factor is generated for each of the previous candidate secondary seller transactions. The aggregate rating adjustment factor is an aggregate of the rating adjustment factors generated for each previous candidate secondary seller transaction. The aggregate rating adjustment factor may be generated based on the rating adjustment factors generated for the one or more matching criterion (or outdated matching criterion) of each previous candidate secondary seller transaction. The aggregate rating adjustment factor may be an average, weighted average, etc. of some or all rating adjustment factors generated for the matching criterion of each previous candidate secondary seller transaction. For example, if the previous candidate secondary seller transaction processor 530 generates 3 rating adjustment factors for a previous candidate secondary seller transaction, the aggregate rating adjustment factor may be generated based on the 3 generated rating adjustment factors.

[00229] After generating the aggregate rating adjustment factor, an updated candidate secondary seller transaction rating is generated for each of the previous candidate secondary seller transactions. The updated candidate secondary seller transaction rating for a previous candidate secondary seller transaction represents an update or adjustment of the original ratings given to the candidate secondary seller for the previous candidate secondary seller transaction. The updated candidate secondary seller transaction rating may be generated by transforming the one or more original ratings given to the candidate secondary seller for the previous candidate secondary seller transaction. The transforming of each original rating given to the candidate secondary seller (which may be an original rating given by the buyer of the previous candidate secondary seller transaction or an original rating given by the seller of the previous candidate secondary seller transaction) may be based on at least the aggregate rating adjustment factor for the previous candidate secondary seller transaction. In this regard, the transforming of each original rating results in the updated candidate secondary seller transaction rating having a different rating value from the original rating.

[00230] Generate an updated overall rating for the candidate secondary seller (e.g., action 757).

[00231] In an example embodiment, an updated candidate secondary seller rating is generated for the candidate secondary seller. The updated candidate secondary seller rating represents an update or adjustment of the overall rating of the candidate secondary seller. The updated candidate secondary seller rating may be generated based on at least the updated candidate secondary seller transaction ratings generated for the one or more previous candidate secondary seller transactions. The updated

candidate secondary seller rating may be an average, weighted average, etc. of some or all of the updated candidate secondary seller transaction ratings generated for the candidate secondary seller. For example, if updated candidate secondary seller transaction ratings were generated for 5 previous candidate secondary seller transactions, the updated candidate secondary seller rating may be generated based on the 5 updated candidate secondary seller transaction ratings.

[00232] After the updated candidate secondary seller rating is generated for the candidate secondary seller, the candidate secondary seller may be matched with the buyer and/or seller based on, among other things, the updated candidate secondary seller rating. For example, as described in the present disclosure, the buyer (and/or seller) of a potential new transaction may be matched to one or more candidate secondary sellers by matching the updated buyer rating (e.g., as generated by the updated buyer rating processor 440 of the buyer processor 400) of the buyer (and/or the updated seller rating (e.g., as generated by the updated seller rating processor 340 of the seller processor 300) of the seller) to one or more best matching updated candidate secondary seller ratings (e.g., as generated by the updated candidate secondary seller rating processor 540 of the secondary seller processor 500, as described in the present disclosure).

[00233] Creating one or more candidate transactions (e.g., action 760).

[00234] In an example embodiment, one or more candidate transactions are generated based on the updated candidate seller ratings generated for each selected candidate seller (e.g., action 737) and the updated buyer ratings generated for the buyer (e.g., action 717). In regards to the candidate sellers, one or more matching candidate sellers may be selected to form a candidate transaction (i.e., to be matched to the buyer) based on one or more of a plurality of considerations. For example, one or more matching candidate sellers may be selected from among the plurality of candidate sellers (e.g., as selected in action 720) to form a candidate transaction based on the highest updated candidate seller rating. As another example, one or more matching candidate sellers may be selected from among the plurality of candidate sellers (e.g., as selected in action 720) to form a candidate transaction based on the closest match to the buyer's updated buyer rating. Other selection criterion are also contemplated without departing from the teachings of the present disclosure.

