SYSTEM AND METHOD FOR ALLOCATING BUSINESS TO ONE OF A PLURALITY OF SELLERS IN A BUYER DRIVEN ELECTRONIC COMMERCE SYSTEM

Claim to Priority

This application claims priority under 35 U.S.C. § 120 to U.S. Patent Application Serial No. 08/889,319, entitled Conditional Purchase Offer Management System, filed July 8, 1997, which is a continuation-in-part of U.S. Patent Application Serial No. 08/707,660, filed September 4, 1996 (U.S. Patent No. 5,794,207, issued August 11, 1998), the disclosures of which are incorporated herein by reference.

Field of the Invention

The present invention relates generally to a system for processing the sale of goods and services and, more particularly, to a system and method for the allocation of business among multiple sellers within a buyer-driven commerce system.

Background of the Invention

Most systems for processing the sale of products are seller-driven, whereby the seller prices, packages, configures and offers the product for sale, and the buyer decides whether or not to accept the seller's offer. In a buyer-driven system, however, the buyer dictates the terms of the offer and one or more sellers decide whether or not to accept the offer. A "help wanted" advertisement, for example, is a buyer-driven inquiry since the employer is looking to locate and buy the services of a qualified employee. The inquiry is advertised to a large number of potential employees, who may respond by submitting their resumes to the prospective employer.

Priceline.com, Incorporated of Stamford, CT is a merchant that has successfully implemented a buyer-driven system for the sale of products such as airline tickets and automobiles. Priceline.com utilizes a Conditional Purchase Offer (CPO) Management System, described in U.S. Patent No. 5,794,207 and International Application Number PCT/US97/15492, that processes Conditional Purchase Offers and/or Binding Conditional Purchase Offers (Binding CPO's) received from individual consumers. These CPO's contain one or more buyer-defined conditions for the purchase of goods or services, at a buyer-defined price. The Binding CPO's are typically guaranteed by a general-purpose account, such as a debit or credit account, and thereby provide sellers with a mechanism for enforcing any agreement that may be reached with the consumer. The CPO's are provided by the CPO management system to sellers, either directly or using seller-supplied rules, for individual sellers to either accept or reject. If a seller accepts a Binding CPO, the CPO management system binds the buyer on behalf of the accepting seller, to form a legally binding contract.

Thus, the CPO management system empowers individual consumers to obtain goods and services at a price set by the consumer. The CPO management system provides numerous commercial advantages to sellers as well. For example, the CPO management system permits individual sellers to effectively sell excess capacity when actual demand fails to meet forecasted demand. In particular, the CPO management system provides an effective mechanism for sellers to be confident that if they accept a consumer's offer, the consumer will purchase the requested goods or services at the agreed-upon price, and not just use the information to ascertain the seller's underlying level of price flexibility, which, if known to a seller's competitors or customers, could impact the seller's overall revenue structure.

For some sellers, and the airline industry in particular, response to an individual CPO is difficult without significant re-engineering of the existing transaction processing system. As a result, these sellers empower an agent to manage buyer-driven commerce transactions. These sellers become agency-based

sellers, with a CPO management system acting as their agent. However, with multiple agency-based sellers, there is no method for the CPO management system to allocate CPO's among the agency-based sellers.

It is also possible that an agency-based seller can satisfy a CPO with more than one seller-defined CPO rule. There currently exists no method for the CPO management system to select the seller-defined CPO rule generating the maximum revenue for the agency-based seller.

For broadcast-based sellers, some form of allocation is also desirable. This is particularly helpful where allocation based on the order of seller response is not possible or appropriate. For example if two broadcast-based sellers respond at the same time, there must be some method for allocating the CPO among them. Similarly, for broad-cast based sellers it may be appropriate to allocate or limit the CPO to particular sellers based on region of business, market area, service history or other factors.

SUMMARY OF THE INVENTION

The invention provides a system and method for allocating conditional purchase offers (CPOs) in a buyer-driven system. First look and second look sellers are identified based on their market share in a relevant market. In identifying first and second look sellers, the system and method also considers the numbers of first look opportunities given as compared to numbers of first look opportunities due. The first look seller is given the first opportunity to satisfy the CPO. If the first look seller is unable to satisfy the CPO, the second look seller is given an opportunity to satisfy the CPO. If neither the first nor second look sellers are able to satisfy the CPO, the system performs a price-oriented search across the remaining sellers.

When a seller is able to satisfy the CPO with more than one rule or price, the system and method preferably identify the highest value rule or highest

price that will satisfy the CPO. In this manner, the seller maximizes its revenue from a CPO.

