BID TYPE COOPERATIVE SELLING METHOD USING COMPUTER NETWORK

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention generally relates to a bid type cooperative selling method using computer network, and more particularly, to a bid type cooperative selling method wherein sellers' bid request contents are received using computer network such as the Internet; a seller who provides the highest bid price is selected and a bid notice is posted on the Internet; consumers place their bids for the good offered; only the bidders who place a bid price and bid quantity falling within a range which is beneficial for both the seller and the consumers are selected to be determined as the winning bidders; and said winning bidders are allowed to purchase the good cooperatively.

Since the winning bid price and bid quantity are determined in a more reasonable manner in the present invention by limiting the bidders to those whose bid price and bid quantity is conform to the conditions set forth by the sales priority of the shopping mall, the consumers can enjoy the effect of a cooperative purchase at low prices, although they actually purchase individually. On the other hand, the present invention allows the seller or the distributor, as provider of said service, to choose their sales strategies either to maximize their profit or to maximize the quantity of the total sales in accordance with their sales policy.

Description of the Prior Art

Currently, a conventional Internet auction is carried out in a manner that a seller puts up an article for auction (by specifying the kind and quantity of the article), and the article is knocked down to the highest bidder. In another method of auction, the so-called, "reverse auction", a consumer posts a bid notice for a desired article in

desired quantity and purchases said article from a seller who offers the article at the lowest price (or at the price set by the consumer).

Among the various types of electronic commerce via the Internet, which gains increasing popularity recently, there is cooperative purchase. In contrast to the Internet shopping mall where a consumer simply chooses and buys a commodity, a cooperative purchase is usually performed in a manner that consumers desiring to purchase a specific commodity are invited to reach a sufficient number and then they are connected directly to manufacturer of the commodity in order to subsequently purchase the commodity collectively at a low price. In such a cooperative purchase, the seller presents the quantity and the price for cooperative selling of a commodity, invites the consumers desiring to buy said commodity via the Internet, and sells the commodity if the number of the purchaser reaches a level sufficient for a collective sale of the commodity. By virtue of this cooperative purchase, the sellers can increase their total sales volume by reducing the supply unit price based on the mass sales, while the consumers can buy commodities at a lower price, at the cost of delayed purchase due to the necessary time for gathering the purchasers. Thus, this cooperative purchase is widely in use.

However, such conventional cooperative purchase on the Internet is disadvantageous in that it limits the consumers' choice because the price and quantity are determined by the sellers one-sidedly and consumers have only to accede thereto, and further, in that no purchase can be effected if the quantity ordered during the predetermined period is below the target quantity for a cooperative sale.

Recently, an alternative cooperative purchase has been introduced in which a predetermined initial supply price is reduced according as the number of purchasers increases, thereby enabling the consumers to buy products at lower prices, leading to increased participation of the consumers,, resulting in an increase in total sales volume. In this method, too, however, the consumers may only determine the quantity of the possible purchase, but may not suggest the price. The consumers have to accept the prices (initial price and the reduced prices according to the bid quantity) as set one-sidedly by the sellers. Further, on the part of the sellers, they are unable to maximize

their profit because the sales are performed by a predetermined unitary criterion with the totality of the consumers regardless of their sales policies (for example, if a large quantity has been bidden, the price can go down up to a point barely covering the manufacture cost, whereupon, an increase of the bid quantity may not be proportional to the profit).

Accordingly, the above-mentioned conventional cooperative purchase and alternative cooperative purchase are both seller-oriented methods. These methods are no bids (or auctions) in strict sense, because the consumers are not allowed to select a bid price, but rather , they are merely methods for mass purchase based on the collection of the purchasers. In other words, the customers are not allowed to purchase at a price determined by themselves but at a price set one- sided set by the seller according to the number of purchaser. In this sense, the customers were allowed neither to select a price nor to predict the purchase price.

Still further, it should be noted that auction on the Internet is a time-based selling strategy in which a seller calls for bid for a commodity in a predetermined quantity and only consumers suggesting a bid price higher than last price is allowed to participate in the auction. In an auction, the consumers enjoy the right to select the price, but may not select the quantity which is limited within the range of the prices presented by the seller.

SUMMARY OF THE INVENTION

The present invention, being conceived to solve the aforementioned problems, aims to provide a method for electronic commerce on the Internet, wherein a number of purchasers bid their prices and quantities and those bidders who fit to the terms of sales policy as set forth by the seller are selected and allowed to purchase (the commodities provided by the seller). To sum up, the present invention aims to provide a selling method by combining Internet bidding with cooperative purchase, which is beneficial to both the consumers and the sellers in the sense that it allows the consumers to purchase commodity at a low price while it meets the requirements of the sellers in terms of their sales policies.

It is an objective of the present invention to provide a method for Internet purchase, wherein only bidders whose bid contents meet with the sales conditions of the seller are selected to purchase said commodity, and which method comprises the steps of making a bid notice for the commodity to sell and then allowing the consumers to bid for the commodity.

Another objective of the present invention is to provide a bid type cooperative selling method using computer network, based on the fact that an increase of the sales quantity enables to reduce the sales unit price, wherein a bid notice for a commodity is made, consumers are allowed to bring bid price and bid quantity, only bidders whose bid contents meet with the sales strategy of the seller are selected as the winning bidders according to a specified manner, and then are allowed to purchase cooperatively.

A further objective of the present invention is to provide a bid type cooperative selling method in an electronic commerce using computer network such as the Internet, wherein a seller who male the most favorable offer for the consumers is selected to be allowed to make a bid notice, if a plurality of suppliers wishes to sell the same commodity.

A still further objective of the present invention is to provide a bid type cooperative selling method using computer network, wherein a bidder who has placed a bid price most proximate to the winning bid price is selected and then rewarded with a predetermined amount of compensation.

The present invention achieves the above objectives by providing a bid type cooperative selling method which comprises the following steps: the step of (a web server's) determining the bid contents which comprise one or more of the items, the maximum supply unit price, the graded prices, i.e. the reduced prices depending on the increase of the sales quantity, the biddable prices which depend on the sales quantity, and the maximum suppliable quantity, based on the bid application data received from the sellers and stored in a seller's bid contents database by said web server, (in a bid type cooperative selling method using computer network which connects said web server comprising a member database and a seller/bid contents database to client

computers); the step of bidding, in which the web server receives bid application contents containing the bid price and bid quantity transmitted from one or more clients via said connecting channel and stores them in at least one of said databases; the step of determining the winning bid price and quantity, in which the web server determines the winning bid price (knock down price) and quantity on the basis of the bid contents received and stored during said bid period; and the step of cooperative selling, in which the web server effects a cooperative transaction between the seller and the winning bidders who have placed a bid price not lower than the winning bid price.

As to the determination of the aforementioned winning bid price and bid quantity, the lowest biddable price among the biddable prices that comply with the requisition that the cumulative sum of the bid quantities at bid prices between the maximum supply unit price and the biddable price most proximate to, but lower than a predetermined bid price should not be lower than the selling quantity corresponding to said biddable price is determined as the winning bid price, and the total sum of the bid quantities at bid prices between the maximum unit supply price and said winning bid price is settled for the winning bid quantity.

