

Statement of Individual Goals

Roles:

I serve as the leader for the external communication subsystem of the AuBi robot team. I will also be a member of the User Interface team and the Biometrics team.

External Communication:

As the leader for the external communication subsystem, my responsibility includes designing the website for users to call over the robot, developing software for the subsystem, debugging and testing the software and integrating it with other subsystems.

The external communication system will allow the users to call over the robot to a specific room by choosing the room on the website. To satisfy the requirements, the system should be able to define the goal locations, send those goal locations to the navigation stacks to execute the mission and head towards the goal locations. The external communication subsystem is dependent on the navigation subsystem, so the Robot Operating System (ROS) will be used for the development of the software after the robot mapping out the detailed floor plan of the 4th floor. Each room will have a coordinate (x,y) , and after the user presses a key on the website, it will execute `moveToGoal(x,y)`. The coordinates are determined by using `rviz` to visualize the map and then getting the coordinates using the 2D Pose Estimate button. By November 1st, the basic floor plan should be completed, and we should start making the interactive floor map for the website. By November 15th, the floor map for the website should be completed. By January 24th, there will be a higher quality mapping of the floor produced by SLAM navigation, and we could begin finding the coordinates for the location of interest. By January 31st, the external communication subsystem should be nearly completed, and the testing of the communication between the robot and the computer should begin. By February

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21st, the external communication subsystem should be completed and the integration of all systems should be completed by February 28th.

The website will contain the floor plan of the AEC 4th floor, and the room numbers will be specified for each room. The users will be able to choose a room for the robot to move to by clicking the floor plan on the website. The website should be easy to access and user friendly. The website should be completed by November 15th.