DESCRIPTION OF THE FIGURES

FIG. 1 is a block diagram illustrating major elements in the system of the invention;

FIG. 2 is a block diagram illustrating elements of the central controller of the invention;

FIGS. 3A and 3B are flow charts illustrating a CPO Evaluation Process in the method of the invention;

FIG. 4 is a flow chart illustrating a Rules Evaluation Subroutine in the method of the invention;

FIG. 5 is a table from a database illustrating rules in a CPO management system;

FIGS. 6A and 6B are flow charts illustrating a preferred embodiment of the method of the invention;

FIG. 7 is a flow chart illustrating an alternative embodiment of the method of the invention; and

FIG. 8 is a flow chart illustrating an alternative embodiment of the method of the invention.

The Figures are understood to provide representative illustration of the invention and are not limiting in their content.

DETAILED DESCRIPTION

FIG. 1 shows a first embodiment of a conditional purchase offer (CPO) management system 100 for receiving and processing CPO's for one or more goods or services, from one or more buyers 110 or agents 120 (on behalf of buyers

110). The CPO management system 100 determines whether one or more sellers, such as sellers 130, 140, 150, 160 are willing to accept a given CPO. As discussed further below, if a seller accepts a given CPO, the CPO management system 100 binds the buyer on behalf of the accepting seller, to form a legally binding contract.

As used herein and in the claims, the following terms are defined to mean:

Agency-Based Seller - A seller who has delegated authority to the CPO Management System to accept or reject a given CPO using seller-defined CPO Rules

Broadcast-Based Seller - A seller who has received a CPO from the CPO Management System (directly or by, for example, access to an electronic posting) for evaluation.

Conditional Purchase Offer (CPO) - An offer containing one or more conditions submitted by a buyer for the purchase of goods and/or services at a buyer-defined price.

Binding Conditional Purchase Offer (Binding CPO) - A binding offer containing one or more conditions submitted by a buyer for the purchase of goods and/or services at a buyer-defined price. As compared to a CPO, a Binding CPO includes a payment guarantee, for example with a General Purpose Account, and authorization to debit the Account upon acceptance of the Binding CPO.

Conditional Purchase Offer (CPO) Rule - A restriction defined by a Broadcast-Based or Agency-Based Seller under which the operator of the CPO Management System may act as an agent to determine whether to fill a CPO for that Seller.

CPO Management System - A controller that receives and processes CPO's for one or more goods or services, from one or more buyers, to determine if one or more sellers (Agency-Based or Broadcast-Based Sellers) are willing to accept a CPO.

General Purpose Account - Any account from which payment can be made, including a credit or debit account.

First Look Opportunity - The initial opportunity given to a seller to satisfy a CPO, when the CPO management system allocates a CPO among multiple sellers.

Second Look Opportunity - The follow-up opportunity given to a seller to satisfy a CPO, when the CPO management system allocates a CPO among multiple sellers. If the CPO is unsatisfied in the first look opportunity, the seller given the follow-up opportunity to satisfy the CPO receives the second look opportunity.

Rule - A restriction or restrictions defined by a seller which must be satisfied before the seller will honor a particular price or sale. In the airline industry, rules include among other requirements black-out dates, day of week for origination, minimum and maximum stay length, advanced purchase requirements and cancellation/change terms.

Metric - A ranking parameter used to prioritize sellers. A metric can include seller factors such as market share, buyer factors such as preference, and random factors.

As shown in FIG. 1, the CPO management system 100 preferably includes a central controller 200, discussed further below in conjunction with FIG. 2. The CPO management system 100 may provide a given CPO to selected sellers 130, 140, 150, 160 based on predefined screening criteria, so that sellers only obtain CPO's that they may be interested in or are authorized to screen or have the potential to fulfill. Alternatively, the CPO management system 100 may provide all CPO's to all sellers for screening.

As discussed further below, each buyer 110 contacts the CPO management system 100, for example, by means of telephone, facsimile, online access (i.e. the Internet), electronic mail, in-person contact or through an agent, and provides the CPO management system 100 with the terms of the buyer's CPO. It is

noted that each buyer 110 and seller 130, 140, 150, 160 may employ a general-purpose computer for communicating with the CPO management system 100. Though not illustrated, the general-purpose computer is preferably comprised of a processing unit, a communication device (e.g. a modem), memory means and any software required to communicate with the CPO management system 100.

The CPO management system 100, as well as any general-purpose computers utilized by buyers 110 or sellers 130, 140, 150, 160 (collectively, the "nodes") preferably transmit digitally encoded data and other information between one another. The communication links between the nodes preferably comprise a cable, fiber or wireless link on which electronic signals can propagate.

AGENCY AND BROADCAST-BASED SELLERS

According to one feature of the present invention, the CPO management system 100 preferably provides an optional agency feature that permits the CPO management system 100 to accept or reject a given CPO on behalf of certain agency-based sellers 130, 160 who have delegated such authority to the CPO management system 100. Thus, the CPO management system 100 preferably (i) evaluates CPO's on behalf of certain agency-based sellers 130, 160 who have delegated authority to the CPO management system 100 to accept or reject a given CPO, and (ii) permits broadcast-based sellers, such as sellers 140, 150 to evaluate CPO's independently.

