Checkers Design Documentation

Table Of Contents

Tommas Solarino

Assesment 2

Due 11/6/2015

Checkers Design Documentation

Game Variant

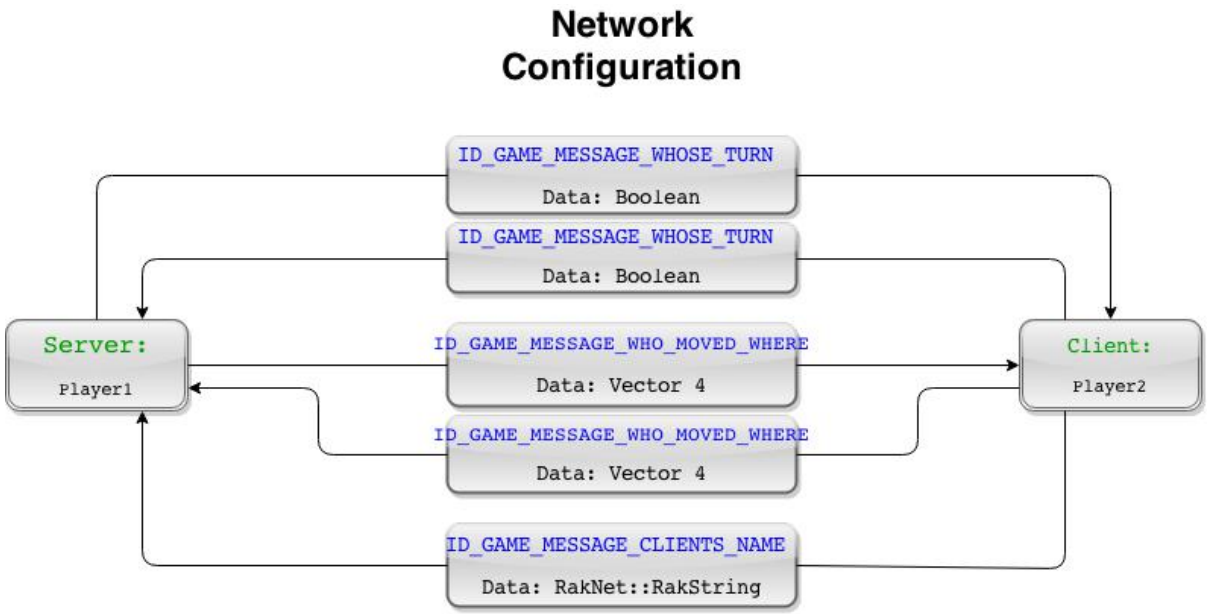
I chose networking as my game variant. My reason for choosing networking was because I didn't think i'd have time to implement a functioning AI. I also have a strong interest in networking as well as AI but I did some AI last year and wanted to learn something new.

Network Configuration

I've done a peer to peer connection because i felt that would be the best way to make my game. This is because there are only two players at a time and having a server client i felt would be over complicating it. When you run the game you can choose to be the server or the client. The server is player 1 and the client is player 2.
I'm using Raknet because its was the best option considering that there are AIE tutorials using Raknet as well as easy to follow tutorials on the Raknet website.

Network Diagram:

Here is a diagram of the network configuration and messages being sent between the server and the client.



Messages Sent:

- **ID_GAME_MESSAGE_WHOES_TURN:**
  I am also sending which player's turn it is. This is so when it's not your turn you can't make moves on the board.
- **ID_GAME_MESSAGE_WHO_MOVED_WHERE:**
  Both the grid reference for the selected checker and the place it moved to (End position) are stored in a vector 4 and sent across the network. The vectors x and y values store the selected checkers grid position and the z and w values store the grid reference of the end position.

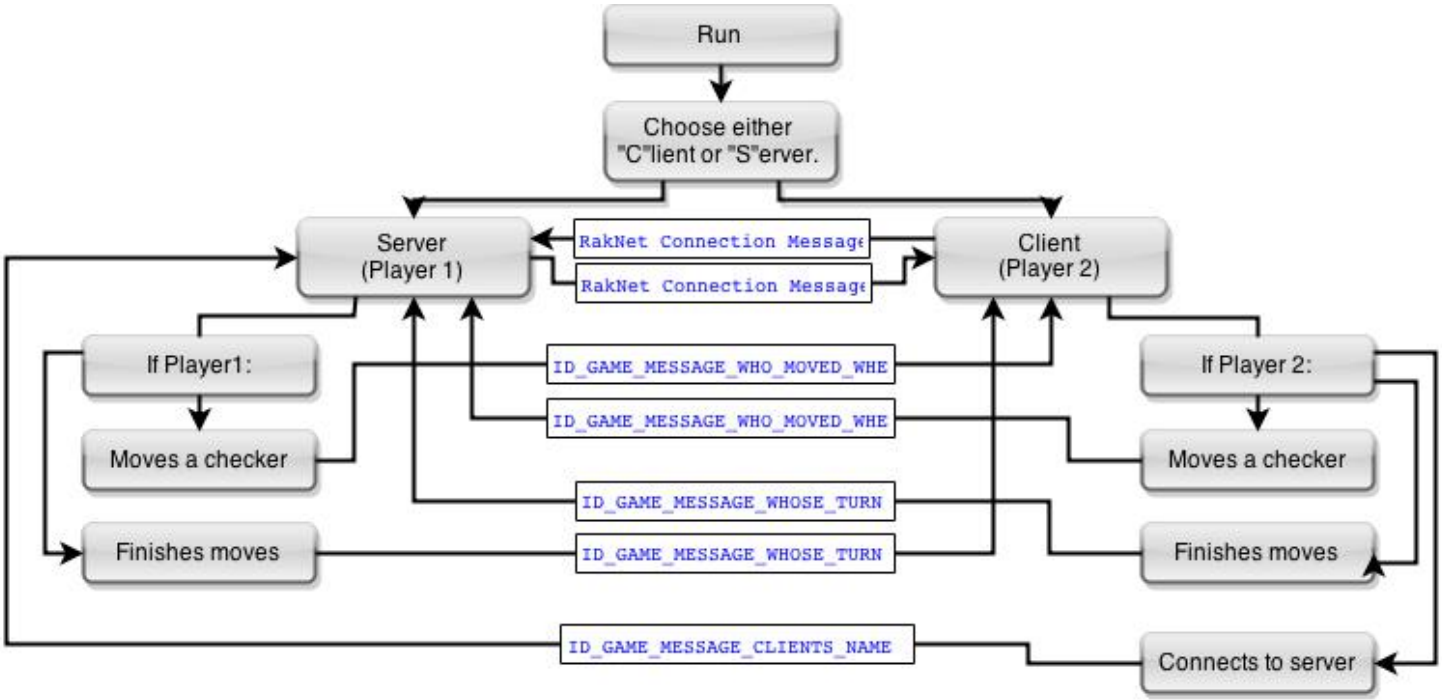
Tommas Solarino
Assesment 2 Due 11/6/2015

- **ID_MESAGE_CLIENTS_NAME:**
  When the client connects it sends their name to the server.

- **Raknet Connection Messages:**
  Theses are messages sent by RakNet informing both the server and clients on who is connected, requesting connection, lost connections, etc.

Network Event Diagram:

Below you can see what messages are being sent over the network and when they are being sent.



GameStates:

In the current version of the game there is only a play state. If someone wins the game will reset the boards for both players and you can start again. I do want to add more to the game in the future such as pause states and statistic and possibly a messenger window to talk to the other player.

Tommas Solarino
Assesment 2 Due 11/6/2015