

# ANALYSIS, DESIGN AND IMPLEMENTATION OF A SECURE ONLINE AUCTION SYSTEM USING DETAINING TECHNIQUE

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**ABSTRACT:** The E-sell off, one of the famous online business exercises, enables bidders to legitimately offer the items over the Internet. With respect to fixed offer, the additional exchange cost is required for the middle people in light of the fact that the outsider is the significant job between the purchasers and the merchants help to exchange both during the bartering. Bidders frequently feel tested when searching for the best offering techniques to exceed expectations in the focused condition of numerous and concurrent online sales for same or comparable things. The notoriety of the Internet, the reconciliation administrations have slowly changed individuals every day life, for example, web based business exercises on exchanges, transportation, etc.

The exploratory outcomes demonstrate that the operators who pursue dissuading relapse approach beat other existing specialists in many settings as far as their prosperity rate and anticipated utility. Like SCO device give most noteworthy need to utilizing rating for government contractual worker. Bidders face muddled issues for choosing which closeout to take part in, regardless of whether to offer early or late, and the amount to offer. In this framework, we present the plan of offering techniques which intend to conjecture the offer sums for purchasers at a specific minute in time dependent on their offering conduct and their valuation of an unloaded thing. The operator builds up an exhaustive philosophy for definite value estimation which structures offering techniques to address purchasers' distinctive offering practices utilizing two approaches: Mamdani strategy with Regression Analysis and Negotiation Decision Functions.

**Keywords-** *E-auction, Public Bid, Sealed Bid, Smart Contract, Government Contract.*

## 1. INTRODUCTION

Advent of electronic commerce has dramatically advanced traditional trading mechanisms, and online auction settings like eBay and Amazon have been emerged as a powerful tool for allocating goods and resources. Discovery of the new markets and the possibilities opened by online trading has heightened the sellers' and buyers' interest. In online auction commerce, traders barter over products, applying specific trading rules over the Internet which support different auction formats. Common online auction formats are English, Dutch, First-price sealed bid and Second-price sealed-bid auctions. Bidders in this marketplace face difficulties when looking for the best bidding strategies to win the auction. Moreover, there are commonly many auctions selling the desired item at a particular moment of time. Deciding which auction to participate in, whether to bid early or late, and how much to

bid are very complicated issues for bidders. The difficult and time-consuming processes of analysing, selecting and making bids and monitoring developments need to be automated in order to assist buyers with their bidding.

The rise of programming operator innovation has made an imaginative system for creating on the web closeout components. As a result of their exceptional versatile abilities and trainability, programming operators have turned into a basic segment of web-based exchanging frameworks for purchasing and selling merchandise. Programming operators can perform different errands like examining the present market to foresee future patterns, choosing offer sums at a specific minute in time, assessing diverse sale parameters and checking closeout progress, just as some more. These arranging specialists outflank their human partners in light of the efficient methodology they take to overseeing complex basic leadership circumstances adequately. This makes more

### Motivation

The purpose of testing countermeasures. Furthermore, there is limited commercial auction data available due to the sensitivities of an online auctioneer being willing to admit that fraud has, or is occurring. In order to test fraud countermeasures in a controlled environment, we have created our own online auction server for conducting auction related research.

### 2. RELATED WORKS:

Analysis of the data produced in online auction environments can be created using data mining techniques to predict the end-price of an online auction. Data from a series of identical or similar closed auctions has been used in the past to forecast the winning bid by exploiting regression, classification and regression trees, multi-class classification and multiple binary classification tasks. The history of an ongoing auction also contains significant information; this can be exploited for short-term forecasting of the next bid by using support vector machines and functional k-nearest neighbour approaches, clustering and regression and classification techniques.

Furthermore, bidders repeatedly adjust their bids towards their maximum valuation of an item based on the time left in the auction and the bids placed by other participants. This triggers different bidding behaviours. Analysis of these bidding behaviours suggests that agents can be categorized as evaluators, participators, opportunists, snipers, unmaskers or skill bidders.

Evaluators have a clear idea of their valuation of the item and place a single, significantly high bid during the early phase of the auction. Participators make a low initial bid and then place ascending bids as the auction progresses. Opportunists place the minimum required bid just before the auction closes. The main drawback is that there is existing system no effective and particular method to prevent the users from giving false identity and hence the system fails in providing a secured environment.

### 3. EXISTING SYSTEM

The first part of the project is an investigation of already existing on-line auction systems around the net. We considered three of the most famous auction web sites: eBay.com, asteinrete.com and onsale.com. all the three systems give the possibility to register, to login to the website and have a home page with a general description of the portal. They offer also a personal page, where each

user can check the status of their auctions or of their offers. But the rating functionality not available on that portals. This existing system only allows to bid the products. But the main drawback is that there is no effective and particular method to prevent the users from giving false identity and hence the system fails in providing a secured environment.