[00235] In example embodiments where one or more candidate secondary sellers are also selected and processed (e.g., actions 740 and 750), one or more candidate transactions are generated based on the updated candidate seller ratings generated for each selected candidate seller (e.g., action 737), the updated buyer ratings generated for the buyer (e.g., action 717), and the updated candidate secondary seller ratings generated for each selected candidate seller (e.g., action 757). In regards to the candidate sellers, one or more matching candidate sellers may be selected to form a candidate transaction (i.e.,

to be matched to the buyer, and in some embodiments, to an already selected secondary seller) based on one or more of a plurality of considerations. For example, one or more matching candidate sellers may be selected from among the candidate sellers (e.g., as selected in action 720) to match the buyer and/or one or more already selected secondary sellers so as to form a candidate transaction based on the highest updated candidate seller rating. As another example, one or more matching candidate sellers may be selected from among the candidate sellers (e.g., as selected in action 720) to match the buyer and/or one or more already selected secondary sellers so as to form a candidate transaction based on the closest match to the buyer's updated buyer rating. In regards to the candidate secondary sellers, one or more matching candidate secondary sellers may be selected to match the buyer and/or one or more sellers so as to form a candidate transaction based on one or more of a plurality of considerations. For example, one or more matching candidate secondary sellers may be selected from among the candidate secondary sellers (e.g., as selected in action 740) to match the buyer and/or one or more sellers so as to form a candidate transaction based on the highest updated candidate secondary seller rating. As another example, one or more matching candidate secondary sellers may be selected from among the candidate secondary sellers (e.g., as selected in action 740) to match the buyer and/or one or more sellers so as to form a candidate transaction based on the closest match to the buyer's updated buyer rating and/or seller's updated candidate seller rating. Other selection criterion are also contemplated without departing from the teachings of the present disclosure.

[00236] Anonymizing information for the one or more candidate transactions (e.g., action 770).

[00237] In some embodiments, an anonymization process may be performed on the generated one or more candidate transactions so as to create one or more anonymized candidate transactions (e.g., action 770). The anonymization process includes anonymizing certain information in the one or more candidate transactions. Example information that may be anonymized for the candidate transactions include information that may identify the parties, contact information of the parties, etc. The anonymizing of certain information in the one or more candidate transactions enables, among other things, personal or confidential information of the parties to be protected until the candidate transaction is a confirmed transaction; control of future transactions that may result from the candidate transactions.

[00238] Providing anonymized one or more candidate transactions to the buyer and/or seller (e.g., action 780).

[00239] After performing the anonymization process (e.g., action 770), the anonymized candidate transactions are provided to the buyer and the one or more matching candidate sellers (e.g., action 780). In situations where one or more candidate secondary sellers are matched in the candidate

transactions, the anonymized transactions are provided to the buyer, the one or more matching candidate sellers, and the one or more matching candidate secondary sellers (e.g., action 780). In this regard, each of these users are then provided with an option on whether or not to proceed with and/or commit to one or more of the anonymized candidate transactions. After proceeding with and/or committing to one or more of the anonymized candidate transactions, a de-anonymization process may be performed on the anonymized candidate transactions. The de-anonymization process may include de-anonymizing some or all of the anonymized information in the anonymized candidate transactions (e.g., over time, after certain actions or milestones are completed, after certain payments are made, etc.). It is to be understood in the present disclosure that more than one de-anonymization processes may be performed on the anonymized candidate transactions (e.g., certain information is de-anonymized after both parties commit to the candidate transaction, more information is de-anonymized after the buyer places a deposit, and all information is de-anonymized after the buyer makes full payment). It is also to be understood that the anonymization process and/or de-anonymization process may not be performed on the one or more candidate transactions without departing from the teachings of the present disclosure. For example, a platform or service that manages transactions between users may prefer not to perform the anonymization process on any candidate transactions. As another example, a platform or service that manages transactions between users may perform an anonymization process for candidate transactions involving parties who have never transacted together, but may not perform an anonymization process for candidate transactions involving parties who have previously transacted together.

[00240] Finalizing transaction and track status of the finalized transaction (e.g., action 790).

