Advanced Hovercraft

Team Members:

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0.1 Motivation

We have an idea to make a prototype vehicle to move on land, water, ice, if time permits then fly also.

Our design is similar to combination of advanced Hovercraft and hybrid car helicopter.

The link of Hovercraft is :-
http://en.wikipedia.org/wiki/Hovercraft
The link of hybrid car helicopter :-
https://www.youtube.com/watch?v=z-HCSYVg66c
We want to add some features like making to move on road smoothly like adding wheels , if time permits we will see about the flying issue also.

0.2 Broad Vision

We have seen the demonstration of hovercraft and hybrid car helicopter in youtube and seen its content in Wikkipedia. We wanted to club the both to make a developed version of hovercraft possible.

0.3 Demonstration

Firstly the vehicle moves on land by the remote-controller which makes the main propeller when it comes near a water ice boundary then the air starts filling inside the rubber tube and then made to move into the water or on ice. Due to its floating capacity (of rubber) it will float and the main propellers will push the vehicle forward.
When it comes to flying the outside visible fans help in the flying of the vehicle and the propeller pushes in the direction we wanted to.So by these ways the vehicle can move on land, ice, water and in air

0.4 Work implementation

0.4.1 First 10 days

Ordering of components, Designing of the vehicle.

0.4.2 Second 15 days

Initiate and Complete building the desired vehicle.

0.4.3 Third 10 days

Testing and improving the conditions of vehicle where-ever possible and needed to.

0.5 Learning

We would be learning the fluid dynamics and how to counter it and the conditions to make a object move in various other surfaces and to learn about the propeller-systems

0.6 Requirements and Cost

1. Big Propeller (to move it forward)
2. A rubber skirt (to make it float on water)
3. balsa wood and pipes (to make the skeleton of the body)
4. RC controller
5. 2 motors
6. battery (if needed)
7. 4 Small Propellers (to make it fly)

The cost for this project would be around 6 to 8 thousand. As the cost would go much for the propellers and motors.