

Chapter 9

An Implementation of a New Type of Online Auction

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ABSTRACT

In recent years, there has been an increased interest in the types of online auction. Yet many auctions with fixed-end times are experiencing “sniping” or submission of bids in the final minute of an auction. Late bidding deprives rivals of the ability of seeing one’s bid and undercutting it. Late bidding facilitates colludes or independent pricing well above that predicated by auction mechanism. This article aims to propose and implement a new type of online auction called Least and Unique Price (LUP). In the LUP auction, the winner will be the bidder who submits the least and unique price. Moreover, late bidding and specific closing time also be overcome by the LUP auction. In addition, this article presents the practical implementation of the proposed auction. In order to evaluate the proposed auction a comparative analysis of different auction types and the proposed one has been done.

INTRODUCTION

Each year, millions of Internet users utilize online auctions to purchase and sell various products. Despite the recent economic slowdown, consumers and businesses continue to spend money online. Due to the explosive popularity of the Internet, the use of electronic commerce as revenue-generating

businesses has also increased. Government, corporations, as well as businesses are keen to find ways of efficiently allocating their resources with the use of auction type mechanisms (Okamoto, 2002). There are several auction types used on the market today are: the English auction, the Dutch auction, and second price sealed bid auction (Yuen, Sung, & Wong, 2003).

An online auction is an indirect sale transaction type of e-commerce. An online auction increases competition among vendors in addition to broaden the set of potential consumers (Richard & Halstead, 2004). Online auction has become very popular, even though there are some aspects of an online auction that its electronic version cannot encompass, such as seeing and touching the real product. An auction is a public sale in which the price is determined by bidding, and the item is sold to the highest bidder. To participate in an auction means to bid to obtain an item (Turban, King, Lee, & Viehland, 2004). For example, in the English auction, the person who offers the highest bid wins the right to purchase the item at that price. Online auctions have been widely used throughout the world in order to set prices of such unique items such as fine art and antiquities.

Various researchers (Parente, Venkataraman, Fazel, & Milett, 2001; Gao, 2005; Orson & Donald, 2004) have pointed out that, there are a variety of auction formats and many characteristics that define auctions. These formats and factors are valid for online auctions. The number of bidders and pattern of bidding is determined by the rules of the auction and its surrounding environment. Relevant environmental factors include the type of the good being sold, risk preferences of bidders, the time frame of the auction, and the available information concerning the bidding process.

One auction characteristic that may influence auction success is auction time of the bidding period. Most auctions are initiated with advanced notice of a specific closing time. The fixed end time poses an incentive problem – the early bid serves no benefit to the bidder but reveals information to his rivals (Parente et al., 2001).

Bapna, Goes, and Gupta (2001) report that, the major problem is that of a bidder hiding as until near the end of the auction, to conceal its true interests/values from opponents. Example: “bid-sniping” in eBay (auction last a week, but all meaningful bids occur in the last 5 minutes). One of the possible remedies for the snipers problem

is an auction “Overtimes” which can restore the desirable bidding properties of reverse auctions. An overtime or extension to the auction (Parente et al., 2001) is invoked if any bidding occurs in a designated final phase of the auction (e.g., bid in the last 3 minutes). The overtime may iterate if late bidding continues in the previous overtime. The additional time allows bidders the opportunity to react to “snipers” and minimizes the potential for pricing rings. However, Chafferry (2004) noticed that the disadvantage of overtime is that it obligates serious bidders to return to the auction at closing time and remain through subsequent extension periods.

In addition to propose a new type of online auction and resolve the sniping problem, this article aims to understand the business of online auction that which type of business model that it's under, how it works, types of it, advantages and disadvantages of it, payment options and the trust that exist between customers on the Web with the proposed auction.

This article is organized as follows: in section 2, background on online auctions is presented, including information on the varieties, benefits, and uses online auctions. Next in section 3, the LUP auction is discussed, which is the proposed auction. Implementation of the proposed auction is then proposed in section 4. Section 5 introduces the comparative analysis between the proposed auction and different auction types. Finally, conclusions and future researches on online auction are discussed.

GENERAL AUCTION TYPES

Online auctions are rapidly gaining popularity (Reginaldo, Braga, & Masiero, 2001). Online auction systems are classified base on different aspects such as: bid definition, specification of auction rules, and definition of transactions. Several reasons motivate their use, among which are the ability to increase the number of potential

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