[00241] Once the parties to a candidate transaction agree to proceed with and/or commit to one or more of the candidate transactions (which may be an anonymized candidate transaction or a non-anonymized candidate transaction), each such candidate transaction becomes a confirmed transaction (e.g., action 790). After the confirmed transactions are created, the status of the confirmed transaction are tracked. In situations where the confirmed transactions are anonymized, the anonymized confirmed transactions are also de-anonymized, either entirely or partially. The method 790 may also include performing an analysis of the progress and results of the confirmed transaction, obtaining ratings by a party in the confirmed transaction regarding another party, storing of information in one or more databases 150, etc.

[00242] In situations where a confirmed transaction becomes a failed transaction (e.g., the confirmed transaction is cancelled, abandoned, terminated, etc.) or a poor-performing and/or non-optimal transaction, an analysis or assessment of the transaction may be performed so as to identify

one or more reasons for the bad result. In an example embodiment, such reasons for the bad results of the confirmed transactions may be received, analyzed (e.g., via artificial intelligence, machine learning, etc.), and applied so as to improve, among other things, the dynamically generated ratings for the buyer, candidate sellers, and/or candidate secondary sellers; the matching criterion, including the dynamically generated matching criterion; the selection of candidate sellers for matching with the buyer; the selection of candidate secondary sellers for matching with the buyer; the matching of the buyer with the matching candidate seller(s); the matching of the buyer with the matching candidate secondary seller(s); the matching of the matching candidate seller with the matching candidate secondary seller; the anonymization and/or de-anonymization processes; etc. In example embodiments, the dynamic generation of the updated ratings and/or matching processes, as described above and in the present disclosure, may be re-performed for the buyer in the failed transactions based on the bad results (e.g., learn from the mistakes). In example embodiments, the bad results of the confirmed transactions may be provided to a sandbox and/or developers to develop value-added services or solutions to address the gaps which prevented the transactions from being fulfilled or to enhance efficiency and reduce friction for future similar transactions.

[00243] While various embodiments in accordance with the disclosed principles have been described above, it should be understood that they have been presented by way of example only, and are not limiting. Thus, the breadth and scope of the example embodiments described in the present disclosure should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the claims and their equivalents issuing from this disclosure. Furthermore, the above advantages and features are provided in described embodiments, but shall not limit the application of such issued claims to processes and structures accomplishing any or all of the above advantages.

[00244] For example, "communication," "communicate," "connection," "connect," or other similar terms should generally be construed broadly to mean a wired, wireless, and/or other form of, as applicable, connection between elements, devices, computing devices, telephones, processors, controllers, servers, networks, telephone networks, the cloud, and/or the like, which enable voice and/or data to be sent, transmitted, broadcasted, received, intercepted, acquired, and/or transferred (each as applicable).

[00245] Also, as referred to herein, a processor, device, computing device, telephone, phone, server, gateway server, communication gateway server, and/or controller, may be any processor, computing device, and/or communication device, and may include a virtual machine, computer, node, instance, host, or machine in a networked computing environment. Also as referred to herein, a

network or cloud may be or include a collection of machines connected by communication channels that facilitate communications between machines and allow for machines to share resources. Network may also refer to a communication medium between processes on the same machine. Also as referred to herein, a network element, node, or server may be a machine deployed to execute a program operating as a socket listener and may include software instances.

[00246] Database (or memory or storage), including database 150, may comprise any collection and/or arrangement of volatile and/or non-volatile components suitable for storing data. For example, memory may comprise random access memory (RAM) devices, read-only memory (ROM) devices, magnetic storage devices, optical storage devices, solid state devices, and/or any other suitable data storage devices. In particular embodiments, database, including database 150, may represent, in part, computer-readable storage media on which computer instructions and/or logic are encoded. Database, including database 150, may represent any number of memory components within, local to, and/or accessible by a processor and/or computing device.

[00247] Various terms used herein have special meanings within the present technical field. Whether a particular term should be construed as such a "term of art" depends on the context in which that term is used. Such terms are to be construed in light of the context in which they are used in the present disclosure and as one of ordinary skill in the art would understand those terms in the disclosed context. The above definitions are not exclusive of other meanings that might be imparted to those terms based on the disclosed context.