Thus, the CPO management system 100 can preferably provide one or more CPO's to each broadcast-based seller 140, 150, for the seller 140, 150 to independently determine whether or not to accept a given CPO. It is noted that the CPO management system 100 can provide a CPO to each appropriate broadcast-based seller 140, 150, for example, by means of a broadcast transmission, or by means of posting the CPO, for example, on an electronic bulletin board accessible by each broadcast-based seller 140, 150. Alternatively, the CPO management system 100 can evaluate one or more CPO's against a number of CPO rules defined by one or more agency-based sellers 130, 160 to decide on behalf of an agency-

based seller 130, 160 to accept or reject a given CPO. An illustrative set of CPO rules for illustrative agency-based sellers is set forth in FIG. 5.

Thus, the CPO management system 100 can determine if one or more sellers 140, 150 accepts a given CPO by broadcasting the CPO to each seller 140, 150 and receiving an acceptance or rejection, or by applying the CPO to the CPO rules to render a decision to either accept, reject or counter a CPO on behalf of an agency-based seller 130, 160.

As discussed further below, a CPO rule is a set of restrictions defined by a given agency-based seller 130, 160 for which the seller 130, 160 is willing to accept a CPO. For a more detailed discussion of CPO rules, the manner in which they are generated, and related security issues, see U.S. Patent Application Serial No. 08/889,319, entitled Conditional Purchase Offer Management System, filed July 8, 1997, and U.S. Patent No. 5,794,207.

FIG. 2 is a block diagram showing the architecture of an illustrative central controller 200. The central controller 200 preferably includes certain standard hardware components, such as a central processing unit (CPU) 205, a random access memory (RAM) 210, a read only memory (ROM) 220, a clock 225, a data storage device 230, and a communications port 240. The CPU 205 is preferably linked to each of the other listed elements, either by means of a shared data bus, or dedicated connections, as shown in FIG. 2. The communications port 240 connects the central controller 200 to each buyer 110 and seller 130, 140, 150, 160. The communications port 240 preferably includes multiple communication channels for simultaneously establishing a plurality of connections.

The ROM 220 and/or data storage device 230 are operable to store one or more instructions, discussed further below in conjunction with FIGS. 3 through 8, which the CPU 205 is operable to retrieve, interpret and execute. For example, the ROM 220 and/or data storage device 230 preferably store processes to accomplish the transfer of required payments, charges and debits, between the sellers 130, 140, 150, 160 and buyers 110. The processing of such accounting

transactions are preferably secured in a conventional manner, for example, using well-known cryptographic techniques.

The data storage device 230 includes at least a seller database 231, a buyer database 232, an offer database 233 and a seller rules database 234. The seller database 231 preferably stores information on each seller 130, 140, 150, 160 which is registered with the CPO management system 100 to sell goods or services to CPO buyers, including contact information. The buyer database 232 preferably stores information on each buyer of the CPO management system 100, including identification information and billing information, such as a credit card number. The offer database 233 preferably contains a record of each CPO being processed by the CPO management system 100, including the conditions associated with the CPO and the associated status. The seller rules database 234 preferably maintains the CPO rules for one or more agency-based sellers 130, 160.

In addition, the data storage device 230 includes a CPO evaluation process 235 and a rules evaluation subroutine 236, discussed further below in conjunction with FIGS. 3A, 3B and 4, respectively. Generally, the CPO evaluation process 235 (i) receives each CPO from a buyer 110, (ii) provides each CPO to the appropriate broadcast-based sellers 140, 150 and evaluates each CPO against the appropriate rules of each agency-based seller 130, 160 and (iii) determines whether any sellers 130, 140, 150, 160 accept the CPO. The rules evaluation subroutine 236 is a subroutine executed by the CPO evaluation process 235, which receives a CPO and compares the CPO against the rules of one or more agency-based sellers 130, 160 to generate a response on behalf of the sellers to the given CPO.

Having described the system of the present invention, a first method of the invention will be described. At step 301 of FIG. 3A, the system 100 receives a CPO from one of the plurality of buyers 110.

At step 303, the system determines whether the CPO is a valid offer.

At step 305, if the system determines that the CPO is not valid, the system requests the buyer retransmit the offer.

At step 307, with a valid offer, the system receives a payment identifier.

At step 309, the system determines whether the payment identifier is valid.

At step 311, if the system determines that the payment identifier is not valid, the system requests the buyer retransmit the payment identifier.

At step 313, the system transmits the offer to broadcast-based sellers and executes a rules evaluation subroutine for agency-based sellers. The rules evaluation subroutine is discussed below in conjunction with FIG. 4.

At step 315, when a seller accepts the CPO, the system receives at least one acceptance signal.

At step 317, when the system receives more than one acceptance signal, the system selects one acceptance signal.

