

NETWORKING ADAPTATION

Ricochet Robots Project

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Our project is currently not programmed to be played on a network. However, it is possible to adapt the game such that it is playable on a network system. Most importantly, the Java Environment has some built-in networking libraries to assist with a future network adaptation. The current implementation of the game is such that only one player can demonstrate a solution at a time even though multiple bids can be made until the countdown is exhausted.

One way to create a server using Java is by creating class to represent the server with the main method. The main method will create a server socket using the host computer's IP and a port, setting a number of threads for up to 4 players. Other computers (clients) will connect to the host computer using the IP and host information give to potential client computers. The host will need to have a dedicated 'SaveState' class to monitor the actions of each client computer and as well as the host itself for every change during the gameplay. This will help to prevent any conflicts during the game (e.g. two clients moving the same robot at the same time). We could also use our 'Stats' class to display global player statistics as well.

The adapted Ricochet Robots game will most likely make use of networking protocols like TCP (Transmission Control Protocol) to ensure reliable packet delivery for a proper gameplay session.

