# Messages

University of Orléans

7 octobre 2013

## Presentation

- Class of messages
- Format of messages
- Message class
- Messages track

### Six class

There is six different class of messages that may be throw :

#### Six class

There is six different class of messages that may be throw:

• CS : client service message.

#### Six class

There is six different class of messages that may be throw:

- CS : client service message.
- $\bullet$  CG : client game message.

#### Six class

There is six different class of messages that may be throw:

- CS : client service message.
- CG : client game message.
- SS : server service message.

#### Six class

There is six different class of messages that may be throw:

- CS: client service message.
- CG : client game message.
- SS : server service message.
- SG : server game message.

#### Six class

There is six different class of messages that may be throw:

- CS : client service message.
- CG : client game message.
- SS: server service message.
- SG : server game message.
- SP : server problem message.

#### Six class

There is six different class of messages that may be throw:

- CS: client service message.
- CG : client game message.
- SS: server service message.
- SG: server game message.
- SP: server problem message.
- SR : server recall message.

### Example of utilisation

• MessageCS.connect(): message to request a connection.

### Six class

There is six different class of messages that may be throw:

- CS: client service message.
- CG : client game message.
- SS: server service message.
- SG: server game message.
- SP: server problem message.
- SR : server recall message.

- MessageCS.connect(): message to request a connection.
- MessageSR.types: messages with all the types of the player.

## Format of messages

#### Same for all

A message is represented by a string. All messages can be represented by four properties.

- ip : the ip of the client or server
- port : the port of the client or server
- type: the type of message
- parameters : the message datas.

### A separator in top

To represent a message we use an auto generated separator. The final format is as follow :

SEPA + Ip + SEPA + port + SEPA + type + SEPA + Parameters + SEPA.

## Format of messages

#### Parameters: different for all

The parameter format must be generic because there is message with no limit of parameters or even no parameters.

### A separator inside another

To represent the parameters we will then uses another auto-generate and different separator. The final format is as follow: SEPA+Param1+SEPA+Param2+SEPA+...+ParamN+SEPA.

### Example of message

 $Parameters: SEP2 \\ \underline{\textbf{playername}} SEP2 \\ \underline{\textbf{message}} SEP2$ 

### The main: Message

This class contains the methods to build message. The important one are :

And the one that will be modified when a new message is created :

### The main: Message

This class contains the methods to build message. The important one are :

 $\bullet$  new\_separator : generate a new separator

And the one that will be modified when a new message is created:

### The main : Message

This class contains the methods to build message. The important one are :

- new\_separator : generate a new separator
- getParam : return a parameter in a type with a limit of parameters.

And the one that will be modified when a new message is created :

### The main: Message

This class contains the methods to build message. The important one are :

- new separator : generate a new separator
- getParam : return a parameter in a type with a limit of parameters.
- getListeParam : return a list in a type with no limit of parameters.

And the one that will be modified when a new message is created :

### The main: Message

This class contains the methods to build message. The important one are :

- new separator : generate a new separator
- getParam : return a parameter in a type with a limit of parameters.
- getListeParam : return a list in a type with no limit of parameters.
- isMessage : return true if a message respect the format.

And the one that will be modified when a new message is created:

### The main : Message

This class contains the methods to build message. The important one are :

- new separator : generate a new separator
- getParam : return a parameter in a type with a limit of parameters.
- getListeParam : return a list in a type with no limit of parameters.
- isMessage : return true if a message respect the format.

And the one that will be modified when a new message is created :

• isTypeListParam : return true for no limit params message.

### The main : Message

This class contains the methods to build message. The important one are :

- new separator : generate a new separator
- getParam : return a parameter in a type with a limit of parameters.
- getListeParam : return a list in a type with no limit of parameters.
- isMessage : return true if a message respect the format.

And the one that will be modified when a new message is created :

- isTypeListParam : return true for no limit params message.
- ${\color{blue} \bullet}$  is NotTypeListParam : the opposite.

### The main: Message

This class contains the methods to build message. The important one are :

- new separator : generate a new separator
- getParam : return a parameter in a type with a limit of parameters.
- getListeParam : return a list in a type with no limit of parameters.
- isMessage : return true if a message respect the format.

And the one that will be modified when a new message is created :

- isTypeListParam : return true for no limit params message.
- isNotTypeListParam : the opposite.
- getTailleTypeMessage : return the number of params.

### The main: Message

This class contains the methods to build message. The important one are :

- new\_separator : generate a new separator
- getParam : return a parameter in a type with a limit of parameters.
- getListeParam : return a list in a type with no limit of parameters.
- isMessage : return true if a message respect the format.

And the one that will be modified when a new message is created :

- isTypeListParam : return true for no limit params message.
- isNotTypeListParam : the opposite.
- getTailleTypeMessage : return the number of params.