At step 319, the system identifies the seller corresponding to the acceptance signal.

At step 321, of FIG. 3B, the system provides the selected seller with personal information of the buyer.

At step 323, if the CPO is not a binding CPO, the system determines whether the buyer defaulted or reneged.

At step 327, if the buyer does not default or renege, the system ends the CPO evaluation process.

At step 325, if the buyer defaults or reneges, the system collects a penalty from the buyer and then ends the CPO evaluation process at step 327.

As discussed above, the CPO evaluation process 235 executes a rules evaluation subroutine 236 during step 313 of FIG. 3A to determine if one or more agency-based sellers 130, 160 are willing to accept a CPO.

At step 401, of FIG. 4, the system compares the CPO with corresponding restrictions as set forth in any CPO rules that are defined by agency-based sellers 130, 160.

At step 403, the system determines whether any CPO rules are satisfied by the CPO.

At step 405, if the system determines that a CPO rule is satisfied, the system identifies the corresponding seller.

At step 407, the system returns to the rules evaluation subroutine with an indication of whether a rule was or was not satisfied at step 403.

The steps thus described and illustrated in FIGS. 3A, 3B and 4 allow the system to accept and validate a CPO; transmit the CPO to broadcast-based sellers; execute a rules evaluation routine for agency-based sellers; determine whether any seller accepts, and bind the CPO when a seller accepts (assuming the CPO is a Binding CPO). The method in FIGS. 3A, 3B and 4 does not provide a method to allocate a CPO among multiple agency-based sellers 130, 160. Such a method to allocate a CPO to multiple agency-based sellers in accordance with a predetermined strategy is described in greater detail with reference to FIGS. 5 through 8.

With multiple agency-based sellers, the system 100 uses information in the seller database (231 in FIG. 2), and the seller rules database (234 in FIG. 2) to determine whether any of the agency-based sellers can satisfy a CPO. As an example, in FIG. 5, the seller rules database (234 in FIG. 2) includes information on flight schedules 505 for multiple agency-based sellers of airtravel. Depending on the restrictions in a CPO, more than one of those agency-based sellers may be able to satisfy the CPO. Thus, if the CPO merely requires departure from New York and a destination in California during the first quarter of 1997, two agency-based sellers can satisfy the CPO. One agency-based seller 510 has a flight originating in New York on January 1, 1997 and terminating in Los Angeles, with a stop in Chicago. Another agency-based seller 520 has a non-stop flight originating in New York on

March 3, 1997 and terminating in San Francisco. However, agency-based seller 530 is unable to satisfy the CPO because the departure point is not New York, and the date is not in the first quarter of 1997.

As thus described, with more than one agency-based seller able to satisfy a CPO, system 100 must have a method to allocate the CPO among the agency-based sellers. Additionally. when multiple agency-based sellers are able to satisfy a CPO and they are further able to satisfy the CPO at different prices, the system must desirable allocate the CPO to one particular agency-based seller, and must further allocate the CPO to one of the possible prices. These steps are described below in greater detail with reference to FIGS. 6 through 8.

A method to allocate a CPO among multiple agency-based sellers is illustrated in FIGS. 6A and 6B. At step 601, system 100 receives data from a buyer and forms a CPO. This step is functionally the same as described at steps 301 through 311 in FIG. 3A.

At step 603, the system determines which of the agency-based sellers can possibly satisfy the CPO. As an example, if the CPO is for air travel with specified departure and destination points, only agency-based sellers servicing those departure and destination points can possibly satisfy the CPO. The other agency-based sellers are unable to satisfy the CPO and are excluded from further consideration. Similarly, if an agency-based seller has no qualifying prices that could satisfy the CPO, they are unable to satisfy the CPO and are excluded from further consideration. The system thus uses multiple factors to determine whether a seller can possibly satisfy the CPO.

At step 605, the system determines a first look opportunity seller from those agency-based sellers that can possibly satisfy the CPO. This determination is based on a metric, which in the preferred embodiment considers a relative market share of all the agency-based sellers that could satisfy the CPO. The system assigns the first look opportunity to the seller with the largest relative market share in the market offered in the CPO, with consideration for the number of first

look opportunities provided to that agency-based seller versus the number of first look opportunities due to that agency-based seller.

The system records numbers of first look opportunities provided to sellers for different CPOs. This historic information forms part of the consideration for allocation of first look opportunities. When the system receives a new CPO, the historic information on opportunities provided for each seller is compared to the number of opportunities that are due for each seller. As a result of many factors, the number of opportunities due and the number of opportunities provided are seldom in agreement and the system attempts to bring them into closer agreement by weighting or biasing allocation to the seller that is most out of agreement. The disagreement can be a simple numerical difference between opportunities due and provided, or a percentage difference between opportunities due and provided.