Figure 1: Bidding System

### 4. PROBLEM STATEMENT

While researchers are proposing methods for combating such fraud, it is extremely difficult to test how effective these countermeasures are. This is primarily due to it being unethical to engage in fraudulent behaviour just for the purpose of testing countermeasures.

### 5. LITERATURE SURVEY

Online auctions have become a pervasive transaction mechanism for e-commerce. As the largest online marketplace in the world, eBay is an attractive case study that enables the study of online auctions utilizing data involving real people and transactions. In this paper, we present a detailed investigation and analysis of multiple online auction properties including: consumer surplus, sniping, bidding strategy and their cross relationships. Our goal is to evaluate the theoretical foundations of online auctions and discover patterns and behaviours hidden due to the lack of real and extensive transaction data. Among

our findings, we uncover an important correlation among sniping and high surplus ratios, which implies the uncertainty of true value in a competitive environment. The key issue is the wrong assumption that bidder's valuations are independent from each other, which leads to inefficient auctions. In order to address the inefficiencies of current online formats we introduce a declining price auction model customized for online transactions. Conceptually, this model ought to deal with the complexities of competition in an online environment while maximizing social welfare. [1]

In recent years, the proliferation of the World Wide Web has led to an increase in the number of public auctions on the internet. One of the characteristics of online auctions is that a successful implementation requires a high volume of buyers and sellers at its website. Consequently, auction sites which have a high volume of traffic have an advantage over those in which the volume is limited. This results in even greater polarization of buyers and sellers towards a particular site. This is often referred to as the network effect in a variety of web and telecommunication applications involving interactions among a large number of entities. While this effect has qualitatively been known to increase the value of the overall network, its effect has never been modelled or studied rigorously. In this paper, we construct a Markov Model to analyse the network effect in the case of web auctions. We show that the network effect is very powerful for the case of web auctions and can result in a situation in which one auction can quickly overwhelm its competing sites. This results in a situation in which the natural stable equilibrium is that of a single online auction seller for a given product and geographical locality. While a single player structure is unlikely because of some approximation assumptions in the model, the trend seems to show the likely existence of single dominant player in the web auction space. [2]

Academic interest in the popularity and success of online auctions has been increasing. Although much research has been carried out in an attempt to understand online auctions, little effort has been made to integrate the findings of previous research and evaluate the status of the research in this area. The objective of this study is to explore the intellectual development of consumer behaviour in online auction research through a meta-analysis of the published auction research. The findings of this study are based on an analysis of 83 articles on this topic published mainly in information systems (IS) journals

between 1998 and 2007. The results indicate that the consumer behaviour research on online auctions can be categorized into three major areas facilitating factors, consumer behaviour and auction outcomes. Based on this literature review, directions for future research on auction consumer behaviour are discussed, including potential new constructs, unexplored relationships and new definitions and measurements, and suggestions for methodological improvements are made. [3]

This study seeks to the answer the question of how an individual would trade off between listing fee (i.e., cost of listing an auction item) and transaction probability (i.e., the chance that a product will be sold). Applying the trade-off decision-making paradigm into the auction context, we examine a seller's choice of online auction outlet and subsequent starting price strategies when facing the trade-off between transaction probability and listing fee. Results from a set of laboratory experiments suggest that a seller would be willing to incur a high cost in exchange for a higher transaction prospect. Furthermore, if the expected transaction probability is high, a seller is more likely to set a high starting price despite incurring a high listing fee. The implications for theory and practice are discussed. [4]

Online auction is becoming more and more popular in electronic commerce (EC). It has become the mainstream trading methods in consumer to consumer (C2C), such as eBay. The steady collaboration field and common concept of exchange may be formed in the cooperation of the Multi-Agent system (MAS), and then the agents will have so much common knowledge in order to complete the tasks. The member of MAS has both cooperation and self-interest. Based on the analysis of the cooperation and competition of the participators in the online auction, the concept of overtime and history information is introduced. As existing incomplete information, the efficiency of the auction is low without consider the history information. This paper put forward a MAS flow frame and negotiation algorithms that make the bidders of the auction participate in the negotiation honestly and actively. Both the efficiency and transparency among the participators have been enhanced. [5]

## 6. CONCLUSION

We have proposed a Analysis, Design and Implementation of a Secure Online Auction System Using detaining Technique based on Online Auction System has made consumers more effective and efficient in their behaviour and has driven businesses to a new level, forcing many to

make the necessary adjustments and changes to reach the new market of knowledgeable consumers. Rapid growth of e-auction has resulted in a e-transformation in the global retail infrastructure. Despite being faced with numerous bottlenecks, Thanks to rising internet and higher incomes and more savvy population.

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