Heath Burnett Network Design Document

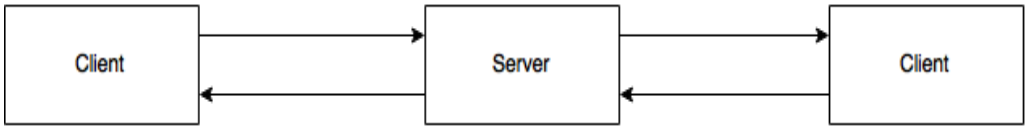
Advanced Diploma in Professional Game Development
Assessment - Complex Game Systems

Summary
For this assessment we were required to develop the game of Checkers with an implementation of either networking or artificial intelligence. After my first iteration of Checkers I decided that networking would suit my game design.

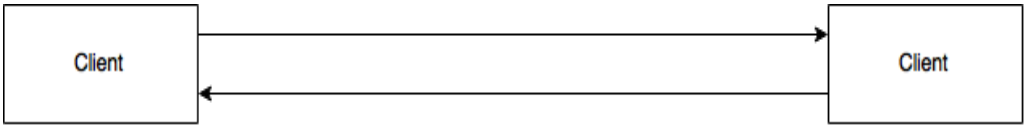
Networking Structure

There generally two types of network structures:

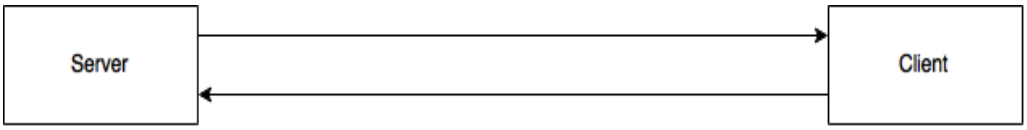
1. Clients to a centralised server.



2. Peer to peer.



However I am unsure how to classify my structure as instead of two clients connecting to a server that holds information on both, one player is the server and the other is a client that connects to them. There is a maximum limit of one client per server, so that multiple clients can't join the same game. Another key point to make is that neither the client or server keep track of the others game state. They both just simulate play based on information sent to the other. Which, if not implemented correctly, can lead to two different games/boards being played. A downside to this is that if a player disconnects or tries to join a game where a move has already been played, then the game will be at a standstill as both players will have different information.



The only information sent to the opposing player is the position of the mouse when it is clicked. There are several checks within the game logic to check who clicked, what team they are on and whether or not it is their turn. This way, there is no need for a server to hold information about the game board and transmit it to the clients, both players just simulate it on their own end.