With multiple factors considered in the metric to determine which agency-based seller gets the first look opportunity, some weighting or priority of factors is required. If the relative market share is normalized among agency-based sellers who can possibly satisfy the CPO, that relative market share can have a value between zero percent (0%) and one hundred percent (100%). With two agency-based sellers, A & B, that can each satisfy the CPO, and seller A having three times the relative market share of seller B in the relevant market, then seller A with the larger share would have a relative market share of 75%, while seller B with the smaller share would have a relative market share of 25%.

With these relative market shares in the relevant market, seller A will receive seventy five percent (75%) of the first look opportunities (e.g., three out of four first look opportunities), while seller B will receive twenty five percent (25%) of the first look opportunities (e.g., one out of four first look opportunities).

At step 605, the system also determines the seller receiving the second look opportunity in the same manner that the first look opportunity is determined.

At step 607, the system determines whether the seller receiving the first look opportunity satisfied the CPO.

At step 609, if the seller receiving the first look opportunity did not satisfy the CPO, the system determines whether the seller receiving the second look opportunity satisfied the CPO.

At step 611, if either of the sellers receiving the first look opportunity or the second look opportunity satisfies the CPO, the system binds the CPO, to create a Binding CPO, and informs both the buyer and seller.

At step 613, if neither of the sellers receiving the first look opportunity or second look opportunity satisfied the CPO, the system determines whether there are remaining sellers.

At step 615, if there are no remaining sellers, the system notifies the buyer that no seller was able to satisfy the CPO.

At step 617 of Fig. 6B, if there are remaining sellers, the system performs a low price lookup from all sellers, and selects the lowest price satisfying the CPO.

At step 619, the system determines whether any seller satisfied the CPO. If a seller was able to satisfy the CPO, the system binds the CPO and informs the buyer and seller at step 611 of FIG. 6A.

If no seller was able to satisfy the CPO during the low price lookup, the system so notifies the buyer at step 615 of FIG. 6A.

As illustrated in FIGS. 6A and 6B, the system gives the highest priority agency-based seller an opportunity to satisfy the CPO. It is possible that an agency-based seller will be able to satisfy a CPO with more than one rule. For example, if a CPO includes a price term of $300.00, and the priority agency-based seller can satisfy the CPO with two rules having prices of $250.00 and $270.00, the system must decide which rule to fulfil the CPO with. In the example, the CPO

binds at $300.00, but the specific question is whether the system fulfils the CPO at $250.00 or $270.00.

In the described embodiment, when more than one rule satisfies the CPO, the system selects the highest value or highest priced rule that will satisfy the CPO. In this manner, the system fulfils the CPO at the highest price or value satisfying the CPO, though the system binds the CPO at the price specified by the buyer. This ensures that the agency-based seller can also fulfil another CPO, which could only be fulfilled at the lower price. It also assures agency-based sellers that they will receive the maximum possible revenue for each CPO they fulfil. Without these assurances, certain agency-based sellers might decline to participate.

It is also possible that factors other than price are used instead of or in addition to price in selecting a particular seller. In the airline industry examples of these other factors include: level of service; date / time of flight; seat class or booking options; and day of week of travel.

Using the CPO management system illustrated in FIGS 1 and 2, the preferred embodiment of the method illustrated in FIGS. 6A and 6B allows agency-based sellers a first look and second look opportunity to fulfil or satisfy a CPO, based on a predetermined metric. The metric described is relative market share in a relevant market. When a seller can satisfy a CPO with more than one rule, the system allows the seller to maximize revenue with the highest price or highest value CPO. Various alternative embodiments are also available.

The metric that system 100 uses at step 605 of FIG. 6A to determine the first and second look sellers can be something other than an adjusted market share. For example, the metric can be based on total market share, without adjustment for the relevant market (e.g. origin/destination pair). Alternatively, the metric can be based on a random number. It is also possible that a buyer preference metric is used. A buyer preference metric can be a buyer requirement regarding a particular agency-based seller as a condition of the CPO. For example, the buyer

may indicate a preference for a particular agency-based seller or an unwillingness to accept a particular agency-based seller.

FIGS. 7 and 8 illustrate alternative embodiments for the method of the invention. In the first alternative embodiment, at step 701, system 100 receives data from a buyer and forms a CPO. This step is functionally the same as described at steps 301 through 311 in FIG. 3A.

At step 703, system 100 orders agency-based sellers in priority order from highest to lowest for the first look opportunity to satisfy the CPO. As previously described, system 100 uses a metric such as market share, adjusted market share, random number or a buyer specific metric to order the sellers.

At step 705, system 100 gives the highest priority seller a first look opportunity to satisfy the CPO.

At step 707, system 100 determines whether the seller was able to satisfy the CPO.

At step 709, if the seller was able to satisfy the CPO, the system binds the CPO and informs the buyer and seller.

At step 711, if the system determined that the seller was not able to satisfy the CPO, the system identifies that highest priority seller as unable to satisfy the CPO.

