## Post Mortem

With this game being the first we have been asked to produce that was networked, I was initially finding it very hard to get to grips with what each player needed, what the server needed and what TronGameW32 was for! Having sat down and gone through a few ideas I decided I wanted to put the bulk of the game in TronGameW32. This was a mistake that I found out fairly soon, however some serious code was lost! This was mainly because I didn’t realise that the server shouldn’t know what a sprite was, and that anything ‘sf::’ was a no go.

After this initial hiccup, I thought about the idea of having a ‘data’ version of the LightCycle game within TronGameW32, as this would allow me to have a version of it on both the server and client side. What I then wanted to do for the client was to pull the information out of this data version and simply update its own assets based upon its data. What I could then try to do was have each client send their data to the server when they had changed tile position, or if they have changed direction. The server would then update the player’s direction but alter the data to match its own before forwarding it on, that way both clients would be running the same version based off the server’s game.

Something else I tried was to have was the bikes moving between ‘points’, that represented each tile, rather than have them free moving around the game area. But for reasons unknown I couldn’t get this to work in a manner I was happy with. Players bikes would be way out of sync on each player’s game and I struggled with the approach.

Coming towards to final week or two before submission I was still struggling to try and get both bikes to sync on any real level, and It was then I simply decided to ditch the idea of the server having a version of the game and simply allow each player to update each other, via the server, when something happened, such as moving to a new tile or changing direction.

## Last Minute Update

With a last-minute decision made to have a final look before submission, I was able to implement a system where each player was using the servers game to keep them in check, now hopefully the game is in better sync and my concept of having a data version of the game in TronGameW32 has been justified. Whereas before, I was simply sending updates and passing them on and there being no real need for the data version of the game, the server now has its own game and is finally doing some checking against its own game before passing on any updates. This tied in with the fact that an update is send each time a new tile is entered allows for better synchronisation. There is still the slight issue with the odd tile being claimed on one players screen and not the other, but overall, it’s a better system with more potential to build upon. With more time would have been very interested in trying to get the tiles to sync up perfectly and explore the options now available with the server running the game.

~~In the end I was disappointed I was unable to implement a better system, with the cycles being more in sync. The final version I have works to a point, but at times tiles still become claimed on the other players screen essentially leading to the game becoming slightly out. The game is still playable but not to the level I had hoped for in the beginning.~~

There were also several features I wanted to implement but simply ran out of time, such as audio, and a better lobby system. Perhaps with players able to pick a lobby to join and match with specific players. The server could also have supported multiple different games with a few minor changes, perhaps threads could have come more into play for each game running ect with the option for players to play against other players online.

All in all, it was a very interesting assignment to work on, but one that I certainly felt rather un prepared for, mainly due to the tight deadline, and the fact we were still being taught ‘key’ content needed for the assignment several weeks after it was released, this led to me personally, not feeling like I has as much time as needed to achieve what I would have liked to in the time provided. This is absolutely not a ‘dig’ at the lecturer as they have been **fantastic** over the course of the module, but more a constructive criticism, and all in all the **only** negative from the assignment and module as a whole.