

COMMUNICATION PROTOCOL TO USE AS A CLIENT OF THE RTYPE GAME

To communicate with our server, you will have to manipulate package looking like that:

Package to send contains:

- type (enum NetworkEventType)
- id (int)
- key (int)
- pos (std::pair)
- objectType (enum ObjectType)

The NetworkEventType enum is composed of these values:

- UNDEFINED = -1
- CONNECT = 1
- INPUT = 2
- DIE = 3
- OBJECT = 4

The ObjectType enum is composed of these values:

- NONE = -1
- PLAYER = 1
- ENNEMI = 2
- PARRALAX_LAYER = 3
- BOSS_ALIEN = 4
- BOSS_HIVE = 5

The package will be use diferently depending on the value of the “type” value.

- UNDEFINED = -1 -> The package will be ignored be it allows to let the server that you are still there.
- CONNECT = 1 -> It will be used at the beginning. You will have to send a package containing this value as the “type” value (the others value of the package will be ignored). After that, the server will respond to you with a package containing CONNECT as the “type”, your player id as the “id”, your starting position as the “pos” and PLAYER as the “objectType”. The “key” won't be used.

- INPUT = 2 -> You can either receive or send packages containing this value as the "type" at any time of the game. When sending or receiving those packages, use the "id" value to know which object is impacted by the key, use "objectType" to say what can of object it is, use "key" to know which key has been triggered. You can ignore the "pos".
- DIE = 3 -> The packages containing that as the "type" signify that an object died. You can know what can of object by using the "objectType" value, the "id" will tell you which object of this type died.
- OBJECT = 4 -> This is the kind of package that you should receive the most. It indicates the position of an object (already created or not). Take the "objectType" value to know what kind of object is concerned, the "id" to know which object of this kind and then set its position to the "pos" value. If the object doesn't exist create it.

If the server doesn't receive any package from you for 1 minute, it will disconnect you.

The server has all the controls over the game, you should not create an enemy on your side of the game if the server doesn't tell you to. So, you should not be sending any packages containing OBJECT as the "type".

Don't forget to send a package with DIE as the "type" when closing your client if the game isn't over.