At step 713, the system determines whether there are any remaining sellers.

At step 715, if there are remaining sellers, the system shifts the priority of all remaining sellers up by one.

The system then gives the new highest priority seller a second look opportunity to satisfy the CPO at step 705. The process repeats with other look opportunities (third, fourth etc.) until a seller satisfies the CPO at step 707, or the system determines that no sellers remain at step 713.

At step 717, if the system determines that no sellers remain, the system notifies the buyer that no seller was able to satisfy the CPO.

In another embodiment illustrated in FIG. 8, at step 801, system 100 receives data from a buyer and forms a CPO. This step is functionally the same as described at steps 301 through 311 in FIG. 3A.

At step 803, system 100 identifies the highest priority seller for a first look opportunity to satisfy the CPO. Determining priority of sellers is accomplished with a metric, such as the previously described adjusted market share, market share, random number, and buyer specific metric.

At step 805, system 100 gives the highest priority seller a first look opportunity to satisfy the CPO.

At step 807, the system determines if the highest priority seller satisfied the CPO.

At step 809, if the seller satisfied the CPO, the system binds the CPO and informs the buyer and seller.

At step 811, if the seller did not satisfy the CPO, the system identifies that highest priority seller as unable to satisfy the CPO and removes that highest priority seller from the eligible list of sellers for the CPO.

At step 813, the system determines whether there are remaining sellers.

If there are remaining sellers, at step 803, the system identifies the highest priority seller for a second look opportunity to satisfy the CPO. In this manner, the method continues with other look opportunities (third, fourth, etc.) until the system determines that a seller satisfies the CPO at step 807, or the system determines that no sellers remain at step 813.

In this manner, sellers may be reprioritized according to the selected metric with any influence of a higher priority but non-filling seller removed.

At step 815, if there are no remaining sellers, the system informs the buyer that no seller was able to satisfy the CPO.

FIGS. 7 and 8 illustrate alternative embodiments of the method of the invention using the system illustrated in FIGS. 1 and 2. In these alternatives, sellers are prioritized according to a metric and sellers are given an opportunity to satisfy the CPO according to their priority order.

STRUCTURAL ADVANTAGE EMBODIMENT

In an alternate embodiment, an allocation system is used to provide an advantage or disadvantage to one or more participating agency-based sellers. In this embodiment, the objective of the system is to create imbalance in an attempt to favor a specific seller without providing that favored seller with all of the first look opportunities.

In one example of this embodiment, the CPO management system allocates first look opportunities to the plurality of agency-based sellers on the basis of market share between two points. When a first look opportunity is allocated to a "favored seller", it does not count as being allocated unless the favored seller binds or fulfills the offer. This creates a structural advantage in that if the favored seller does not fulfill the offer, the favored seller automatically receives a first look at the next unit of demand between those two points.

It is understood that there are many methods by which a CPO management system can provide a structural advantage or disadvantage to one or more agency-based sellers.

OTHER EMBODIMENTS

The airline industry is used as an example, however, any industry in which the buyer-driven commerce model can be applied is appropriate for the system and method of the invention.

The embodiments thus described disclose allocation among Agency-Based Sellers. It is also envisioned that the invention provide allocation among Broadcast-Based Sellers. Similarly, the invention envisions allocation among multiple sellers including a combination Agency-Based and Broadcast-Based Sellers.

The embodiments have described the invention in the context of a Binding CPO. However, the invention is also appropriate for circumstances where the CPO is not binding.

In another embodiment, a CPO may contain a seller-defined variable or flexible condition, typically specified using a range. For example, the variable condition may be a date range within which the product may be delivered by the seller. Other variable conditions might include: a price range, a performance range, a quality range, etc... The seller may then choose a product to fill the buyer's flexible condition within the specified range. Such a variable condition may provide substantial assistance to the seller in filling the buyer's CPO. For example, with respect to an airline ticket, the seller may be able to meet a buyer's specified price if the CPO permits him to select a flight within a range of times or days.

It is desirable that in one embodiment the present invention include features that prevent buyers from repetitively querying, or 'pinging,' the system, to determine the underlying price flexibility of the sellers. Such pinging might result in potential damage to the seller's price margins and profitability. As mentioned above, requiring a buyer to enter into a Binding CPO at least discourages pinging by insuring that if an offer is accepted, the product is actually purchased. Another method of discouraging pinging includes preventing buyers from submitting repetitive, similar offers. For example, repetitive CPOs changing only the offer price in an effort to determine price flexibility may be blocked by the system. In one embodiment, subsequent CPOs by the same buyer are accepted by the CPO Management System only if there is some substantial change to the buyer specifications that would result in the purchase of an essentially different product.

For example, with respect to the sale of airline tickets, subsequent CPOs may be accepted for processing only if there is a significant change in the itinerary. Yet another method for discouraging pinging is to require a payment for each submission of a CPO.