[00248] Words of comparison, measurement, and timing such as "at the time," "equivalent," "during," "complete," and the like should be understood to mean "substantially at the time," "substantially equivalent," "substantially during," "substantially complete," etc., where "substantially" means that such comparisons, measurements, and timings are practicable to accomplish the implicitly or expressly stated desired result.

[00249] Additionally, the section headings and topic headings herein are provided for consistency with the suggestions under various patent regulations and practice, or otherwise to provide organizational cues. These headings shall not limit or characterize the embodiments set out in any claims that may issue from this disclosure. Specifically, a description of a technology in the "Background" is not to be construed as an admission that technology is prior art to any embodiments in this disclosure. Furthermore, any reference in this disclosure to "invention" in the singular should not be used to argue that there is only a single point of novelty in this disclosure. Multiple inventions may be set forth according to the limitations of the claims issuing from this disclosure, and such claims accordingly define the invention(s), and their equivalents, that are protected thereby. In all

instances, the scope of such claims shall be considered on their own merits in light of this disclosure, but should not be constrained by the headings herein.

Claims

What is claimed is:

1. A method of managing transactions between a plurality of users, the method comprising:
 - identifying a first seller;
 - selecting, by a processor, a previous first seller transaction, the previous first seller transaction being a transaction in which the first seller was selected, from among a plurality of available sellers, as a match to a buyer of the previous first seller transaction based on:
 - a search query received, by the processor, from the buyer of the previous first seller transaction; and
 - a predetermined matching criteria; and
 - identifying, by the processor, a relevant date of the previous first seller transaction;
 - identifying, by the processor, an original first seller rating for the previous first seller transaction, the original first seller rating being a rating provided by the buyer to the first seller for the previous first seller transaction;
 - identifying, by the processor, a relevant state of the predetermined matching criteria, the relevant state being a state of the predetermined matching criteria as of the relevant date of the previous first seller transaction;
 - obtaining, by the processor, a current state of the predetermined matching criteria, the current state being a most recent state of the predetermined matching criteria;
 - comparing, by the processor, the relevant state to the current state; and
 - responsive to a determination that the current state is different from the relevant state:
 - generating, by the processor, a rating adjustment factor for the predetermined matching criteria, the rating adjustment factor generated based on at least the comparison between the current state and the relevant state;
 - generating, by the processor, an updated first seller rating for the previous first seller transaction, the updated first seller rating generated by transforming the original first seller rating for the previous first seller transaction based on at least the rating adjustment factor, wherein the transforming of the original first seller rating results in the updated first seller rating having a different rating value from the original first seller rating; and
 - identifying a second transaction, the second transaction being a transaction between the buyer in the previous first seller transaction and a secondary seller, the second transaction being a transaction in which the secondary seller was matched, by the processor, to the buyer based on:
 - the matching of the first seller to the buyer in the previous first seller transaction; and

- a second predetermined matching criteria;
wherein the secondary seller is different from the first seller.
- 2. The method of claim 1, wherein one of the following apply:
 - the relevant date of the previous first seller transaction is a date on which the first seller was matched to the buyer of the previous first seller transaction; or
 - the relevant date of the previous first seller transaction is a date on which the previous first seller transaction was concluded.
- 3. The method of claim 1, wherein the predetermined matching criteria is a criteria selected based on the received search query, the first seller, and/or the buyer.
- 4. The method of claim 1, wherein the predetermined matching criteria includes one or more of the following:
 - a profile of the first seller on the relevant date;
 - a profile of the buyer on the relevant date;
 - a preference of the first seller on the relevant date;
 - a preference of the buyer on the relevant date;
 - a credit rating of the first seller on the relevant date;
 - a credit rating of the buyer on the relevant date; and/or
 - a price, price range, and/or unit price on the relevant date.
- 5. The method of claim 1, wherein one or more of the following apply:
 - when the predetermined matching criteria is a unit price:
 - the relevant state is a specific unit price or specific unit price range offered by the first seller as of the relevant date; and
 - the current state is a most recent current specific unit price or specific unit price range being offered by the first seller;
 - when the predetermined matching criteria is a unit price:
 - the relevant state is a specific unit price or specific unit price range the buyer was willing to pay as of the relevant date; and
 - the current state is a most recent specific unit price or specific unit price range the buyer is willing to pay;
 - when the predetermined matching criteria is a regulation or legislation:
 - the relevant state is an applicable regulation or legislation as of the relevant date; and
 - the current state is a most recent applicable regulation or legislation;
 - when the predetermined matching criteria is a credit rating:

