SFO
Spherical Flying Object

Introduction:

SFO is a spherical drone capable of self sustainable flight and also efficient movement on land (rolling). It will be powered by single propeller housed in a wire frame bent to form a sphere.The machine will use flaps for maneuvering both in air and on land .By virtue of its spherical shape it can withstand rough landings/collisions without damaging the interior components.We have also used gyroscope to stabilize and hover the drone in the air .It has 6 degrees of freedom for movement.

Motivation:

We have an idea to make a prototype vehicle to move on land, air and if time permits ,in water.

(Inspired by this model)

Design:

-Spherical frame of a light but sturdy material . Material-still speculating probably carbon fibre, aluminium ,plastic. Rough cost-Rs 2000
-Brushless DC Motor -10,000 rpm –Rs 2000
-4 servo motor-Rs 1500
-12 volt battery-Rs2000
-Controller –Rs3000
-Misc –Rs1500

Timeline:

Week 1:
-Purchase materials required for construction.
-Design, conceptualize, and fabricate the major components of the bot.

Week 2:
-assembling of various components to make a complete structure.
-circuit designing .

Week 3:
Console making.

Week 4:
Enhancing the stability of the bot.
Testing and calibration.

Week 5:
Troubleshooting.
Exploring the possibilities of amphibian locomotion.

Week 6:
Further improvisation

Team members:
Laukik Mujumdar (9769803214) (laukikm11@gmail.com)
Anshul Chauhan(8454890893) (anshulchauhan1997@gmail.com)
Arshdeep Singh (9478902758) (arshdeepsingh1996@gmail.com)
Rajat Kumar(8860574839) (kumarajat16@gmail.com)