In another embodiment of the invention, sellers identities are maintained anonymous within the CPO Management System until a CPO is accepted. Such identity anonymity, by itself and in combination with the discouragement of price pinging discussed herein, enables sellers to participate in the CPO Management System process without fear of undercutting their published price structures and losing their regular customer base. For example, most retailers have published product prices, and loyal customers who willingly pay those prices. Participating in the CPO Management System enables a seller to discount those products, potentially below its published prices, to fill offers from buyers who might not otherwise pay published prices. With anonymity, these sellers can more freely participate in the CPO Management System process with less fear of losing their regular customers and undercutting their published price structure.

Although illustrative embodiments of the present invention, and various modifications thereof, have been described in detail herein with reference to the accompanying drawings, it is to be understood that the invention is not limited to these precise embodiments and the described modifications, and that various changes and further modifications may be effected therein by one skilled in the art without departing from the scope or spirit of the invention as defined in the appended claims.

We claim:

1. An allocation method in a buyer-driven system comprising:

identifying one of at least two sellers as a priority seller; and

providing the priority seller with a first look opportunity to satisfy a conditional purchase offer.

2. A method according to claim 1, further comprising providing another of the at least two sellers with a second look opportunity to satisfy the conditional purchase offer.

3. A method according to claim 1, further comprising binding the buyer to the conditional purchase offer.

4. A method according to claim 1, further comprising notifying the buyer that the conditional purchase offer will not be satisfied.

5. A method according to claim 1, further comprising, before identifying one of the at least two sellers as a priority seller, determining which of at least two sellers could satisfy the conditional purchase offer.

6. A method according to claim 1, wherein one of the at least two sellers is an agency-based seller.

7. A method according to claim 1, wherein one of the at least two sellers is a broadcast-based seller.

8. A method according to claim 1, wherein the conditional purchase offer is a binding conditional purchase offer.

9. A method according to claim 1, wherein identifying one of at least two sellers as a priority seller includes:

determining a number of first look opportunities due to the at least two sellers;

determining a number of first look opportunities given to the at least two sellers; and

identifying one of the at least two sellers with the largest deficiency between opportunities given and opportunities due as the priority seller.

10. A method according to claim 1, wherein identifying one of at least two sellers as a priority seller includes:

determining a percentage of first look opportunities due to the at least two sellers based on an adjusted market share;

determining a percentage of first look opportunities given to the at least two sellers; and

identifying one of the at least two sellers with the largest deficiency between percentage of first look opportunities given and percentage of first look opportunities due as the priority seller.

11. A method according to claim 1, wherein identifying one of at least two sellers as a priority seller includes:

assigning a random number to each of the at least two sellers; and

using the random numbers to identify the priority seller.

12. A method according to claim 1, wherein identifying one of at least two sellers as a priority seller includes:

determining a market share for each of the at least two sellers; and

identifying one of the sellers having the largest market share that could also satisfy the conditional purchase offer as the priority seller.

13. A method according to claim 1, wherein identifying one of at least two sellers as a priority seller further includes:

determining a buyer preference metric for each of the at least two sellers; and

using the buyer preference metric to identify one of the at least two sellers as the priority seller.

14. A method according to claim 1, wherein identifying one of at least two sellers as a priority seller further includes providing an advantage to one of the at least two sellers.

15. A method according to claim 1, further comprising:

determining whether more than one seller price will satisfy the conditional purchase offer; and

selecting the highest seller price.

16. A method according to claim 1, further comprising:

determining whether there are other sellers that could satisfy the conditional purchase offer; and

performing a low price search of the other sellers.

17. An allocation method in a buyer-driven system comprising:

determining which of a plurality of sellers can satisfy a conditional purchase offer;

identifying one of the sellers that can satisfy the conditional purchase offer as a first look opportunity seller based on relative market share in a relevant market and number of first look opportunities provided as compared to number of first look opportunities due;

identifying another of the sellers that can satisfy the conditional purchase offer as a second look opportunity seller;

providing the first look opportunity seller with a first look opportunity to satisfy the conditional purchase offer.

18. A method according to claim 17, further comprising providing the second look opportunity seller with a second look opportunity to satisfy the conditional purchase offer.

19. A method according to claim 17, further comprising:

determining whether more than one seller price will satisfy the conditional purchase offer; and

selecting the highest seller price.

20. A method according to claim 17, further comprising:

determining whether there are other sellers that could satisfy the conditional purchase offer; and

performing a low price search of the other sellers.

