SCHOOL OF COMPUTING

UNIVERSITY OF TEESSIDE

MIDDLESBROUGH TS1 3BA

**Multiplayer and Social Games**

**(COM3046)**

ICA2 Car Game

Fuentes Talens, Ignacio

# Network Messages Diagram

Broadcast-> RG\_DISCOVER

RG\_UPDATE:Id:PosX:PosY:Lives

RG\_UPDATE:Id:PosX:PosY:Lives

RG\_NEWPLAYER:Id:Team:PosX:PosY:Lives:Name

RG\_NEWPLAYER:Id:Team:PosX:PosY:Lives:Name

RG\_LOGIN:OK:Id:Team:StartingPosX:StartingPosY:StartingLives:Name/ RG\_LOGIN:ERROR

RG\_LOGIN:Name:Pass

RG\_REGISTER:OK/RG\_REGISTER:ERROR

RG\_REGISTER:Name:Pass

Server

Client

Answer-> RG\_IDENTIFY, client stores IP

# Explanation

When the client is first opened, it will send a broadcast message containing “RG\_DISCOVER”, to which the server will reply “RG\_IDENTIFY”, the client will then store the IP address of the computer that answers with the “RG\_IDENTIFY” message, as it is the server.

Once the server has been identified, the client will be able to either login or register through the client’s interface. If the user decides to register, the client will send a message containing “RG\_REGISTER:Name:Pass” to the server, which will check if the following username and password are valid. In case they are valid the server will respond “RG\_REGISTER:OK”, in case it is not valid, it will respond “RG\_REGISTER:ERROR”. When the user presses the login button, the client will send “RG\_LOGIN:Name:Pass” to the server, which will then verify the validity of the data. In case the data is valid, it will answer “RG\_LOGIN:OK:Id:Team:StartingPosX:StartingPosY:StartingLives:Name”; the client will then store that data and start the game. In case it was invalid data, the server will respond “RG\_LOGIN:ERROR” instead. Once the client is logged in, the server has to send a network message to all previously connected clients, “RG\_NEWPLAYER:Id:Team:PosX:PosY:Lives:Name”, which will tell the clients they have to create a new player with that data. Same applies for the new client, it has to create all the previously existing players.

All clients have a fixed update time of 16ms, so they will send a message, “RG\_UPDATE:Id:PosX:PosY:Lives” to the server. The same applies for the server.