The bid request contents that a web server receives from the sellers include at least one of the items, the seller information, the commodity to be sold, the maximum supply unit price, the minimum supply unit price, the minimum suppliable quantity at the minimum supply unit price, the maximum suppliable quantity, and the grading amount as per the selling quantities. Furthermore, if a plurality of sellers desires to sell the same product, the web server may include an additional step of seller selection, wherein the seller who offers the highest grading amount is selected to the final seller.

Either one of the following two methods may be employed for actual determination: the first method in which the clients are allowed to place a bid price and a bid quantity of their own; or the second method in which the clients may select a bid price among the biddable prices corresponding to the selling quantities as set by the web server or the seller, while the bid quantity is selected freely by the clients.

Further, it is possible to employ an additional step, wherein the winning bidder who has placed a bid price most proximate to the winning bid price is rewarded with a

compensation such as gift, cash, securities, cyber money, or a discount in the price of the product purchased.

After the close of the bidding, the web server may accept additionally applications of the unsuccessful bidders and other clients to purchase the offered product at the winning bid price and include them in the cooperative purchaser.

The present invention accomplishes its objectives further by providing another bid type cooperative selling method which comprises the following steps: the step of making a bid notice by said web server, wherein bid contents comprising one or more of the items, the bid period, the commodity data, the maximum supply unit price (consumer price), and the biddable prices (Upi) for different selling quantities to one or more clients via computer network, (in a bid type cooperative selling method using a computer network which is consisted of a web server comprising a client database and a commodity/bidding/bid results database including information on the biddable price (sellable price: Upi) as per each graded selling quantities (i) of the bid-object and the manufacture cost (c); the step of bidding, in which the web server receives bid contents containing bid prices and quantities transmitted by one or more clients via the connecting channel and stores said bid contents in at least one of said databases; the step of determining the winning bid price and winning bid quantity, in which the web server determines the winning bid price and the winning bid quantity on the basis of the sales policy decision condition established and stored by the service provider (of the bid type cooperative selling service) and the bid contents received and stored during said bid period; the step of cooperative selling, in which the web server effects a transaction wherein the seller sells the product to the winning bidders who have offered a price not below the winning bid price. The aforementioned sales policy decision condition is given by assigning to at least one of the profit priority and the sales priority a weight value from 0 to 1, wherein the sum of the weight values given to both priorities is 1. The above winning bid price is determined by a method according to said sales policy decision condition, in which the lowest biddable price among the biddable prices that meet the requirment that the cumulative sum(qi) of bid quantities at bid prices between the maximum supply unit price and the biddable price(UPi) most

proximate to, but lower than a predetermined price should not be lower than the graded selling quantity(i) corresponding to said biddable price is determined as the winning bid price. And, the total sum of the bid quantities at bid prices between the maximum supply unit price and said winning bid price is determined as the winning bid quantity.

The above description is applicable to cases where a service provider of the bid type cooperative selling service is a manufacturer / seller of the product offered, wherein the final winning bid price and winning bid quantity are determined by the following procedure: Assuming a weight value 'a' ($0 \leq a \leq 1$) for the above profit priority, then, a price having the greatest cumulative sum of bid quantities (selling quantity: qi) is selected as the final winning bid price, among the possible winning bid prices having an opportunity loss cost (OPi) (= maximum profit (max(yi)) – total profit at the corresponding possible winning bid price (yi)) within the range of the value calculated from the formula: the maximum profit (max(yi))×(1 – the weight value (a)), and said greatest cumulative sum is obtained for the winning bid quantity from the following Formulas:

[Formula 1]

$yi = (UPi - c) * qi$

[Formula 2]

$OPi = \max(yi) - yi$

Here, yi represents the total profit at each possible winning bid price; UPi, the biddable price; c, the manufacture cost for the product; qi, the cumulative sum of bid quantities at corresponding possible winning bid price; max(yi), the maximum profit; and OPi, the opportunity loss cost.

On the other hand, if the service provider of the above-mentioned bid type cooperative selling service is not a manufacturer / seller but an intermediary distributor who mediates a transaction between sellers and consumers, an additional step prior to the posting of a bid notice should be incorporated, wherein the web server determines bid contents comprising at least one of the items, the maximum supply unit price

(consumer price: maxP) of the offered product, the minimum supply unit price (minP), the minimum supply quantity(n) suppliable at the minimum supply unit price, the grading amount(sp) which is the amount of the price reduction amount according to the increase of the selling quantity, the biddable prices (UPi) per the graded selling quantities(i), and the maximum suppliable quantity, based on the bid request contents received by the web server from one or more sellers and stored in the product/bid/winning bid contents database.

In case the service provider of the bid type cooperative selling service according to the present invention is an intermediary distributor, the final winning bid price is determined by the following procedure: Representing a weight value 'a' ($0 \leq a \leq 1$) for the profit priority and referring to formulas 3 and 4 below, the price having the greatest cumulative sum of bid quantities (selling quantity: qi) is selected as the final winning bid price, among the possible winning bid prices having an opportunity loss cost (OPi) (= maximum profit (max(yi)) – total profit at corresponding possible winning bid price (yi)) within the range of the value calculated from the formula: the maximum profit (max(yi))×(1 - the weight value (a)), and said greatest cumulative sum is obtained for the winning bid quantity from the following Formulas:

[Formula 3]

$yi = UPi * qi * r + (UPi - oi) * qi$

[Formula 4]

$OPi = \max(yi) - yi$

Here, yi represents the total profit at each possible winning bid price; UPi, the biddable price; qi, the cumulative sum of bid quantities at corresponding possible winning bid price (selling quantity); r, the commission rate in percentage based on the total sales (UPi×qi); oi, the unit price for an actually supplied quantity (the unit price for the ordered quantity); max(yi), the maximum profit; and OPi, the opportunity loss cost.

Besides, the following step can further be included in the case where the

service provider of the present invention is either a manufacturer / seller, or an intermediary distributor; wherein a client is allowed to select a price among the biddable prices corresponding to the minimum suppliable quantities as set forth by the above web server of the bid type cooperative selling, while the client is allowed to specify a bid quantity freely. In other words, the clients may select a price among the biddable graded prices (UPi) as indicated in the bid notice, or may choose one at will. In case the price is chosen by a client, the web server determines the biddable graded price (UPi) which is the most proximate to, but lower than the client's bid price.

Still a further step may be employed as in the foregoing method of the present invention, wherein the winning bidder who has offered a bid price most proximate to the winning bid price is rewarded with a compensation and/or additional application for the purchase by other clients may be received.

Based on the clients' bid results, the seller or the distributor may adopt a sales policy preferring the profit by selecting a biddable price (UPi) which maximizes the profit, or a sales policy preferring the sales volume in order to maximize the quantity of the sales even at the cost of the profit. In other words, a seller or a distributor may assign a weight value 'a' from 0 to 1 to the profit priority or the sales priority (in this case, the other priority receives a weight value of '1-a', automatically), depending on the consumers' bidding in regard to each graded selling quantities (i) and the graded biddable prices (UPi) corresponding thereto. Based on the weight value so assigned, a biddable price which corresponds with the sales policy set by the seller or the distributor is then selected as the final winning bid price.

