

# **MRSD Individual Lab Report 08**

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# 1. Individual Progress

## 1.1 Studied Rocon to set up distributed system for IntraFace

This week, I mainly worked with Gauri to study how to write our own distributed system to communicate between multi masters. And set up distributed system part is one of the most challenging work in our project.

In order to achieve our goal earlier, I planned to change the original files provided by Rocon Wiki. I have found that we have to change the parameters under the files in Figure. 1.

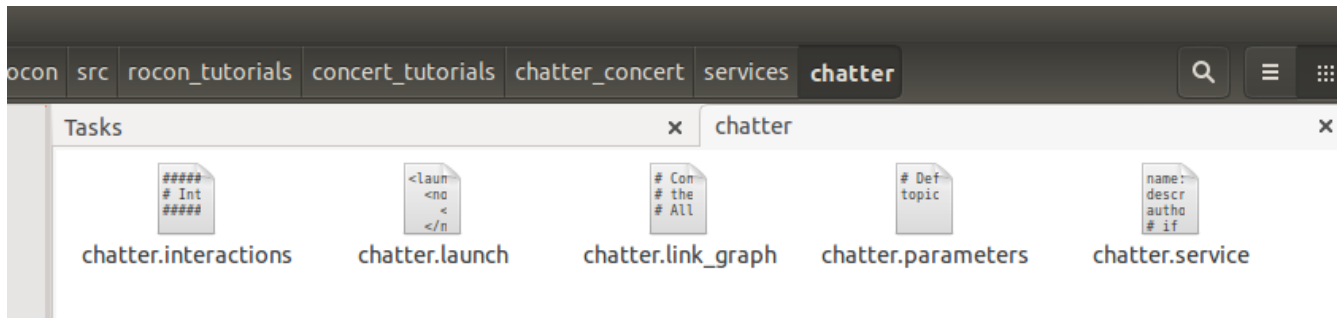


Figure 1: The files need to change for distributed system

And what I should do is to write a file to subscribe the data from IntraFace/Emotions and publish to chatter topic for the purpose of communicating between multi masters. I've found this task to be difficult because the file have to both subscribe and publish. And I am still working on it.

## 1.2 Set up single master for multi-robot system for IntraFace

I have learned how to use single master for multi-robot communication system using IntraFace. One robot will be the talker and the other one will be the listener. And this is the first setup for setting up distributed system between multi-masters.

# 2. Challenges

## 2.1 The problems in setting up the distributed system.

It took Gauri and I long time for setting up distributed system. We spent a long time to learn how to use rocon. And the main solutions are shown as below:

- (1). Change the rapp manager files, which are launchers with no code.
- (2). Learn to write the node that can subscribe IntraFace information and

publish to chatter topic.

(3). Change the data in the Service files, in order to change the parameters of the distributed system.

### **3. Team Work**

This week our team mainly worked on Rocon for multi-master system setup, Gazebo simulation and redesigned mechanism system. Gauri and I worked on Rocon and we tried to set up the distributed system between our laptops for IntraFace. Although we have not achieved our goal, we learned how to start it. Jimit set up the global camera system in our lab. Rohit worked on designing a new mechanism system which can achieve better performance in our project. And Tiffany worked on Gazebo simulation for multi-robots.

### **4. Future Plan**

Gauri and I plan to continue to work on distributed system for IntraFace. And we also plan to work on multi-master navigation with simulation and in reality.