the relevant state is a credit rating of the first seller as of the relevant date; and

the current state is a most recent credit rating of the first seller;

when the predetermined matching criteria is a credit rating:

the relevant state is a credit rating of the buyer as of the relevant date; and

the current state is a most recent credit rating of the buyer;

when the predetermined matching criteria is a performance reliability metric:

the relevant state is a performance reliability metric of the first seller as of the relevant date; and

the current state is a most recent performance reliability metric of the first seller;

when the predetermined matching criteria is a performance reliability metric:

the relevant state is a performance reliability metric of the buyer as of the relevant date; and

the current state is a most recent performance reliability metric of the buyer;

when the predetermined matching criteria is a financial reliability metric:

the relevant state is a financial reliability metric of the first seller as of the relevant date; and

the current state is a most recent financial reliability metric of the first seller;

when the predetermined matching criteria is a financial reliability metric:

the relevant state is a financial reliability metric of the buyer as of the relevant date; and

the current state is a most recent financial reliability metric of the buyer;

when the predetermined matching criteria is a completed transaction metric pertaining to completed and uncompleted previous transactions:

the relevant state is a completed transaction metric of the first seller as of the relevant date; and

the current state is a most recent completed transaction metric of the first seller;

and/or

when the predetermined matching criteria is a completed transaction metric pertaining to completed and uncompleted previous transactions:

the relevant state is a completed transaction metric of the buyer as of the relevant date; and

the current state is a most recent completed transaction metric of the buyer.

6. The method of claim 1, further comprising:

identifying a relevant date of the second transaction;

identifying an original second rating for the second transaction, the original second rating being a rating provided by the buyer to the secondary seller for the second transaction;

identifying a second relevant state of the second predetermined matching criteria, the second relevant state being a state of the second predetermined matching criteria as of the relevant date of the second transaction;

obtaining a second current state of the second predetermined matching criteria, the second current state being a most recent state of the second predetermined matching criteria;

comparing the second relevant state to the second current state; and

responsive to a determination that the second current state is different from the second relevant state:

generating a second rating adjustment factor for the second predetermined matching criteria, the second rating adjustment factor generated based on at least the comparison between the second current state and the second relevant state;

generating an updated second rating for the second transaction, the updated second rating generated by transforming the original second rating for the second transaction based on at least the second rating adjustment factor, wherein the transforming of the original second rating results in the updated second rating having a different rating value from the original second rating.

7. The method of claim 1, further comprising:

identifying a third transaction, the third transaction being a transaction between the first seller in the previous first seller transaction and a secondary seller, the third transaction being a transaction in which the secondary seller was matched, by the processor, to the first seller based on:

the matching of the first seller to the buyer in the previous first seller transaction; and

a third predetermined matching criteria;

wherein the secondary seller is different from the first seller.

8. The method of claim 7, further comprising:

identifying a relevant date of the third transaction;

identifying an original third rating for the third transaction, the original third rating being a rating provided by the first seller to the secondary seller for the third transaction;

identifying a third relevant state of the third predetermined matching criteria, the third relevant state being a state of the third predetermined matching criteria as of the relevant date of the third transaction;

obtaining a third current state of the third predetermined matching criteria, the third current state being a most recent state of the third predetermined matching criteria;

comparing the third relevant state to the third current state; and

responsive to a determination that the third current state is different from the third relevant state:

generating a third rating adjustment factor for the third predetermined matching criteria, the third rating adjustment factor generated based on at least the comparison between the third current state and the third relevant state;

generating an updated third rating for the third transaction, the updated third rating generated by transforming the original third rating for the third transaction based on at least the third rating adjustment factor, wherein the transforming of the original third rating results in the updated third rating having a different rating value from the original third rating.