A 'product', for the purpose of the present invention, is not limited to a tangible one, but rather should be understood comprehensive to include all goods for electronic commerce, for example, tangible goods, intangible information, travel service, and the like. In particular, goods that allow bigger discounts for increasing supply quantity are considered to be especially appropriate for application of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The description of examples of preferred embodiment of the present invention is given below, making reference to the accompanying drawings, for a more clear understanding of the present invention.

Fig. 1 shows a general construction of the system for implementing a bid type cooperative selling method according to the first embodiment of the present invention, wherein no use of the decision conditions for the service provider's sales policy is made.

Fig. 2 shows a general construction of the system for implementing a bid type cooperative selling method according to the second embodiment of the present invention, wherein the decision conditions for the service provider's sales policy are used.

Fig. 3 is a flow chart of the sources among the constituents of the bid type cooperative selling method according to the present invention.

Fig. 4 is a flowchart of a bid type cooperative selling method using computer network according to the first embodiment of the present invention.

Fig. 5 is a flowchart of a bid type cooperative selling method using computer network according to the second embodiment of the present invention.

Fig. 6a, an example of a web site providing a bid type cooperative selling service according to the present invention, shows an on-screen menus of a web page where a seller can make a request for a bid.

Fig. 6b is a table for determining the final bidder (final seller) in case a plurality of sellers wishes to sell the same product.

Fig. 6c is a table showing the supplier's unit prices and the (minimum) biddable prices per sales quantities as presented by the final bidder of the first embodiment.

Fig. 6d is a table showing the supplier's unit prices and the (minimum) biddable prices per sales quantities as presented by the final bidder of the second embodiment.

Fig. 7 illustrates a web page providing information on the product offered to

let the clients place their bids.

Fig. 8a is a table explaining the method for determining the winning bidder, final bid price and quantity, and/or a winner of the compensation in the first embodiment. Fig. 8b shows information on the final bid results.

Figs. 9a and 9b are tables explaining the method for determination of winning bidder, final bid price and quantity, and/or a winner of the compensation in the second embodiment. Fig. 9a shows the case where the service provider is a manufacturer/seller and Fig. 9b the case where the service provider is an intermediary distributor.

DETAILED DESCRIPTION OF THE INVENTION

A detailed description of the first embodiment of the subject invention is given below in conjunction with the accompanying drawings.

Fig. 1 shows a general construction of a system implementing the bid type cooperative selling method according to the first embodiment of the present invention. The system comprises a web server (11) for the bid type cooperative selling, a client computer system (12) as customer, and a computer network connecting channel, such as the Internet, for interconnecting said web server and said client computer system. A seller (14) may request for a bid notice via the Internet, or alternatively, may use another communication means to have the necessary product information received by the web server.

A close type network such as LAN(Local Area Network) or WAN(Wide Area Network) can be used as the computer network connecting channel. However, an open network such as the Internet or the intranet is preferable so that it is open to all general consumers for use.

The web server comprises a software or a hardware including a seller/bid contents control module, a client (control) module, a transmission/receipt module, and a central processing module. The seller/bid contents (control) module and the client (control) module are linked to a seller/bid contents database(15a) and a client database(16), respectively. The central processing module, linked to each of the above

modules, controls the respective module(s), to receive, store and control the bid request contents from the sellers and/or the bid contents from the clients; to post a bid notice after determining the grading amount, the biddable prices, etc.; and to determine the winning bidders, winning bid price, winning bid quantity, and the gift winner. The central processing module should be capable of carrying out, such functions as calculation of the grading amount based on the increase of selling quantity, selection of the final seller, calculation of the biddable prices, and determination of the winning bidder and winning bid price, all of which signify the most important techniques of the present invention.

The seller database includes fields for the seller ID code, the product to sell, maximum supply unit price (consumer price), minimum supply unit price, minimum quantity suppliable at the minimum supply unit price, the grading amount, biddable prices, bid period, etc. The client database includes fields for the member ID code, the member data (contact address, email address, financing data, such as, ID, password, etc.), bid contents (bid product, bid price and quantity, etc.), the winning bid contents (bid results), bonus point (e.g., cyber money) and the like. These two databases are linked to each other.

Fig. 2 shows a general construction of a system for implementing a bid type cooperative selling method according to the second embodiment of the present invention. In general, the second embodiment is the same as the first embodiment (Fig. 1), but it is slightly different from the first embodiment in regard to the construction details of the web server as described below:

The web server comprises a software or a hardware including a product/bid/winning bid contents control module, a client (control) module, a transmission/receipt module, and a central processing module. The product/bid/winning bid contents control module and the client (control) module are linked to the product/bid/winning bid contents database (15b) and the client database(16), respectively. The central processing module, linked to each of the above modules, controls the respective module to receive, store and control the product information, bid contents and winning bid contents and/or the bid contents of the

clients; to post a bid notice after producing the bid contents including the grading amount (sp), the biddable prices (UPi) for the graded selling quantities (i), etc.; and to determine the winning bidders, winning bid price, winning bid quantity, and the gift winner, on the basis of the bid results and said formulas. The central processing module should be capable of conducting a series of procedures, wherein a price among the biddable prices (Upi) for the graded selling quantities (i) at which the cumulative sum of bid quantities (qi) exceeds the corresponding graded selling quantity is determined in accordance with said formulas after consideration of the weight values (a), which are given to the profit priority and the sales priority and bidding status, as the final winning bid price; and then the winning bidders are determined accordingly. Further, in case where the service provider of the present invention is an intermediary distributor, the web server should be able to conduct an additional function of receiving bid request contents from one or more sellers, and, based thereon, calculating maximum supply unit price (maxP), minimum supply unit price (minP), minimum suppliable quantity (n) at the minimum supply unit price, maximum suppliable quantity, grading amount (sp), and biddable price (UPi) for the graded selling quantities (i), and then storing these data.

Such web servers can be implemented using a variety of web server programs provided with in accordance with operating systems such as DOS, Windows™, Lynux™, Unix, Macintosh, etc. Typical examples are websites used in the Window environment, and CERN, NCSA and APPACH used in the TTPS and Unix environments. However, the web servers here should be understood comprehensively to include, in addition to common web server programs, a series of application programs operating in said servers and a certain system that connects and intermediates between clients, databases and each of the modules by using computer networks.

The product/bid/winning bid contents database comprises a multiple of fields such as seller ID code, product information, manufacture cost (c), maximum supply unit price (consumer price; maxP), minimum supply unit price (minP), minimum suppliable quantity (n) at the minimum supply unit price, grading amount (sp), biddable prices (UPi) for graded selling quantities (i), cumulative sum of bid

quantities(qi) at each biddable price, total profit (yi), opportunity loss cost (OPi), commission rate as per total sales amount (Upi*qi) (for distributors: r), supply unit price linked to supply quantity (for distributors; oi), and bid period, etc. The client database includes a multiple of fields such as consumer ID code, consumer information (contact address, email address, financing details, ID, passwords, etc.), bid contents (bid product, bid price bid quantity, etc.), winning bid contents (bid results), bonus point (e.g., cyber money) and the like. These two databases are linked to each other.

