

Team 10: Marsupial Robot Deployment and Recovery

Team Members:

*Robert Skapof
Lamontie James
Frederick Holt III
Randall Shaw*

Communication:

Communication is a very important aspect of any team driven project. It is the very basis for successful problem solving. Effective communication between the team and between the team and the client is essential. Individuals within the team must be able to concisely offer their ideas on the proposed problem as well as poses the ability to accept ideas from other individuals within the team. The understanding that no idea is stupid or outlandish must also be present within the team. It is the outlandish and stupid ideas that sometimes turn out to be the best solution to the problem. The team needs to also establish good communication between themselves and the client. First understanding what the client's needs are and expectations are is paramount. These aspects are the very basis behind the "problem". The team should meet with the client in person or via some other medium. Once a good line of communication is established (exchanging phone numbers, email addresses, etc...), the team should then keep the client updated as much as possible.

Conflict Resolution:

The first idea that should be understood is that conflict is unavoidable. There are two forms of conflict that take place: Constructive conflict and Destructive conflict.

Constructive conflict is good conflict. It usually nets ideas and gets the group in a common consensus. Concept generation and system architecture are great stages for this type of conflict to take place.

Destructive conflict is bad conflict. This is where personalities and personal opinions come into play. When this type of conflict takes place it needs to be stopped immediately or it will have negative effects on the team as well as the team's performance.

The best way to get around conflict is through the use of "constructive criticism". By acknowledging that the person's idea or work is of credit, but offering suggestions, will let them know that you are not trying to attack them but rather give a different view that they might not had thought about; Compromise.

Weekly tasks:

Weekly tasks should be created for the smooth operation of the team. Important deliverables, presentations, and client and team progress updates should be noted and appended to a calendar. By doing this, the team will not run into cases where "last minute" work is deemed acceptable.

Roles:

Role playing is another key to having a productive team. The two main roles that affect this aspect are the person that dominates and the person that remains quiet.

The person that dominates can be a destructive force to the group. This is a person who wants complete control and doesn't mind if it comes at the expense of others. The person that remains quiet can also be as equally a destructive force as the person that dominates. This person may have a brilliant idea or solution to the problem; however the group would never know due to his/her lack of communication. A solution to avoiding both of these roles is **Compromise**. Individuals should possess the ability to give and take.

The other way to avoid these personalities is by assigning titles. An example of some of these are: Team leader, which keeps everyone on their tasks and oversees overall group progression; Team coordinator, which coordinates all team activities and team meetings; Treasurer, who keeps the team budget and spending; and Team Secretary, which keeps group minutes and all documentation.

Decision Making:

Decision making is the bread and butter of all projects. Even the greatest engineers, scientists, and world leaders would become useless if it were not for decision making. It is the responsibility of the team to make decisions based on the wishes of the customer while keeping in mind ethical and moral considerations. All team decisions will be based on a simple majority process. If a decision cannot be reached by this method then the customer and team adviser can be contacted in order to gain another opinion.

When making decisions it is the responsibility of each team member to voice his reasons as to why they feel that one idea or decision is superior to another. If necessary these reasons can be recorded using a pro-con format so that each decision can be carefully evaluated.

Ethics:

Ethical and moral considerations will be main features of the design process. Industry standards (ex. ASME, ASTM) and government standards (ex. EPA, CFR, OSHA) must always be adhered to. It is the responsibility of each group member to alert all members of the group if they believe that any standard is being violated.

Also, the system must be designed with the health and safety of the public, as well as the operator, engineers, and mechanics that could be in the general vicinity of the project. It is the responsibility of each member individually as well as the team as a whole to foresee any and all possibilities that could lead to injury, destruction of equipment, or environmental concerns. These hazards must be carefully evaluated to assess their worth versus risk. This process will take place in accordance to the decision making process described herein.

Team Dynamics:

The informal definition of team dynamics states, “Group dynamics refers to the interactions between people who are talking together in a group setting.” Really team dynamics embodies all of the topics which were stated earlier. They involve communication, conflict resolution, defining roles, and team ethics. Without these factors there could not be a team. How well a team is formed, organized, and its overall performance is key to success.

Signed:

Robert Skapof: _____

Lamontie James: _____

Frederick Holt VIII: _____

Randall Shaw: _____