9. The method of claim 7, further comprising:

identifying a relevant date of the third transaction;

identifying an original fourth rating for the third transaction, the original fourth rating being a rating provided by the secondary seller to the first seller for the third transaction;

identifying a third relevant state of the third predetermined matching criteria, the third relevant state being a state of the third predetermined matching criteria as of the relevant date of the third transaction;

obtaining a third current state of the third predetermined matching criteria, the third current state being a most recent state of the third predetermined matching criteria;

comparing the third relevant state to the third current state; and

responsive to a determination that the third current state is different from the third relevant state:

generating a third rating adjustment factor for the third predetermined matching criteria, the third rating adjustment factor generated based on at least the comparison between the third current state and the third relevant state;

generating an updated fourth rating for the third transaction, the updated fourth rating generated by transforming the original fourth rating for the third transaction based on at least the third rating adjustment factor, wherein the transforming of the original fourth rating results in the updated fourth rating having a different rating value from the original fourth rating.

10. The method of claim 9, further comprising:

generating an overall first seller rating for the previous first seller transaction, the overall first seller rating generated based on the updated first seller rating and the updated fourth rating.

11. A method of managing transactions between a plurality of users, the method comprising:
identifying a first buyer;

selecting, by a processor, a previous first buyer transaction, the previous first buyer transaction being a transaction in which a seller was selected, from among a plurality of available sellers, as a match to the first buyer based on:

a search query received, by the processor, from the first buyer; and

a predetermined matching criteria; and

identifying, by the processor, a relevant date of the previous first buyer transaction;

identifying, by the processor, an original first buyer rating for the previous first buyer transaction, the original first buyer rating being a rating provided by the seller to the first buyer for the previous first buyer transaction;

identifying, by the processor, a relevant state of the predetermined matching criteria, the relevant state being a state of the predetermined matching criteria as of the relevant date of the previous first buyer transaction;

obtaining, by the processor, a current state of the predetermined matching criteria, the current state being a most recent state of the predetermined matching criteria;

comparing, by the processor, the relevant state to the current state;

responsive to a determination that the current state is different from the relevant state:

generating, by the processor, a rating adjustment factor for the predetermined matching criteria, the rating adjustment factor generated based on at least the comparison between the current state and the relevant state;

generating, by the processor, an updated first buyer rating for the previous first buyer transaction, the updated first buyer rating generated by transforming the original first buyer rating for the previous first buyer transaction based on at least the rating adjustment factor, wherein the transforming of the original first buyer rating results in the updated first buyer rating having a different rating value from the original first buyer rating;

identifying a relevant date of the second transaction;

identifying an original second rating for the second transaction, the original second rating being a rating provided by the secondary seller to the first buyer for the second transaction;

identifying a second relevant state of the second predetermined matching criteria, the second relevant state being a state of the second predetermined matching criteria as of the relevant date of the second transaction;

obtaining a second current state of the second predetermined matching criteria, the second current state being a most recent state of the second predetermined matching criteria;

comparing the second relevant state to the second current state; and

responsive to a determination that the second current state is different from the second relevant state:

generating a second rating adjustment factor for the second predetermined matching criteria, the second rating adjustment factor generated based on at least the comparison between the second current state and the second relevant state;

generating an updated second rating for the second transaction, the updated second rating generated by transforming the original second rating for the second transaction based on at least the second rating adjustment factor, wherein the transforming of the original second rating results in the updated second rating having a different rating value from the original second rating.

12. The method of claim 11, wherein one of the following apply:

the relevant date of the previous first buyer transaction is a date on which the first buyer was matched to the seller of the previous first buyer transaction; or

the relevant date of the previous first buyer transaction is a date on which the previous first buyer transaction was concluded.

13. The method of claim 11, wherein the predetermined matching criteria is a criteria selected based on the received search query, the first buyer, and/or the seller.