The above databases of said first and second embodiments are implemented by using a relational database management system (RDBMS) such as Oracle, Infomix, Sybase, or DB2, but object-oriented database management system(OODBMS) such as Gemston, Orion, O2, etc. can also be used for the purpose of the present invention. These databases are stored in a storing means of the web server's hardware.

Further, although it is usual that each of the modules mentioned above is implemented by software such as an independent application program or program module (procedure) contained in a program, it is also possible that the modules are implemented by hardware.

Furthermore, a web server(17) providing payment gateway service can be linked to the Internet so as to conduct electronic settlements between the winning bidder and the seller. In addition, an appropriate certificate authority can also be associated for certification between sellers and purchasers. To ensure the security of transmission of the bid contents and/or bid results, an encoding method of layer level such as SSL (Secure Socket Layer), or other encoding method such as PKI (Public Key Infra) can be used, but the applicable security means is not restricted thereto.

Description of Figs. 3 through 5 given below applies to cases where the service provider of the present invention is an intermediary distributor. However, if the service provider is a direct manufacturer / seller, the seller can simply proceed to select the necessary bid contents from the contents stored by the seller himself, and posting the contents so produced for public notice, without any need of receiving bid request contents from sellers or selecting the final seller.

Fig. 3 is a flowchart illustrating the flow of sources between the constituents of

the bid type cooperative selling method on the Internet as per the present invention, wherein: 1) a web server posts a bid notice after receiving bid request contents from one or more sellers, selecting the final seller, and calculating bid contents; 2) clients make their bids on the basis of said bid notice; 3) the web server determines winning bidders based on the received bid contents; 4) the web server notifies the bid results selectively or sends e-mail to the unsuccessful bidders to inquire if they wish to purchase the offered product at the winning bid price. Then, the web server determines the final cooperative purchasers (winning bidders + additional purchasers) after having received applications from the additional purchasers; 5) the web server transmits information on the final cooperative purchasers to the seller; 6) the products are delivered to the final purchasers after settlement of the bill. The payment can be made via the Internet, using a payment system of the web server or the seller, or an external payment gateway server.

Fig. 4 is a flowchart for the bid type cooperative selling method on the Internet according to the first embodiment of the present invention, in which the priority is placed on the selling quantity alone irrespective of the (other) sales policy of the service provider. The web server stores and controls (S41) the bid request contents (kind of product for the bid, maximum supply unit price, minimum supply unit price, minimum suppliable quantity at the minimum supply unit price, grading amount, bid period, etc.) received from one or more sellers. The web server checks (S42) whether bid request has been received from a single or a plurality of seller during the bid period, and determines the seller who has offered the highest grading amount as the final seller (S43) if two or more sellers have requested the bid. Then, the web server posts a bid notice on the Internet (S44) after having calculated the grading amount and biddable prices per selling quantities on the basis of the bid request contents of the final seller. Clients can then bid a price and quantity (quantity of purchase) based on the bid notice. The web server receives bid contents from the clients and stores them in the seller/bid contents database and the member database (S45). After elapse of the bid period, the web server determines winning bidders, winning bid price and winning bid quantity (S47). If no winning bidder exists, the web server declares bid failure (S50) and

terminates the bid procedure. In case the winning bidders have been determined, the web server announces the unsuccessful bidders and other member clients the bid results and invites additional purchasers for a predetermined period (S49). When the final purchasers (winning bidders + additional purchasers) are confirmed, the web server notifies the seller and terminates the cooperative selling by delivery of the product upon settlement of the bill (S50).

Further, an additional procedure, although not described in the drawing, can be employed, in which the winning bidder who has placed a bid price most proximate to the winning bid price is selected as a gift winner and a predetermined compensation is granted to said gift winner.

A detailed description of selection of the winning bidders, winning bid price and winning bid quantity and the gift winner will be given below, with reference to Figs. 7 and 8.

Fig. 6a, an example of a web site providing a bid type cooperative selling service according to the present invention, displays an on-screen menu of a web page where sellers can apply for a bid request. Sellers should enter their personal data such as name, contact information, address, etc. Further, said sellers are requested to enter or select the items, product name, maximum supply unit price (consumer price), minimum supply unit price, minimum suppliable quantity at the minimum supply unit price, and maximum suppliable quantity up to the end of the bid period, desired bid period, etc. Alternatively, the seller may be allowed to enter a grading amount by which received and the prices are reduced step by step coupled with the increase of selling quantities.

The bid contents thus entered are stored and controlled in the databases by the web server. The web server calculates and stores a grading amount in case such information has not been entered by the seller. If a plurality of seller requests for a bid (on same product), the grading amount and biddable prices per selling quantities of the seller who has been selected to the final seller are calculated and stored.

Fig. 6b is a comparison table for a case where four sellers (Seller 1 to 4) desire to sell the same product. The table shows maximum supply unit price of 320,000WON,

minimum supply unit price from 290,000 to 310,000WON, minimum suppliable quantities at the minimum supply unit price from 5 to 10pcs, and maximum suppliable quantities from 50 to 100pcs. The grading amount, namely, the price to be reduced by increase of the selling quantity (here, by increase of each selling quantity) is determined by the following formula:

Grading amount = (maximum supply unit price – minimum supply unit price) / (minimum suppliable quantity at the minimum supply unit price – 1)

Since the grading amounts according to the above formula, for Sellers 1, 2, 3 and 4 are 4,000WON, 3,333WON, 3,333WON, and 5,000WON, respectively, Seller 4, who has provided the highest grading amount is determined as the final seller.

Now that the final seller has been determined, supply unit prices and biddable prices of the final seller are subsequently determined according to the selling quantities. The biddable prices are determined through addition of a predetermined proportion to the supply unit prices of the seller. Such added proportion is for use for compensation to be given to the gift winner, which will be described below. However, if the service is used free of charge, or no compensation is to be given, the supply unit prices and the biddable prices can be established to be equal (cf. the second embodiment: Fig. 6b).

In the present embodiment, the biddable prices are fixed to be 101% of the supply unit prices. The supply unit prices and the biddable prices per selling quantities are given in a table as illustrated in Fig. 6c.

Fig. 7 shows a web page where information on the product desired to bid on is provided to allow clients to bid for said product. This web page displays the name of the product, seller's name, maximum supply unit price (consumer price), bid period, product details, etc. In the lower part, clients can select a bid price and bid quantity. Here, a list of predetermined biddable prices per selling quantities can be provided in a pull-down menu, or clients can enter a bid price of their own. The bid quantity may be decided at the clients' disposal. The web server receives these bid contents from the clients and stores them in databases to use them for determining the winning bidders after elapse of the bid period.

