BLOCKCHAIN BIDDING SYSTEM

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Abstract - The paper introduces a blockchain bidding system. As internet services are used across the world Convergence technologies have changed people's daily lives ever more for e-sales, e-travel and more. The online E-auction being one of the popular e-practices, offers to sell products to the highest bidder through the internet. As with the sealed bid the broker has to be paid additional processing fees on top of the initial costs because the broker is the only way for the bidder to get through to the seller during the auction. Apparently one cannot judge whether the broker is trustworthy or not. To tackle this problem we propose a low cost transaction blockchain platform to build a sealed or a public bid .The smart contract announced in 1990 and reinforced via Ethereum's blockchain, will guarantee the fact that all the transactions are registered on the same yet decentralized booklets which is safe, private and non-reputable and unalterable. The intelligent contract includes the auctioneer's address, the start of the auction, the Date, the winner's address and the current highest bid.

Keywords— Block-chain, Bidding system, E-auction, Public and Sealed bid

.I.INTRODUCTION

➢ The E-auction has become famous for its simplicity. E-auction integrates network technology into the bidding system to reduce the transmission costs. In an electronic bidding system, extra processing costs are required for the intermediaries. The third party plays a major role in between the buyers and the sellers. You never know the third party is a good one.

➢ There are two main issues of e-auction:
• First, the bidding system needs a centralized administrator to aid with coordination between bidders and auctioneers. The centralized broker should have charges added. The identity data and activity documents that are contained in the archives can also cause privacy leakage.
• Second, in a sealed bid, there is no way for bidders to guarantee that the bidding price for the lead bidder will spill.

➢

➢ E-auction can now be divided into two groups, namely public bid and sealed bid. Public bid is that bidders will increase the price of bidding for the goods. Therefore, the price of bidding continuously rises until no bidders are willing to pay a higher amount. When he bids the highest price for the respective commodity, the bidder is announced as a winner. Bidders can bid multiple times during the public tender. So, it's also called multi-bid auction. Sealed bid is that the bidders encrypt the bill and submit the bill only once. The auctioneer compares all the bills, if the time is due, the winner of the sealed bid are the bidder which bids for the highest price. Because bidders can only bid once, it is often called as Single-Bidding Auction. For this the price of all bidders is locked before the opening date of the deal is matched with the prices of all bidders. We have used the blockchain technology to resolve the data leakage and other kinds of malicious activities in the above kinds of bidding. The blockchain is a technology which uses distributed nodes to access, verify and transmit network data. To achieve a decentralized data processing and

Preservation infrastructure it uses a peer-to- peer network.

II. LITERATURE SURVEY

- M Jenifer and B Bharathi [1] created a methodology using blockchain algorithm to reduce the reducer side skew and the time comparison between the new methods and to find the efficiency in MapReduce is proposed in this paper.

- The goal of Affan Yasin and Lin Liu[2] proposed in this paper is to provide a smart contract management framework referring to personal online ratings based on the aggregated digital identity, an experiment conducted based on blockchain technology and theoretical evaluations to the proposed approach.

- In Frantz, Christopher K and Nowostawski Mariusz [3] paper, they

- propose an approach that supports the semi-automated translation of human-readable contract into computational structures that occur within a public blockchain and identify the smart contract components and initialize using a domain-specific language in order to support the contract modeling process.

III. PROPOSED SYSTEM

- The architecture shown below is the general block diagram that has been implemented in 9 modules:
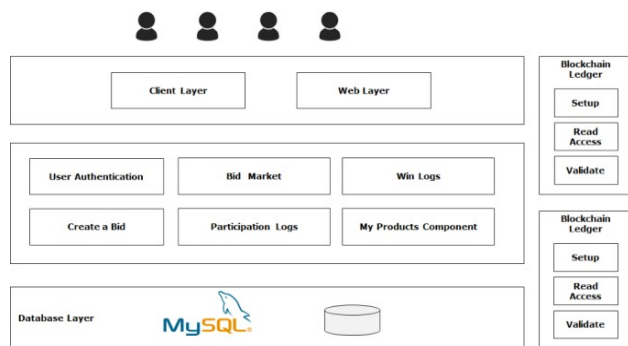
IV. OBJECTIVES

- The main goal of this project is to establish a decentralized communication system between bidder and auctioneers, which decreases thefee.

- Structure of peer-to-peer access to create the trust while protecting personal data and transaction records.

- The bid price which the lead bidder leaks will be avoided via the smart contract.

V. MODULES IDENTIFIED

- There are 6 modules identified:

- Module1: User profile operations:

Here, the project's end users will be given an interface where they can request access to our project. It comes with an HTML GUI that provides the details you need to build a new account. After the user registration is approved by the administrators, the individual may log on to our portal and carry out several account operations.