21. A method according to claim 17, wherein the relevant market is an origin/destination pair.

22. A method according to claim 17, further comprising providing an advantage to one of the plurality of sellers.

23. A method according to claim 17, wherein at least one of the plurality of sellers is an agency-based seller.

24. A method according to claim 17, wherein at least one of the plurality of sellers is a broadcast-based seller.

25. A method according to claim 17, further comprising binding the conditional purchase offer.

26. A system comprising:

a data storage device, for storing information on sellers, a conditional purchase offer and conditional purchase offer rules; and

a processor, for identifying one of at least two sellers as a priority seller and providing the priority seller with a first look opportunity to satisfy the conditional purchase offer according to the conditional purchase offer rules.

27. A system according to claim 26, further comprising a communication port for communicating with the sellers and a buyer.

28. A system for allocation in a buyer-driven system comprising:

means for identifying one of at least two sellers as a priority seller; and

means for providing the priority seller with a first look opportunity to satisfy a conditional purchase offer.

29. A system according to claim 28, further comprising means for providing another of the at least two sellers with a second look opportunity to satisfy the conditional purchase offer.

30. A system according to claim 28, further comprising means for binding the buyer to the conditional purchase offer.

31. A system according to claim 28, further comprising means for notifying the buyer that the conditional purchase offer will not be satisfied.

32. A system according to claim 28, further comprising means for determining which of the at least two sellers could satisfy the conditional purchase offer.

33. A system according to claim 28, wherein one of the at least two sellers is an agency-based seller.

34. A system according to claim 28, wherein one of the at least two sellers is a broadcast-based seller.

35. A system according to claim 28, wherein the conditional purchase offer is a binding conditional purchase offer.

36. A system according to claim 28, wherein means for identifying one of at least two sellers as a priority seller includes:

means for determining a number of first look opportunities due to the at least two sellers;

means for determining a number of first look opportunities given to the at least two sellers; and

means for identifying one of the at least two sellers with the largest deficiency between opportunities given and opportunities due as the priority seller.

37. A system according to claim 28, wherein means for identifying one of at least two sellers as a priority seller includes:

means for determining a percentage of first look opportunities due to the at least two sellers based on an adjusted market share;

means for determining a percentage of first look opportunities given to the at least two sellers; and

means for identifying one of the at least two sellers with the largest deficiency between percentage of first look opportunities given and percentage of first look opportunities due as the priority seller.

38. A system according to claim 28, wherein means for identifying one of at least two sellers as a priority seller includes:

means for assigning a random number to each of the at least two sellers; and

means for using the random numbers to identify the priority seller.

39. A system according to claim 28, wherein means for identifying one of at least two sellers as a priority seller includes:

means for determining a market share for each of the at least two sellers; and

means for identifying one of the sellers having the largest market share that could also satisfy the conditional purchase offer as the priority seller.

40. A system according to claim 28, wherein means for identifying one of at least two sellers as a priority seller further includes:

means for determining a buyer preference metric for each of the at least two sellers; and

means for using the buyer preference metric to identify one of the at least two sellers as the priority seller.

41. A system according to claim 28, wherein means for identifying one of at least two sellers as a priority seller further includes means for providing an advantage to one of the at least two sellers.

42. A system according to claim 28, further comprising:

means for determining whether more than one seller price will satisfy the conditional purchase offer; and

means for selecting the highest seller price.

43. A system according to claim 28, further comprising:

means for determining whether there are other sellers that could satisfy the conditional purchase offer; and

means for performing a low price search of the other sellers.

44. Computer executable software code stored on a computer readable medium, the code comprising:

code for identifying one of at least two sellers as a priority seller; and

code for providing the priority seller with a first look opportunity to satisfy a conditional purchase offer.

45. A computer-readable medium having computer executable software code stored thereon, the code comprising:

code for identifying one of at least two sellers as a priority seller; and

code for providing the priority seller with a first look opportunity to satisfy a conditional purchase offer.

46. A programmed computer comprising:

a memory having at least one region for storing computer executable program code; and

a processor for executing the program code stored in the memory; wherein the program code includes

code for identifying one of at least two sellers as a priority seller; and

code for providing the priority seller with a first look opportunity to satisfy a conditional purchase offer.

47. A method for allocating buyer offers to sellers in a buyer-driven commerce system, comprising the steps of:

receiving from a buyer a conditional purchase offer including a condition, a price, a financial account identifier, and authorization upon fulfillment of said condition to use said financial account identifier to pay said price;

identifying, based on a predetermined metric, one of at least two sellers as a priority seller;

providing said conditional purchase offer to said priority seller;

if said priority seller fills said conditional purchase offer, using said financial account identifier to compensate said priority seller; and

if said priority seller does not fill said conditional purchase offer, then

selecting a second seller, and

providing said conditional purchase offer to said second seller.

48. A method in accordance with claim 47, wherein said metric is selected from the group comprising total market share, relevant market share, random numbers, and buyer preference.

49. A method in accordance with claim 47, and further including the step of keeping the identities of said at least two sellers anonymous from said buyer until said conditional purchase offer is filled.

50. A method in accordance with claim 47, wherein said conditional purchase offer further includes a flexible term that may be specified by a seller.