If a client is already registered as a member, the web server can identify said member by using the "cookie" function of the client's web browser when the client logs in the web server, or, by requesting the client to enter the ID and passwords when logging in the web server. In this way, the client can be freed from entering personal data for every bid. However, the present invention is not limited to a pre-registration system. Under a non-prior-registration system, however, the bidders should be requested to enter their personal data, financing details, and other necessary information.

Fig. 8a is a table for explaining the method for determining the winning bidders, the winning bid price and quantity and/or the gift winner, all of which are the most essential elements of the first embodiment (sales priority case irrespective of other sales policy). The table (similar to Fig. 6) shows the current status of the bid (in terms of the?) (bidders' names / bid quantities for the selling quantities). Here, the lowest biddable price among the biddable prices that comply with the requisition that the cumulative sum of bid quantities at bid prices between the maximum supply unit price and a predetermined biddable price should be not lower than the selling quantity corresponding to said biddable price is determined as the winning bid price, and the cumulative sum of bid quantities at the winning bid price between the maximum supply unit price and the above winning bid price is determined as the winning bid quantity.

Here, if a client may enter a bid price, the bid price falls under the biddable price (selling quantity) most proximate thereto, but lower than said entered bid price. For example, if a client enters a bid price 310,000WON, the bid falls under the biddable price of 308,050WON (selling quantity: 4pcs).

To explain the method of determining the winning bid price and winning bid quantity in the light of the biddable prices having the cumulative sum of bid quantities not less than the corresponding selling quantity are as follows: at 308,050WON (cumulative sum of bid quantities: 5pcs > corresponding selling quantity: 4pcs), at 303,000WON (cumulative sum of bid quantities: 6pcs > corresponding selling quantity: 5pcs), at 297,950WON (cumulative sum of bid quantities: 8pcs >

corresponding selling quantity: 6pcs), at 292,900WON (cumulative sum of bid quantities: 8pcs > corresponding selling quantity: 7pcs), at 287,850WON (cumulative sum of bid quantities: 8pcs > corresponding selling quantity: 8pcs). Accordingly, the lowest price, 287,850WON is determined as the final winning bid price, and the cumulative quantity of 8pcs at the winning bid price is determined as the final winning bid quantity.

In this way, the customers can purchase a product at the lowest price as the seller can provide while the seller can sell the products in a large quantity, thereby benefiting both parties.

Fig. 8b shows the winning bid contents, comprising the winning bid quantity(8pcs) and the winning bid price(287,850WON) together with the gift winner(client B) who has placed a bid price most proximate to the winning bid price and the amount of compensation. In this example, the difference of the total supply amount of the seller from the total winning bid amount, that is, (287,850–285,000)× 8=22,800WON is granted to the gift winner as compensation. The compensation can be paid by cash, by cyber money, or by discount on product price, etc., but not restricted thereto.

By introducing such a compensation system consumers' attention and participation can be enhanced considerably according to the present invention, in comparison to the conventional cooperative purchase or the bid type cooperative purchase without compensation, whereby leading to more applications for a bid. As such, clients can thus purchase products at lower-prices cooperatively. If this fact becomes known, consumers' participation will be promoted further. As a result, it is expected that a chain reaction: reputation of the service → increase of participants → further reduction in product price, will be initiated with a desirable synergy effect, leading to purchase of products in quantities much larger than those of the conventional collective purchase.

Further, as described above, a web server may post the winning bid contents on a web site for public notice, or transmit an e-mail to non-winning bidders individually to invite additional purchasers who are willing to buy the product offered

at the winning bid price.

When the final purchasers, consisted of the winning bidders and the additional purchasers, are confirmed, the web server transmits information on the final purchasers and the winning bid contents (winning bid price, bid quantity of each purchaser, etc.) to the seller whereupon the seller delivers the products to purchasers in a lump. To safeguard the transaction for client, the web server may enable the bill settlement procedure between seller and client be effected after the web server have transmitted the client's delivery details to the seller which it had received from the client. Alternatively, the web server can provide a payment service (payment gateway service) by collecting the payment from the client to whom the delivery has been completed (by credit card, electronic money transfer, on-line payment or the like), and pays further to the seller. To repeat, any type of conventional transaction used in electronic commerce may be used for transactions between the sellers (intermediary distributors) and the consumers, after the winning bidders are determined.

Fig. 5 is a flowchart for the bid type cooperative selling method on the Internet according to the second embodiment of the present invention using a sales policy (by assigning a weight value to an item having a profit priority or sales volume priority) established by the service provider, wherein the web server stores and controls (S51) the bid request contents received from one or more sellers (comprising the kind of product to sell, maximum supply unit price, minimum supply unit price, minimum suppliable quantity at the minimum supply unit price, grading amount, bid period, etc.). The web server checks (S52) if a plurality of seller has requested for bid on the same product during the predetermined period. If so, the web server selects (S53) the seller who has offered the highest grading amount to the final seller. The web server posts subsequently a bid notice (S54) on the Internet after having calculated grading amount, biddable prices (UPi) for graded selling quantities (i), etc., based on the bid request contents of the final seller. Clients may then apply for the bid by choosing a bid a price and bid quantity (quantity to purchase) and the web server receives the clients' bid contents and stores (S55) them in the product/bid/winning bid contents database and in the client database. After lapse of the bid period, the web server determines (S57) the

final winning bidders, winning bid price and quantity, etc. based on the bid contents and the sales policy (assignment of a weight value to an item having a profit priority or a sales volume priority) entered by the service provider. In case no winning bidder has been selected, the web server declares a bid failure (S61) and terminates the bid procedure. If winning bidders are selected, the web server inform the unsuccessful bidders and other member clients of the bid results and invites (S59) additional purchasers for a predetermined period. When the final purchasers (winning bidders + additional purchasers) are determined, the web server informs the seller thereof and performs (S60) the cooperative selling by delivering the good upon settlement of the bill.

Further, though not illustrated herein, an additional step can be employed in which the winning bidder who has placed a bid price most proximate to the winning bid price is selected to the gift winner and a predetermined compensation may be granted to said gift winner.

A detailed description as to the calculation of the biddable prices and selection of the winning bidders, final winning bid price, winning bid quantity and the gift winner is given below, making reference to Fig. 9.

Fig. 6a, being an example of a web site providing a bid type cooperative selling service according to the present invention, a detailed description of which is omitted, since said web site is used in the same way as in the first embodiment.

The bid request contents entered by a seller are received by the web server and stored in database. In case that the seller does not enter a grading amount, the web server calculates and stores it together with the other bid request contents. If a plurality of sellers requests for bid, a final seller among them is selected and the final seller's grading amount, biddable prices (UPi) for graded selling quantities (i), etc. are calculated and stored.

Fig. 6b is an exemplary table, comparable to the table in the first embodiment, for comparison of four sellers (Sellers 1, 2, 3, and 4) who desire to sell the same product, in which are indicated 320,000WON for maximum supply unit price; 290,000 to 310,000WON for minimum supply unit price; 5 to 10pcs for minimum suppliable

quantity at the minimum supply unit price; and 50 to 100pcs for maximum suppliable quantity. The reduced price depending on the selling quantities (or, a price discount based on the increase of selling quantity per piece), namely, the grading amount (sp) is calculated by the following formula:

[Formula 5]

Grading amount (sp) = (maximum supply unit price maxP – minimum supply unit price minP) / (minimum suppliable quantity at the minimum supply unit price n – 1)

According to the above formula, the grading amounts of Sellers 1, 2, 3, and 4 are 4,000WON, 3,333WON, 3,333WON and 5,000WON, respectively. Thus, Seller 4 who has provided the highest grading amount is selected to the final seller.

