Block Diagram:
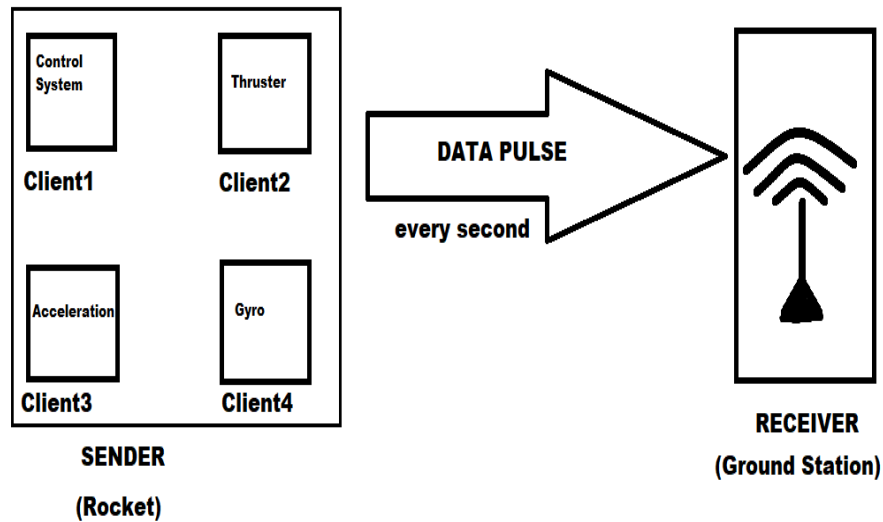

Required Header Files:

- #include<stdio.h>
- #include<sys/socket.h>
- #include<pthread.h>
- #include<unistd.h>
- #include<stdlib.h>
- #include< sys/ipc.h>
- #include<sys/shm.h>

Project Description:

We are receiving 4 different data from rocket, i.e. Temp-ControlSystem, Temp-Thruster, Acceleration, Gyro to the ground station after every second.

We are storing that data in a shared memory to monitor the data every second.

In Client- we are generating data by using a random function and sending it to the station.That data is containing a packet by using a structure.

Struct packet

{

       Int unique_id;

       Long int p_no;

       Int data;

       Time_t timer;

}

Those all 4 clients are connected to the single server station.Clients are sending data packet to server every second simultaneously.

For Server-I am using 4 separate threads for 4 clients to generate data for all clients simultaneously. We will receive the data packet and store that data in shared memory. The data is monitored by displaying it as the output after every second.

Declarations:

- Void *temp_control(void *arg);
- Void *temp_thruster(void *arg);
- Void *acceleration(void *arg);
- Void *gyro(void *arg);
- int rand(void);
- time_t (time_t *second);

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