ROBOTRONICS CLUB

IIT(ISM) Dhanbad

1. Underwater Robotics
2. Underwater electronics
3. Underwater Navigation

- So our basic objective is to make a underwater robot that can navigate, communicate and should have a gripping mechanism
- So we have three checkpoints to clear, you can divide your team in 3 parts
  - Communication
  - Navigation
  - Gripping

Let me give you some basic idea how you should get started .

Communication

- You have two options here :
  - Wired
  - Wireless
- Since we are dealing with underwater electronics it is advised to go for wireless communication
- But if you have a better way to seal the wires you can go with wired communication also

- In Wireless communication frequency of transmitter or receiver should be low.
- We have tested 433 mhz transmitter and receiver and it works well at 1.5 m deep
- But 2.4 Ghz devices kind of lose their signal at depth of 15 cm
- There is a library called “Radiohead” library

  Used for 433 mhz transmitter receiver module

Navigation

- For navigation part you can visit this website :

  https://www.rcshipyard.com/tech/
- There are many different approaches
  - Like you can use syringe with some gears
  - submersible pump with a tank
  - Using a ballon
    - The basic idea is you have lower down the mass/volume ratio

- According to me with submersible pump approach is good it can be done easily
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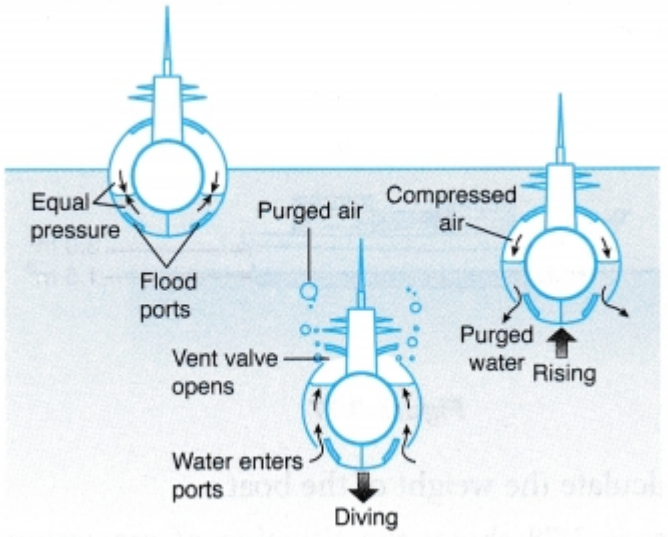

(b) Diving and floating of a submarine