#### Note

 We use static method and not object because we manage string for the messages.

# ${\it Message \ class}$

## MessageType for each type

### MessageType for each type

- A static and public name starting by SG, SS...etc
- A static and public integer which specifies the number of parameters.
- A static and public integer for each parameter
- A static and public method

### MessageType for each type

- A static and public name starting by SG, SS...etc
- Example : SG\_CHAT\_NAME="sg\_chat"
- A static and public integer which specifies the number of parameters.
- A static and public integer for each parameter
- A static and public method

### MessageType for each type

- A static and public name starting by SG, SS...etc
- Example : SG CHAT NAME="sg chat"
- A static and public integer which specifies the number of parameters.
- Example: SG CHAT NUM PARAMS=4;
- A static and public integer for each parameter
- A static and public method

### MessageType for each type

- A static and public name starting by SG, SS...etc
- Example : SG\_CHAT\_NAME="sg\_chat"
- A static and public integer which specifies the number of parameters.
- Example : SG\_CHAT\_NUM\_PARAMS=4;
- A static and public integer for each parameter
- Example : SG\_CHAT\_MESSAGE = 4;
- A static and public method

### MessageType for each type

- A static and public name starting by SG, SS...etc
- Example: SG CHAT NAME="sg chat"
- A static and public integer which specifies the number of parameters.
- Example : SG\_CHAT\_NUM\_PARAMS=4;
- A static and public integer for each parameter
- Example :  $SG_CHAT_MESSAGE = 4$ ;
- A static and public method
- Example : When call : MessageSG.chat(...)

#### Two interfaces

The problem with this generic messages is that they will be many messages to handle. So to simplify and not forget the method two interface exists:

- onMessageReceived : contains one method for each message type with no parameter.
- setMessageSend : contains one method for each message with the parameters of the type of message.

### MessageManager : A usefull class

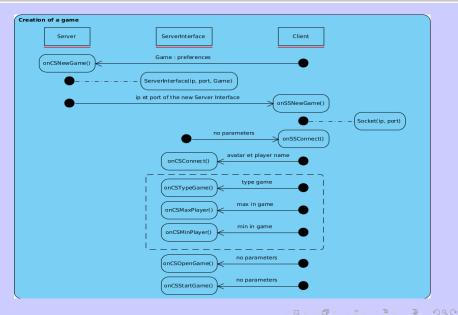
A MessageManager will implements the two interface.

To manage messages we build a class wich extends it and will:

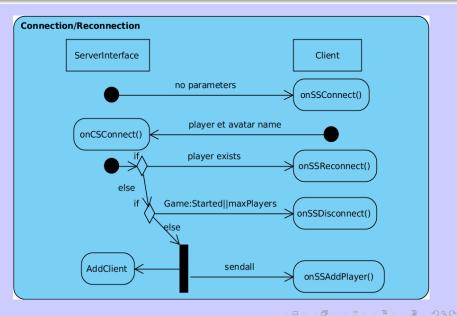
- implement a setMethod to send message.
- implement a onMethod to manage the receive messages.

Messages Track!

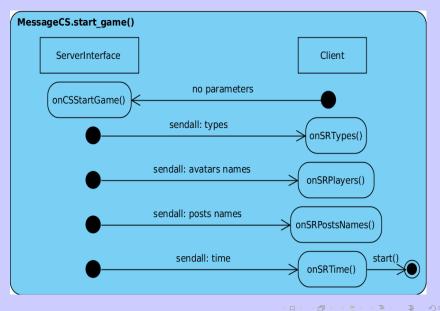
### New Game



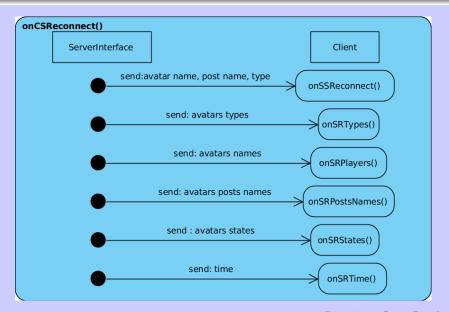
# Connection/Reconnection



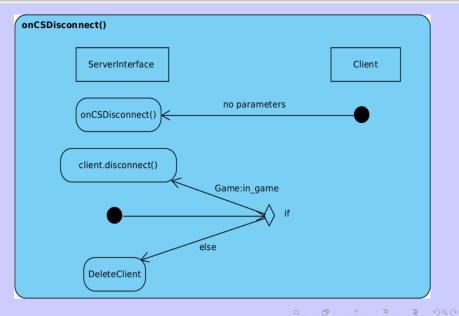
## Start a game



## Reconnection second part



### Deconnection



## Chat messages