14. The method of claim 11, wherein the predetermined matching criteria includes one or more of the following:

a profile of the first buyer on the relevant date;

a profile of the seller on the relevant date;

a preference of the first buyer on the relevant date;

a preference of the seller on the relevant date;

a credit rating of the first buyer on the relevant date;

a credit rating of the seller on the relevant date; and/or

a price, price range, and/or unit price on the relevant date.

15. The method of claim 11, wherein one or more of the following apply:

when the predetermined matching criteria is a unit price:

the relevant state is a specific unit price or specific unit price range offered by the seller as of the relevant date; and

the current state is a most recent specific unit price or specific unit price range being offered by the seller;

when the predetermined matching criteria is a unit price:

the relevant state is a specific unit price or specific unit price range the first buyer was willing to pay as of the relevant date; and

the current state is a most recent specific unit price or specific unit price range the first buyer is willing to pay;

when the predetermined matching criteria is a regulation or legislation:

the relevant state is an applicable regulation or legislation as of the relevant date; and

the current state is a most recent applicable regulation or legislation;

when the predetermined matching criteria is a credit rating:

the relevant state is a credit rating of the first buyer as of the relevant date; and

the current state is a most recent credit rating of the first buyer;

when the predetermined matching criteria is a credit rating:

the relevant state is a credit rating of the seller as of the relevant date; and

the current state is a most recent credit rating of the seller;

when the predetermined matching criteria is a performance reliability metric:

the relevant state is a performance reliability metric of the first buyer as of the relevant date; and

the current state is a most recent performance reliability metric of the first buyer;

when the predetermined matching criteria is a performance reliability metric:

the relevant state is a performance reliability metric of the seller as of the relevant date; and

the current state is a most recent performance reliability metric of the seller;

when the predetermined matching criteria is a financial reliability metric:

the relevant state is a financial reliability metric of the first buyer as of the relevant date; and

the current state is a most recent financial reliability metric of the first buyer;

when the predetermined matching criteria is a financial reliability metric:

the relevant state is a financial reliability metric of the seller as of the relevant date;

and

the current state is a most recent financial reliability metric of the seller;

when the predetermined matching criteria is a completed transaction metric pertaining to completed and uncompleted previous transactions:

the relevant state is a completed transaction metric of the first buyer as of the relevant date; and

the current state is a most recent completed transaction metric of the first buyer; and/or

when the predetermined matching criteria is a completed transaction metric pertaining to completed and uncompleted previous transactions:

the relevant state is a completed transaction metric of the seller as of the relevant date; and

the current state is a most recent completed transaction metric of the seller.

16. The method of claim 11, further comprising:

identifying a second transaction, the second transaction being a transaction between the first buyer in the previous first buyer transaction and a secondary seller, the second transaction being a transaction in which the secondary seller was matched, by the processor, to the first buyer based on:

the matching of the seller to the first buyer in the previous first buyer transaction; and
a second predetermined matching criteria;

wherein the secondary seller is different from the seller.

17. The method of claim 16, further comprising:

identifying a relevant date of the second transaction;

identifying an original second rating for the second transaction, the original second rating being a rating provided by the secondary seller to the first buyer for the second transaction;

identifying a second relevant state of the second predetermined matching criteria, the second relevant state being a state of the second predetermined matching criteria as of the relevant date of the second transaction;

obtaining a second current state of the second predetermined matching criteria, the second current state being a most recent state of the second predetermined matching criteria;

comparing the second relevant state to the second current state; and

responsive to a determination that the second current state is different from the second relevant state:

generating a second rating adjustment factor for the second predetermined matching criteria, the second rating adjustment factor generated based on at least the comparison between the second current state and the second relevant state;

generating an updated second rating for the second transaction, the updated second rating generated by transforming the original second rating for the second transaction based on at least the second rating adjustment factor, wherein the transforming of the original second rating results in the updated second rating having a different rating value from the original second rating.

18. The method of claim 17, further comprising:

generating an overall first buyer rating for the previous first buyer transaction, the overall first buyer rating generated based on the updated first buyer rating and the updated second rating.