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Safety First, Service Always

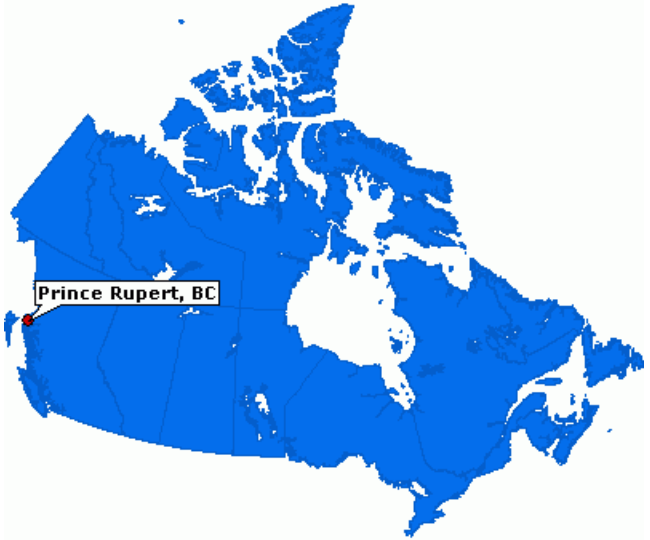
Faraday Generator

Shivang Dube and Karl McVey
MCI

February 7th, 2016

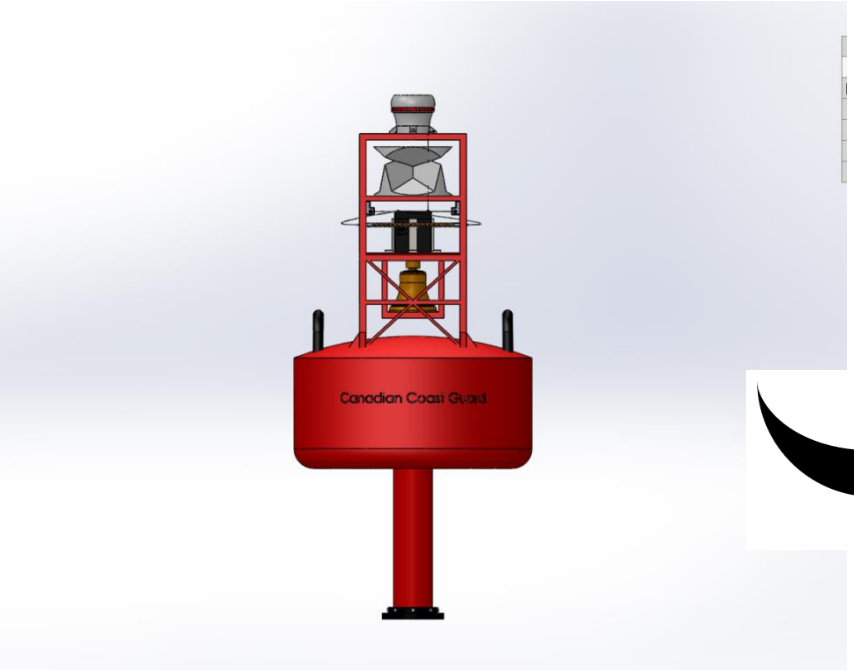
Canada

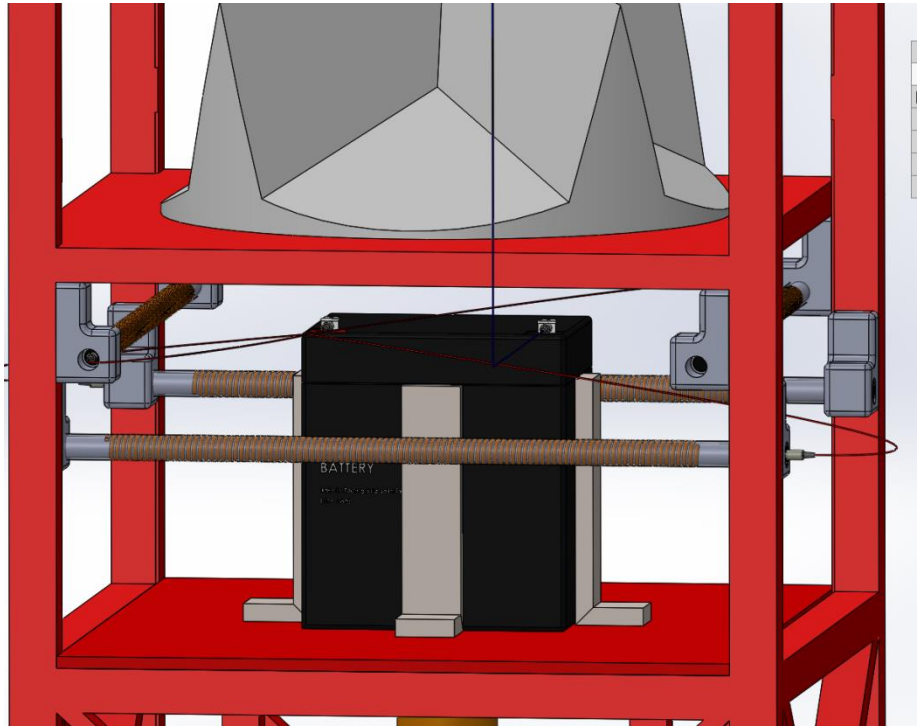
Background Info



Buoys in northern latitudes receive very little light to charge batteries which power the lights for night time navigation. Larger solar panels are not always an option due to high wind loads.

