**Robot Servers protocol**

1. **Description**

This protocol will handle the communication between robot and sensors.

This protocol includes two types of messages are RS and SR.

* RS is the message from Robot to Server. This message will include the environmental data and drop-off information
* SR is the message from Server to Robot. This message will include the action and the movement that the user wants the robot to do.

1. **Protocol**
   1. **RS design:**
      1. **Format:**

JSON format:  
{

temperature: “good/acceptable/bad” (string),/  
humidity : “good/acceptable/bad”(string),  
drop-off : “fix/dynamic/not”(string)  
}

* + 1. Condition:  
       The robot will send RS message after it reaches a point in map.
  1. **SR design**:
     1. Format:  
        JSON format  
        {  
        action: “down/up”   
        move: “forward/backward/left/right/around”  
        }  
        *down*: robot will put the cargo down

*up*: robot will lift the cargo up

*forward*: robot will move straight ahead

*left*: robot will turn left

*right*: robot will turn right

*around*: robot will turn around 180 degrees.

* + 1. Condition:  
       The server will send SR message after client send the control signal.