Once the final seller is determined, the biddable prices (UPi) of said seller for every graded selling quantities (i) can be calculated. To be specific, the biddable prices (UPi) are obtained from: the maximum supply unit price (maxP) – (graded selling quantity (i) – 1) × grading amount (sp). As a result of these calculations, a table illustrating the biddable pieces per graded selling quantities as shown in Fig. 6d is produced.

Since the web page in which information on the product offered is provided to enable clients to bid for, and the bidding process using said web page are the same as in the first embodiment as shown in connection with Fig. 7, a further explanation therefore is omitted.

Figs. 9a and 9b are tables for explaining a method for selecting the winning bidders, winning bid price, bid quantity and/or the gift winner, all of which represent the most essential elements of the present invention. Fig. 9a falls into a case where the service provider of the present invention is a manufacturer / seller, while Fig. 9b, falls into a case where the service provider is an intermediary distributor.

Given a, maximum supply unit price (maxP) of 1,000,000WON, minimum supply unit price (minP) of 600,000WON, manufacture cost (c) of 500,000WON, and minimum suppliable quantity at the minimum supply unit price of 16pcs, the web

server calculates the grading amount (sp) and biddable prices (UPi) for graded selling quantities (i) by using the above formulas and stores them in the database.

The biddable prices can be obtained from the following formula:

[Formula 6]

Biddable prices (UPi) = maximum supply unit price (maxP) – (graded selling quantity (i) – 1) * grading amount (sp)

The bid results are shown in the fourth and fifth column of the table in Fig. 9a. The bid quantity and the cumulative sum of bid quantities at each step are shown in column 4 and column 5, respectively. Based on these bid results, the total profit (yi) per each step is calculated by the formula: Upi*qi. In the present embodiment, the maximum profit (max(yi)) amounts to 22,000,000WON at the graded selling quantity (i) of 11pcs. The opportunity loss cost (OPi) for each grade is calculated by the following formula:

[Formula 7]

Opportunity loss cost (OPi) = maximum profit max(yi) – total profit yi at each grade

As shown above, a biddable price (UPi), at which the cumulative sum of bid quantities (qi) is not less than the corresponding graded selling quantity (i), can be a possible winning bid price. In this embodiment, all allowable bid prices having a graded selling quantity (i) not less than 7 can be determined as possible winning bid prices.

If the seller has entered a profit priority sales policy by assigning a weight value (a) of 1 to the profit priority, according to which only the profit shall be sought, the biddable price (UPi) of 733,340WON (i=11) at which the profit is maximized, is selected to the winning bid price, and the cumulative bid quantities amount to a total of 30pcs. To the contrary, if the seller has entered a weight value (a) of 0 for the profit priority in favor of a sales priority policy, the biddable price of 600,000WON for the last grade (i=16) having the largest cumulative sum of bid quantities is selected to the

winning bid price among the possible winning bid prices (i>6) and the winning bid quantity is determined as 34 pcs.

If the seller adopts a mixed sales policy by entering a weight value (a) of 0.93 for a profit priority, the step of i=15 having the largest cumulative sum of bid quantities is selected among the grades having an opportunity loss cost (OPi) less than 1,540,014WON which is obtainable from the formula: the maximum profit (max(yi))*weight value (a), that is, 22,000,200*(1-0.93)=1,540,014. Accordingly, the winning bid price shall be 626,676WON, and the winning bid quantity 33pcs.

Fig. 9b is an exemplary table for the second embodiment of the present invention in case the service provider is an intermediary distributor. Here, the web server receives bid request contents from one or more sellers of the same product, selects the final seller who provides the highest grading amount, calculates the biddable prices (UPi) per graded selling quantities (i) in the same manner as in Fig. 9a, and stores the bid quantities and the cumulative sum of bid quantities (qi) for each grade. The ordering unit price (oi) is what should be paid to the seller when ordering the product in numbers corresponding to the cumulative sum of bid quantities (qi) for each grade. For example, at grade, i=6, the cumulative sum of bid quantities is 4pcs. Therefore, when 4pcs of the product are ordered, the unit price is 920,020 (920002? in Fig.9a)WON which is the unit price at grade, i=4. Accordingly, to the grade, i=9, or to grades over it, where the cumulative sum of bid quantities exceeds 16pcs, a uniform ordering unit price of 600,000Won applies. The total sales amount is calculated by: the biddable price (UPi) at each grade * the cumulative sum of bid quantities (qi). The commission which the intermediary distributor as the service provider of the present invention receives from the seller is calculated by: the total sales amount*commission rate (r). However, it is also possible that no commission is paid to the service provider, and in such case, the distributor profit, namely, the profit in transactions, to be described hereinbelow, remains the only source of profit for the service provider.

The transaction profit of a distributor is earned by selling the product in a quantity as many as the cumulative sum of bid quantities (qi) at the biddable price (UPi) after deducting the amount paid to the seller based on the ordering unit price

(oi), and is calculated by (UPi-oi)*qi. A distributor's total profit (yi) for each grade is determined by adding the distributor profit to the transaction profit. In this case, 4,000,200WON, the total profit at grade, i=11 is determined as the maximum profit (max(yi)). Further, the opportunity loss cost (OPi) at each grade is calculated in the same way as in Fig. 9a.

In case a profit priority sales policy (a weight value (a) of 1 is assigned to the profit priority) has been entered as in Fig. 9a, then, 733,400WON at grade, i=11 is determined as the final winning bid price. In case a sales priority sales policy (a weight value (a) of 0 is assigned to the profit priority) has been entered, 600,000WON at grade, i=16 is determined as the final winning bid price. Further, in case a weight value (a) of 0.4 has been assigned to a profit priority, the biddable price at grade, i=14 which is the lowest price among biddable prices having an opportunity loss cost (OPi) less than 2,531,121WON, obtained from: 4,220,020*(1-0.4), is determined as the winning bid price.

Now that the final winning bid conditions are determined in such a way, a bidder who has placed a bid price most proximate to the winning bid price is selected to the gift winner and a predetermined compensation is granted to said gift winner. Said compensation can be paid by cash, cyber money, discount on product price, etc., but not restricted thereto.

Further, additional purchasers can be invited in the same way as in the first embodiment.

The bid type cooperative selling method on the Internet according to the present invention is a purchaser-oriented selling method, which is capable of solving the problems of the conventional seller-oriented bid type selling methods. Further, by combining an electronic cooperative purchase (selling) on the Internet with a bid type purchasing (selling) method, the present invention, through appropriate selection of the winning bidders and the winning bid price, enables the clients to purchase products at lower prices and the sellers or distributors to select the selling quantity (winning bid quantity) and the selling price (winning bid price) in accordance with their sales

policies and thus to maximize their profit.

