

Decentralised auctions

Participants in an auction need to be sure that any manipulation is ruled out, which makes transparency a vital condition for successfully running one. dApp-powered auctions can guarantee transparency and facilitate immutability of data for all bids and the time at which they were made.

An auction is a process of buying and selling goods, securities, digital assets and other items by offering them up for bid. Auctions can run under various sets of rules, but the common feature of all auctions is that the item is sold to the highest bidder.

The most common auction formats are the open ascending price auction, in which buyers place bids, competing with each other to set the highest price, and the descending price auction, in which the price is lowered until a participant is willing to accept it and buy the item. Similarly, auctions can either be open, with participants aware of each other's previous bids, or closed, in which buyers/sellers submit sealed bids.

However, transparency is vital for all types of auctions as it eliminates opportunities for manipulation. One way to achieve transparency is the use of blockchain and dApps. For this use case, we would like applicants to analyse potential areas for adoption of decentralised auctions in the IT industry and create a workable, ready-to-use dApp that will be focused on a specific area and valuable to potential users.

Previous experience

Under the third, [special batch of grants](#) focused on projects developed in the RIDE for dApps programming language, we suggested creating a solution facilitating creation of auctions for token issuance on the Waves platform and setting various parameters, such as duration, minimum bid price etc.

[The winning solution](#) works as follows: once an auction has been created, the lot appears on the website's main page and users can start making bids and eventually redeem the lot at the highest price. Once the auction is completed, the winner can take receipt of their tokens by paying their bid.

Waves smart contracts facilitate absolutely transparent buy/sell orders. The seller can be assured that their tokens won't disappear before the auction is over, and the buyer can be assured that they will collect the lot.

Demo: <https://testeron.pro/waves-auction/>

Source code on GitHub: <https://github.com/IgorShadurin/waves-auction>

Description:

<https://medium.com/@igor.shadurin/waves-auction-c90599894a79?sk=1c6e321d7d70ce3c15539694efdd2bb2>

For this use case, we suggest further development of this idea and the creation of a platform for running auctions. The main condition is real-world applicability of the dApp.

Waves tools to be used:

- Smart Contracts
- Waves Keeper
- WAVES tokens



Timeframe

1-3 months



Final result

Completion of work can be proven by:

1. A workable version or demo of a dApp suitable for running auctions.
2. A detailed illustrated manual for using the dApp on a separate landing page or in a Medium post.
3. Source code on GitHub.

The goal of this description is to outline possible approaches to this objective. Maintaining these guidelines is not mandatory. You are welcome to come up with your own ideas for implementing this task.

If you have your own approach to solving this task or ideas/preliminary work, please apply and we will consider your solution.