R-Type
Network Communication Protocol

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Introduction :

This document describes the network protocol of the R-Type Project.
It specifies the different requests between the client and the server. The data exchanged between the is explained right above.

Encoded Data :

We are sending informations through digits codes.

Connection :

The first number represents what device is sending the request. If it's 0, the code is from a client. In the opposite case, if it's 1, the code is from the server.

The second number represents the status of the connection, if it's 6, it means it's good. In the opposite case, if it's 7, is that there is a mistake.

For example the connection code from the client is : '060'.

In Game :

The first number represents what device is sending the request. If it's 0, the code is from a client. In the opposite case, if it's 1, the code is from the server.

The second number represents the entity which is represented : 1 is a player, 2 is an enemy and 3 an obstacle.

The third number represents the type of the event : 0 is the creation state, 1 is the position, 2 is the shoot state, 3 is the death state, 4 is the damage to applied and 5 is the bonus.

For example a client send the information he shot with the code : '012'.

User Datagram Protocol (UDP) :

Connection :

Request Client :

Connection : 060
Trying to connect itself with the server.

Response Server :

Connection : 160N
Send the connected info confirmation with the ID of the client.

Connection : 170
Send the info about the connection failed.

In Game :

Player :

Request Client :
Position : 011X;Y
Get the position of the client with 2 values X and Y.

Shoot : 012
Indicate that the client has shot.

Death : 013
Sending the info that the client is dead.

Response Server :
Position : 111NX;Y
Sending the position of the N client with 2 values X and Y.

Shoot : 112N
Indicate that the N client has shot.

Death : 113N
Sending the info that the N client is dead.

Entity :

Enemy :
Request Client :
Hit : 024N
The enemy N has been hit.

Response Server :
Creation : 120NT
Create an enemy N of type T.

Position : 121NX;Y
Sending the position of the enemy N at the position X,Y.

Shoot : 122N
Sending that the enemy N has shot.

Death : 123N
Sending that the enemy N died.

Bonus : 125N
Sending the info that enemy N dropped a bonus.

Obstacle :
Request Client :
Hit : 034N
The obstacle N has been hit.

Response Server :
Creation : 130NT
Create an obstacle N of type T.

Position : 131NX;Y
Sending the position of the obstacle N at the position X;Y.

Destroyed : 132N
Sending that the obstacle N is destroyed.

Bonus : 135N
Sending the info that the obstacle N dropped a bonus.