Meeting #2 (January 31)

* Construction by Sea Perch method: PVC pipes
* Design proposals
  + Quadcopter design using tilt sensor
  + Torpedo shaped design
* Methods for making vehicle unmanned
  + Sonar
  + Light sensors
    - Probably won’t work in cloudy water
  + GPS
    - We would need to create GPS signal
    - Might annoy local government agencies like the Naval Station or the FCC but we might still be able to work around this
* Where to test
  + Pool?
  + River?
* Programming: Arduino (most of us have experience using this from Electromechanical Systems class)
* Modeling software:
  + SOLIDWORKS
    - Justin has experience using SOLIDWORKS and thinks it will be better than Inventor for our project, may be difficult to access without paying $100)
  + Autodesk Inventor
* Purpose of project: Improve on existing concepts
  + Improve size
  + Improve cost (our goal is to make something that’s already been done but to do it cheaply (under $1000))
* Existing vehicle to from which to get ideas:
  + EcoMapper Autonomous Underwater Vehicle
  + Boeing’s Echoranger
  + US Navy Orcha
  + Mark 18 Mod 2 “Kingfisher” UUV
  + NOAA’s “Sentry”
  + NOAA’s “Sea Bed”
* Features of vehicle
  + Unmanned
  + Collision avoidance
  + Pathfinding
* Stages of project
  + MAE 434W: Remote control
  + MAE 435: Complete autonomy
* Main roles and responsibilities:
  + Design
  + Analysis (validating work)
  + Arduino
* General notes:
  + We might want to get certifications for using MLAB equipment.
  + We will meet with Dr. Kaipa at 11:00 AM on Thursday to get a more concrete idea of what we need to do to accomplish the project