In addition, a client who places a bid price most proximate to the winning bid price is selected to the gift winner and rewarded with a predetermined compensation, which would promote participation of more clients to the bid, thereby leading to the supply of products at even lower price. As a result, a synergy effect is initiated from the reputation of the service → increase of the participants → reduction in product price, so that a cooperative selling of products in quantities larger than in the conventional cooperative selling can be reached.



CLAIMS

1. A bid type cooperative selling method using computer network consisted of a web server having a client database and a seller/bid contents database, a client computer, and a connecting channel interconnecting said client computer and said web server, wherein said method comprises the steps of:

a) determining the bid contents, wherein said web server determines the bid contents comprising at least one of the items, maximum supply unit price, grading amount which is the reduced price for increase of the selling quantity, biddable prices per selling quantities, and maximum suppliable quantity, on the basis of the bid request contents received from a seller and stored in said seller/bid contents database;

b) posting a bid notice, wherein the web server places a bid notice on computer network, including bid period, information on the product to bid on and said bid contents;

c) bidding by clients, wherein the web server receives bid contents comprising as bid price and bid quantity transmitted from one or more clients through said connecting channel, and stores them in at least one of said databases;

d) determining the winning bid price and the winning bid quantity, wherein the web server determines the winning bid price and the winning bid quantity on the basis of the clients' bid contents received and stored during said bid period; and,

e) cooperative selling, wherein the web server performs a cooperative transaction between the seller and the winning bidders who have offered a bid price higher than said winning bid price; and wherein

said winning bid price and winning bid quantity are determined in the following manner: the lowest biddable price among the biddable prices that complies with the requisition that the total sum of bid quantities at bid prices between the maximum supply unit price and the biddable price most proximate to, but lower than a predetermined bid price should not be lower than the selling quantity corresponding to said predetermined biddable price, is determined as the winning bid price, and the total sum of bid quantities at prices between the maximum supply unit price and said

winning bid price is determined as the winning bid quantity.

2. The bid type cooperative selling method using computer network as set forth in Claim 1, wherein said web server receives bid request contents from one or more sellers, comprising at least one of the items, maximum supply unit price, minimum supply unit price, maximum suppliable quantity at the minimum supply unit price, maximum suppliable quantity, and the grading amount as per selling quantity; and determines the seller who has offered the highest grading amount as the final bid requester(seller).

3. The bid type cooperative selling method using computer network as set forth in Claim 1, in which a client is allowed to choose a price from said biddable prices per selling quantities for its bid price and to specify a bid quantity at its discretion.

4. The bid type cooperative selling method using computer network as set forth in Claim 1, in which the winning bidder who has placed a bid price most proximate to the winning bid price is rewarded with a predetermined compensation.

5. The bid type cooperative selling method using computer network as set forth in Claim 4, in which said compensation is paid by at least one of the means, gift, cash, securities, cyber money, or price discount on the product purchased.

6. The bid type cooperative selling method using computer network as set forth in Claim 1, in which an additional step is provided, wherein the web server checks if the unsuccessful bidders and other clients intend to purchase the product at the winning bid price, and proceeds with the cooperative transaction after having added the additional purchasers to the winning bidders.

7. The bid type cooperative selling method using computer network as set

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forth in any one of Claims 1 or 2, in which the web server transmits the winning bid contents comprising winning bid price, winning bid quantity for each winning bidder and information on the winning bidders, and confirmation of delivery from the winning bidders to the seller and one of the winning bidders.

8. A bid type cooperative selling method using computer network consisted of a web server having a client database and a product/bid/winning bid contents database including biddable prices (possible selling price: UPi) of the product per each graded selling quantity(i) and manufacture cost(c) of the product to bid on, a client computer, and a connecting channel interconnecting said client computer and said web server, wherein said method comprises the steps of:

a) posting a bid notice, wherein said web server provides one or more clients with the bid contents comprising at least one of the items, bid period, product information, maximum supply unit price (consumer price) and biddable prices(UPi) per each graded selling quantity through said connecting channel;

b) bidding by the clients, wherein the web server receives the bidding contents comprising bid price and bid quantity transmitted by one or more clients through said connecting channel, and stores them in at least one of said databases;

c) determining the winning bid price and the winning bid quantity, wherein the web server determines the winning bid price and the winning bid quantity on the basis of the clients' bid contents received and stored during said bid period and the sales policy decision conditions entered and stored by the service provider of the bid type cooperative selling service; and,

d) cooperative selling, wherein the web server enables a cooperative selling to the winning bidders who have offered bid price higher than the winning bid price; and wherein

said sales policy decision condition is determined by assigning a weight value from 0 to 1 to at least one of the profit priority and the sales priority (the sum of the weight values assigned to two priorities is 1), and

said winning bid price and winning bid quantity are determined in the

following manner: one of the possible winning bid prices among the biddable prices that complies with the requisition that the cumulative sum of the bid quantities at bid prices between the maximum supply unit price and the biddable price most proximate to, but lower than a predetermined bid price should not be lower than the selling quantity corresponding to said biddable price, is determined to the winning bid price and the total sum of the bid quantities at prices between the maximum supply unit price and said winning bid price is determined as the winning bid quantity.

9. The bid type cooperative selling method using computer network as set forth in Claim 8, in which the lowest price among said possible winning bid prices is determined as the final winning bid price, provided that the service provider of said bid type cooperative selling service is a manufacturer / seller who directly manufactures and sells the product offered for the bid, and a weight value of 1 is assigned to said profit priority, while a weight value of 0 is assigned to said sales priority.

10. The bid type cooperative selling method using computer network as set forth in Claim 8, in which the possible winning bid price that can maximize the total profit (yi, in the following formula) is determined as the final winning bid price among all possible winning bid prices, provided that the service provider of said bid type cooperative selling service is a manufacturer / seller who directly manufactures and sells the product offered for the bid, and a weight value of 1 is assigned to said profit priority, while a weight value of 0 is assigned to said sales priority:

$$yi = (UPi - c) * qi$$

here, yi represents the total profit at the corresponding possible winning bid price; UPi, the biddble price; c, the manufacture cost of the product; qi, the selling quantity (cumulative sum of bid quantities) at the corresponding biddable price.

11. The bid type cooperative selling method using computer network as set

forth in Claim 8, in which the possible winning bid price that has the largest cumulative sum of the bid quantities (selling quantity; qi) is determined as the final winning bid price, among such possible winning bid prices of which the opportunity loss cost(OPi) (=the maximum profit (max(yi)) – the total profit at the corresponding possible winning bid (yi) in the following formula) falls within the range of the value calculated from: the maximum profit(max(yi))*(1-the weight value(a)), provided that the service provider of said bid type cooperative selling service is a manufacturer / seller who directly manufactures and sells the product offered for the bid, and the weight value for the profit priority is represented as 'a' (0<a<1):

$$yi = (UPi - c) * qi$$

$$OPi = \max(yi) - yi$$

here, yi represents the total profit at the corresponding possible winning bid price; UPi, the biddable price; c, the manufacture cost of the product; qi, the cumulative sum of the bid quantities at the corresponding biddble price; max(yi), the maximum profit; and OPi, the opportunity loss cost.

