Project by
David Phillips

The Unique-Bid Auction

To create an auction environment that allows human and robotic bidders to compete for a fictitious auction item

Procedure

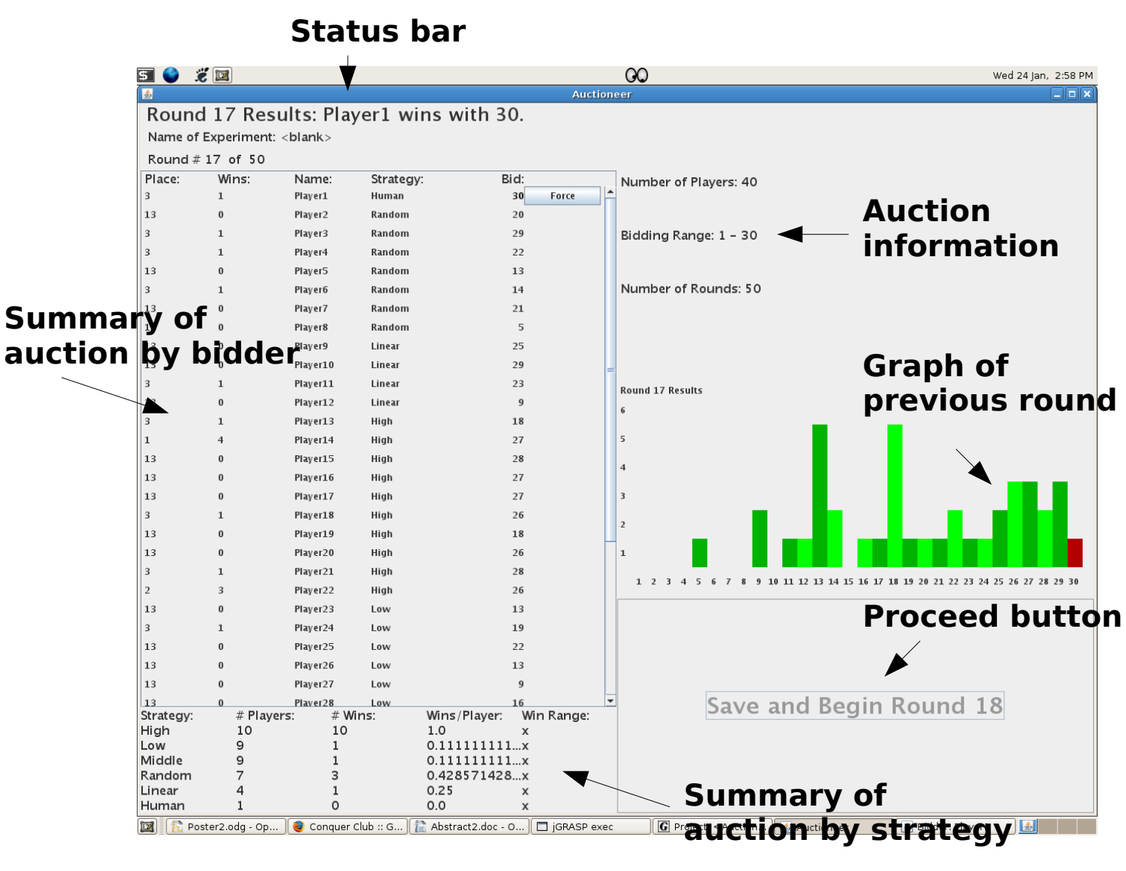
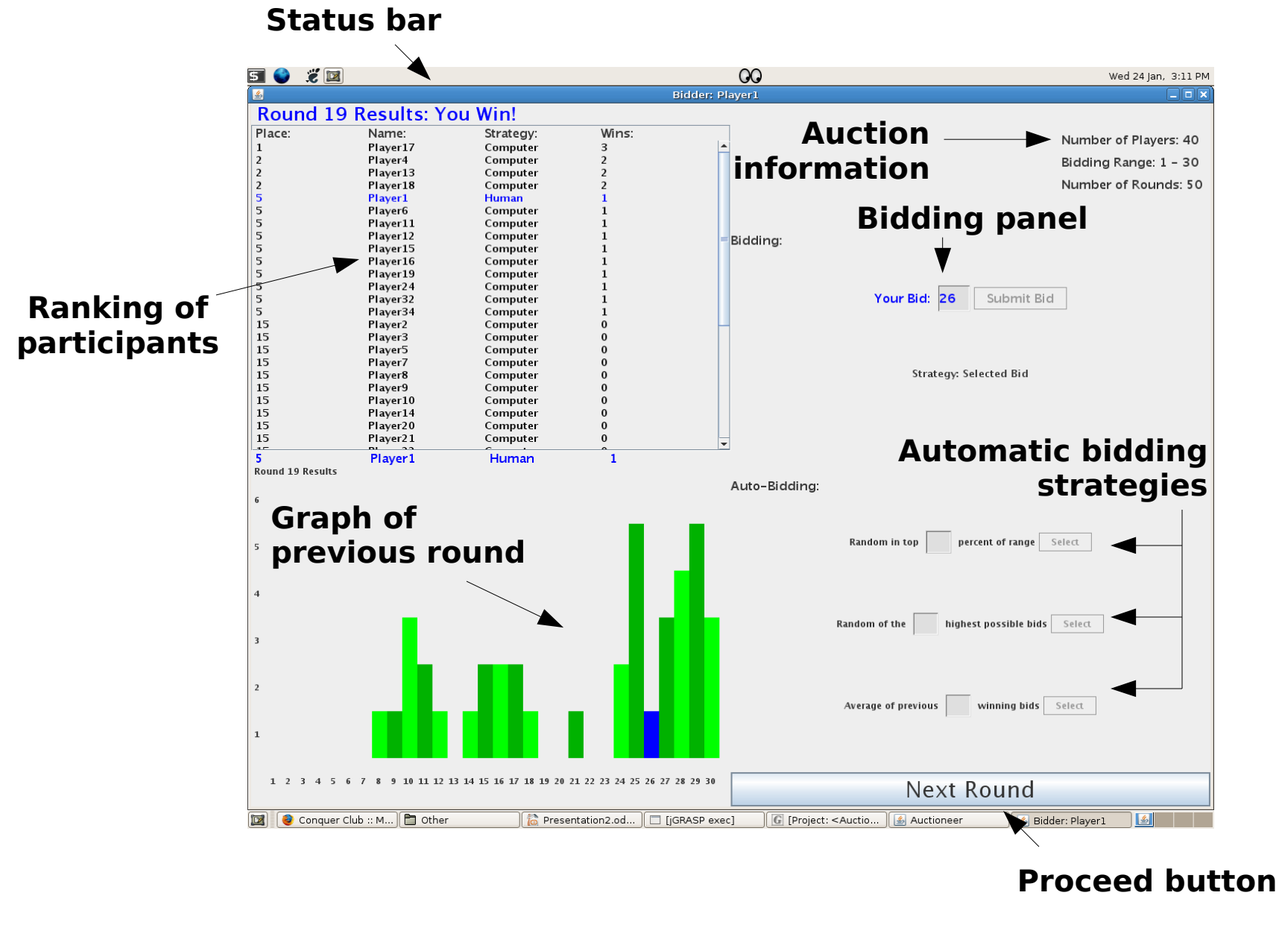
After establishing the size (number of bidders) and the range (the set of acceptable bids), the auction prompts the bidder computers for their bids. To maintain consistency of the auction outcomes, the auction also accepts bids from robotic players with artificially intelligent strategies. After the auction receives all of the robotic and human bids, it determines the winning bid, registers the results from the round, and gives each human player graphical displays of the outcomes. After this, the next rounds begins.

I am running two economic tests on this auction environment. For the first test, many auctions will be ran with two different numbers of participants. For the other test, auctions will be ran with two different levels of information given to the human (and robotic) participants. Specifically, in one level, the bidders will see a frequency distribution of all bids submitted in the previous round, while in the other, each bidder will only see his/her submitted bid and the winning value.

Progress

The game play and interactions between the auctioneer computer and the bidder computers are operational. All interfaces have graphical displays appropriate to the progress of the auction. The program in terms of the visual and operational performance is close to in its final stage. The auction successfully saves for later use all of the bids, strategies, and wins of the experiment. The next step for my project will be to network the computers of the CS Lab so that the experiment can be run beyond the Auctioneer computer.

Auctioneer Interface



Bidder Interface