**Reverse Car Auction System**

ABSTRACT

Today’s web-based auction systems are designed to sell available products to

potential buyers, and little more. This problem explores the means by which these

systems could be improved in terms of value provided to web auction customers.

Imagine a system where a buyer can specify his/her requirement and price. For

example, buyer of a car can actually specify the needs, estimated price and other

details that he/she is looking in a car. And then the users (potential sellers and/or

manufacturers) sharing and using the system can respond to the buyer’s desired

request posted on the system and really can bid for the same. Talking about the

scope of the system, the system and basically idea can be applied to a variety of

applications including the Business to Customer (B to C), Customer-to-Customer

(C to C) and Business-to-Business (B to B).

DESIRED SYSTEM

Online auction sites abound on the web. These online auctions allow buyers to bid for the thousands of products described on your personal computer. Largely, these systems are narrowly focused on selling items and have very little awareness of the buyer, and his or her requirements and needs.

Recently, a few web sites have appeared with the notion of a reverse auction. Reverse auctions are focused and dedicated to the buyer. A buyer describes his or her product requirements and the price he or she expects to pay. The need of this system arises in the areas of complex requirements where a buyer probably is looking for custom product that does not exist and there is a need to build it and then supply it. The example of this can be a particular new mechanical part of an automobile that is required to be manufactured according to the buyer’s requirement and specification. The product may not have been developed or produced in past.

Reverse auction systems are not only specific to a particular industry, area or product. It is a concept that can be applied universally to any business need or an individual requirement. However the best utilization can be achieved in the B-to-B applications where the need is to really build, supply and transport the product that is customized according to the buyer’s requirement

We desire to implement the instance of this idea in car selling and buying business. The implemented system should address the requirement of the buyers of the car (used and new). Our System should be able to provide solution for the problems that a car buyer faces when he/she wants to buy a new/used car. Also there exists a need for facilitating the buyer by letting him demand existing/customized car according to his needs and desire and not impose the traditional and existing system of buying the cars by just selecting from the available existing options only.

Thus the buyer should be able to provide the specifications of the car he/she desires and provide a time limit for receiving the selling proposals from sellers. The seller’s bid (propose their selling price) and thus the prices lower down as auction goes on. At a particular point it can be known what is the current/final lowest bid or quote offered by a seller.

All the bid offers are eligible for selling and further communication as the last decision remains with the buyer. But the system facilitates the buyer by selecting the lowest bid received and also other bids arranged with respect to offer price. The buyer in this case may or may not choose the lowest bid. The interface should provide the facility to all the users involved in a particular biding process for getting detailed information about buyer/seller. Also they may have additional features such as enquire by email. The bids should be maintained in a tabular interface both at buyers and suppliers end for sake of

readability and clarity. This summary table could be drill down as the user follows the hyperlinks provided.

In this system, we focus on facilitating the buyer more, but in the process the other users -- sellers and manufacturers -- also benefit by the business they do.

DETAILED REQUIREMENTS

The user or buyer should be provided with the following features and capabilities when he/she communicates with the system to help buy a car:

1. The user should be able to post a requirement posting on the system for its other users that are the suppliers, dealers or the manufacturers. The requirement includes details and specifications about the desired car. Also it includes the bid period for the buying request.

2. The system should provide an interface for entering users' preferences, which are:

**The Manufacturer’s Company** This field should be populated from the existing manufacturers associated with the system. Option to specify other if doesn’t exist.

**The Model of the Car** The buyer should be able to select and/or specify his own requirement from a list showing the different models of the car available.

**The year of Make** (if opting for a used car)

**Choose and/or select: Transmission, Automatic/Manual**

**Choose and/or select preference of Buying (from a manufacturer, dealer or a owner)** The preference of buying the car from a dealer, company or an individual lies with buyer and should be able to make selection for the same.

**Price Range** Select the provided ranges and/or select his own.

**Target Price** This price indicates the approximation of the price that the buyer is looking forward to pay for.

3. The system should be able to classify and categorize the various needs of buyers and post them to the corresponding suppliers, helping the suppliers to view the details of the initiated posting by a particular buyer.

4. After specifying the details and submitting it to the system, the user should be able to see a drill down feature list for the bids and functionalities that he/she has initiated. The bids should be maintained in a tabular format and the initial details should include time left and minimum price quoted. For other details such as the dealers name and/or company specification the user should be able to click on hyperlink for the bid submitted by the dealer/company to get more details about the same.

5. User should have the option of making his/her posting public, private or say for a particular dealer or manufacturer.

6. The user should be able to provide the time frame of the reverse auction. It means that user should limit the time for the dealers and manufacturers to bid for the particular posting.

7. The user should have the facility to view the final result categorized and customized according to his requirement. Options for the custom output could be the table sorted according to some preferences as seller’s capacity or delivery time etc.

8. The final verdict remains with the buyer whether to choose a particular offer or not.

Usage Scenarios

Scenario #1: Posting a Request

Actors: buyer

In this case, a user can post his request for a car by specifying his requirement including

the manufacturer’s company, the model of the car, the year of Make (if opting for a used

car), transmission type, preference of buying, target price and so on. A buyer also needs

to specify a deadline for the reversed auction (starting date and ending date).

Scenario #2: Sending Buyers request to Corresponding Users

Actors: supplier, dealer, owner and buyer

The system classifies and categorizes the requests posted by buyers and posts them to the

corresponding suppliers, dealers, or owners.

Scenario #3: Collecting bids from suppliers, dealers and owners.

Actors: supplier and/or dealer and/or owner

The system sets a time frame (provided by buyer) that limits the time for bidding for a specific posting. Any bidding within that time frame will be collected and posted to allow bidders to view their biddings. After the deadline, no bidding will be allowed and collected. All biddings will be categorized and sorted.

Scenario #4: Selecting the current lowest bid.

Actors: buyer and/or supplier and/or dealer and/or owner

The buyer views all the biddings posted to his account. The system searches for all the bid prices offered for the particular request and finds the lowest amongst them. This lowest bid price is shown to the buyer/seller on request.

Scenario #5: Showing the User Details

Actors: buyer and/or supplier and/or dealer and/or owner

The user (buyer/seller) follows the hyperlink to view the details of the corresponding seller/buyer. The system should provide the details as the name, company, manufacturing

capacity etc depending upon the user.

Scenario #6: Selecting the Final Lowest Bid

Actors: buyer and/or supplier and/or dealer and/or owner

The buyer views all the biddings after the deadline. The final lowest bid is selected in the

same manner as selecting the current lowest bid (Use Case #4). The buying decision could be made if he is satisfied. Also he can contact and negotiate with the particular supplier. If he is not satisfied, he can call for another reverse auction, going back to *Usecase #*1. If he wants to obtain more information regarding certain bids, he can contact several suppliers for more detailed description.