12. The bid type cooperative selling method using computer network as set forth in Claim 8, in which the client is allowed to choose, a price from said biddable prices(UPi) per graded selling quantities(i) as set by said bid type cooperative selling web server for its bid price, and to specify a bid quantity at its discretion.

13. The bid type cooperative selling method using computer network as set forth in Claim 8, comprising an additional step, in which the winning bidder who has offered a bid price most proximate to the winning bid price is rewarded with a predetermined compensation.

14. The bid type cooperative selling method as set forth in Claim 13, in which said compensation is paid by at least one of the means, gift, cash, securities, cyber

money, or price discount on the product purchased.

15. The bid type cooperative selling method using computer network as set forth in Claim 8, in which the winning bid contents are provided via the connecting channel to unspecified general clients(public) for the purpose of checking whether any unsuccessful bidders or other clients are willing to purchase additionally the offered product at the winning bid price, and said additional purchasers are allowed to participate in the cooperative transaction at the stage of cooperative selling, in addition to the winning bidders.

16. A bid type cooperative selling method using computer network consisting of a web server having a client database and a product/bid/winning bid contents database, a client computer, and a connecting channel interconnecting said client computer and said web server, wherein said method comprises the steps of:

a) determining the bid contents, wherein said web server determines the bid contents comprising at least one of the items, maximum supply unit price(consumer price; maxP), minimum supply unit price(minP), minimum suppliable quantity(n) at the minimum supply unit price, grading amount(sp) which is the reduced price per increase of selling quantity, biddable prices(UPi) for graded selling quantities(i), and the maximum suppliable quantity, based on the bid request contents received from one or more sellers and stored in the product/bid/winning bid contents database;

b) posting a bid notice, wherein the web server provides said bid contents comprising at least one of the items, bid period, information on the product to bid on, maximum supply unit price (consumer price) and biddable price(UPi) for each graded selling quantity(i) to one or more clients through said connecting channel;

c) bidding by clients, wherein the web server receives bid contents comprising bid price and bid quantity transmitted by one or more clients through said connecting channel, and stores them in at least one of said databases;

d) determining the winning bid price and the winning bid quantity, wherein

the web server determines the winning bid price and the winning bid quantity on the basis of the bid contents received and stored during said bid period, and of the sales policy decision conditions that entered by the service provider of said bid type cooperative selling service; and,

e) cooperative selling, in which the web server provides the winning bid contents including at least one of the items winning bidders, the final winning bid price and the winning bid quantity to the seller and to at least one of the winning bidders who have offered a bid price higher than the winning bid price, so that the cooperative transaction between the seller and the winning bidders, is effected; and wherein

said sales policy decision condition is determined by assigning a weight value from 0 to 1 to at least one of the profit priority and the sales priority (the sum of the weight values assigned to these two priorities is 1), and

said winning bid price and winning bid quantity are determined in the following manner: one of the possible winning bid prices in accordance with said sales policy decision condition, among the biddable prices that complies with the requisition that the cumulative sum of the bid quantity at bid prices between the maximum supply unit price and the biddable price most proximate to, but lower than a predetermined bid price should not be less than the selling quantity corresponding to said biddable price, is determined as the winning bid price and the total sum of the bid quantities at prices between the maximum supply unit price and said winning bid price is determined as the winning bid quantity.

17. The bid type cooperative selling method using computer network as set forth in Claim 16, in which the lowest price among said possible winning bid prices is determined as the final winning bid price, provided that the service provider of said bid type cooperative selling service is an intermediary distributor who receives product from a seller and supplies further to purchasers, and a weight value of 1 is assigned to the profit priority while a weight value of 0 is assigned to the sales priority.

18. The bid type cooperative selling method using computer network as set

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forth in Claim 16, in which the possible winning bid price maximizing the total profit (yi, in the following formula) is determined as the final winning bid price among all possible winning bid prices, provided that the service provider of said bid type cooperative selling service is an intermediary distributor who receives products from a seller and supplies further to purchasers, and a weight value of 1 is assigned to said profit priority, while a weight value of 0 is assigned to said sales priority:

$$yi = UPi * qi * r + (UPi - oi) * qi$$

here, yi represents the total profit, UPi, the biddable price; qi, the cumulative sum of bid quantities at each biddable price (the selling quantity); r, percentage rate of the commission to the total sales(Upi*qi); oi, the unit price of a product when the corresponding quantity is provided from a seller (ordered unit price).

19. The bid type cooperative selling method using computer network as set forth in Claim 16, in which the possible winning bid price that has the largest cumulative sum of the bid quantities (selling quantity: qi) is determined as the final winning bid price, among such possible winning bid prices of which the opportunity loss cost(OPi) (=the maximum profit (max(yi)) – the total profit at the corresponding possible winning bid (yi) in the following formula) falls within the range of the value calculated from: the maximum profit (max(yi))*(1-the weight value (a)), provided that the service provider of said bid type cooperative selling service is an intermediary distributor who receives the products from a seller and supplies further to purchasers and the weight value for the profit priority is represented as 'a' ($0<a<1$):

$$yi = UPi * qi * r + (UPi - oi) * qi$$
$$OPi = max(yi) - yi$$

here, yi represents the total profit at the corresponding possible winning bid

price; UPi, the biddable price; qi, the cumulative sum of the bid quantities at the corresponding biddable price (selling quantity); r, percentage rate of commission to the total sales (Upi*qi); oi, the unit price of a product when the corresponding quantity is provided from a seller (ordered unit price); max(yi), the maximum profit; and OPi, the opportunity loss cost.

20. The bid type cooperative selling method using computer network as set forth in Claim 16, in which the web server receives bid request contents from one or more sellers comprising at least one of the items, maximum supply unit price(maxP), minimum supply unit price(minP), minimum suppliable quantity(n) at the minimum supply unit price, maximum suppliable quantity, and the grading amount(sp) as per the selling quantities, and determines the seller who has offered the highest grading amount(sp) as the final bid requester(seller).

21. The bid type cooperative selling method using computer network as set forth in Claim 16, in which a client is allowed to choose a price from the biddable prices(UPi) per graded step selling quantities(i) established by said bid type cooperative selling web server, for its bid price, and to specify a bid quantity at its discretion.

22. The bid type cooperative selling method using computer network as set forth Claim 16, in which the winning bidder who has placed a bid price most proximate to the winning bid price is rewarded with a predetermined compensation.

23. The bid type cooperative selling method using computer network as set forth in Claim 22, in which said compensation is paid by at least one of the means, gift, cash, securities, cyber money, or price discount on the product purchased.

24. The bid type cooperative selling method using computer network as set forth in Claim 16, in which the winning bid contents are transmitted via said



connecting channel to unspecified general clients(public) for the purpose of checking whether any unsuccessful bidders or other clients are willing to purchase additionally the offered product at the winning bid price, and said additional purchasers are allowed to participate in the cooperative transaction in addition to the winning bidders.