- Module 2: Node Implementation:

Here the blockchain network is introduced by building our collection of distributed ledger nodes. If the transaction is committed in the blockchain and the block is mined, each node will be able to perform various operations, and obtain the blockchain data. Perform block validation by comparing current block hash codes and past block hash codes. It gives the clients on that node read-only access to visualize the number of blocks and the type of data being processed. When requested, supply the block chain data to the bidding application.

- Module 3: Super Admin Configuration:

This feature is made available only to the project's super admin. The project's super administrator would basically be the owners of the commodity themselves. Through this function, the project's super admin will be able to perform node addition, node deletion and node visualization operationsFrom the user interfaces given to him / her from the front-end. This functionality will be locked and nobody else will be able to use it, apart from the super admin. More the number of nodes, greater the security measures given by the

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application to bid the blockchain.

- Module 4: Product Addition:

In this module the product seller will be provided a portal. An HTML GUI to which it can add the product he/she wants to sell. The seller will have to provide some basic product information, such as name, definition and URL to the product itself. All of the above fields are mandatory for seller to have. If the product is introduced, it will appear in the market immediately where the consumers will start bidding for it.

- Module 5: Bid Market and Participation:

If the seller has added the product, it will be displayed immediately on the market where the users will start bidding for it. The user must enter the sum in the textbox that was given against the interest object. The buyers bid number along with the specific product identifier will be stored in the blockchain network. Blockchain service class that performs writing and reading operations to and from blockchain network. This blockchain service class can use the Ledger Distribution Thread to write simultaneously to various blockchain networks.

- Module 6: My Products and Win Logs:

This platform helps product sellers to see the status of their goods as well as the information of the bidder for their product. The seller will close the bid window at any time and announce the highest bid winner. When the bidding window is closed, an email message is sent to both buyer and seller.
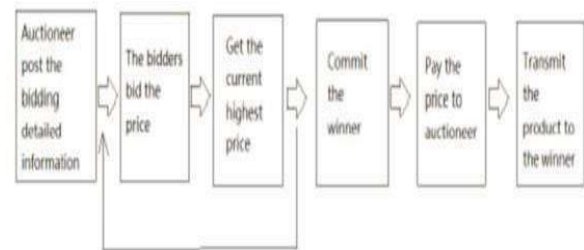
VI. METHODOLOGY

- Firstly, the seller posts the product description.

- Secondly, Bidders bid the price.

- After bidding is done, the auctioneer gets the current highest price.
- The auctioneer commits the winner.
- The amount is paid by the winner to the seller
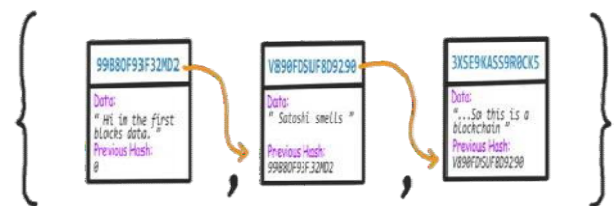
  - Hash = Digital Signature.

and the product is transmitted to the winner. The flowchart of E-auction is shown in Fig below

WORKING AND IMPLEMENTATION

- STEP 1: Open the Bidding Application in any of the search engine by using the path localhost:8080/Bidding/

- STEP 2: Once the home page of the Blockchain Bidding Application is opened, the user who does not have an account will register by giving his/her credentials.

- STEP 3: When the Welcome page is opened, the user is now ready to bid for a product available in the market.

- STEP 4: The user bids the product by giving the amount in the given textbox.

- STEP 5: If the user bids for the highest price, he/she is considered to be the winner.

- STEP 6: When the bidding window is closed, an email is sent to both the seller and the winner.

Implementation of block-chain: A blockchain is a block of nodes. Block in the blockchain would have its own digital signature, contain the previous block's digital signature and have some data (these data may be for example transactions).

- Not only does each block contain the block's hash before it, but its own hash is in part, derived from the previous hash.

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- If the data of the previous block is modified then the hash of the previous block (because it is determined in part, by the data) will affect all the hashes of the blocks afterwards.

- Comparing and measuring the hashes help us to see whether a blockchain is invalid or not.

VII. CONCLUSION

This project provides an E-auction mechanism based on blockchain to ensure confidentiality of electronic seals. We propose a low transaction cost using this blockchain technology to develop a smart public bid and a sealed bid. The smart contract consists of the address of the auctioneer, the start time of the auction, the deadline, the address of the current winner, the current highest price. In the future, we would be working to scale our project to huge number of users and come up with an efficient load balancing algorithm across them.

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