Proposal

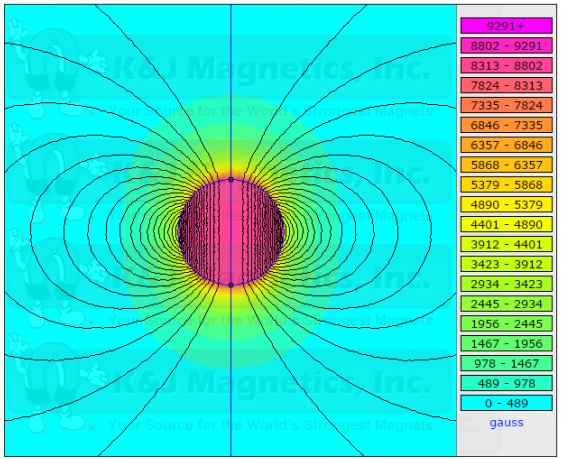


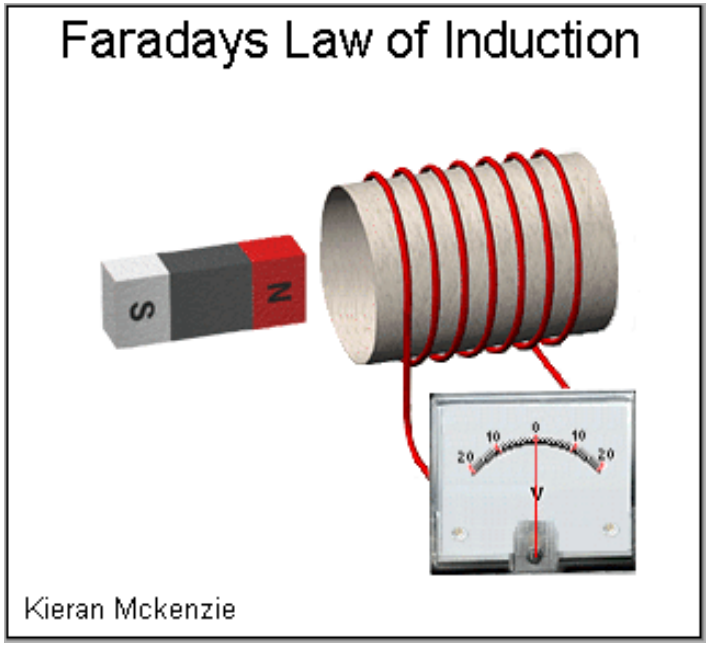


Mount 4 Faraday tube generators onto a buoy cage structure which can in turn charge a battery.

Theory

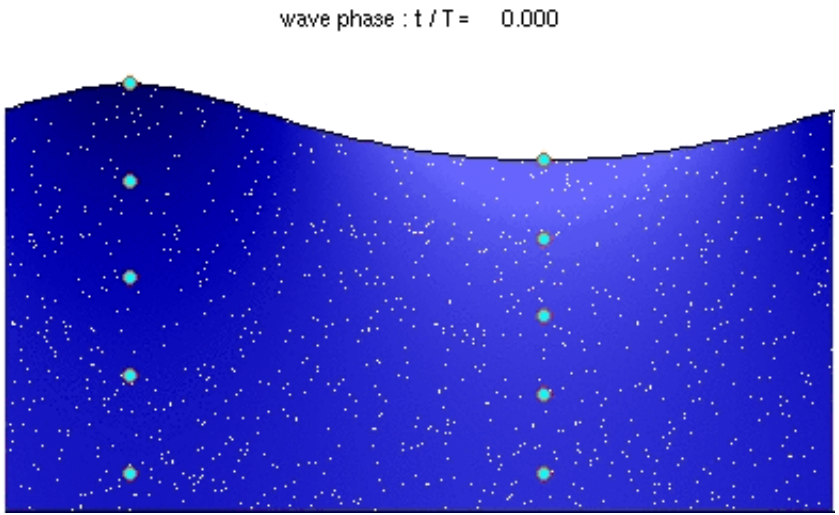
Use the buoy's motion in choppy waters to force a magnet to slide inside a plastic tube and to generate power!





Proposed Design

- A magnet travels in a plastic cylinder wrapped with copper wire (Four assemblies)
- The magnet moves due to wave motion to generate current
- Current supplements the solar panel on lantern to charge battery



Potential Benefits

- Prolonged usage of light for night time navigation
- Diminishes reliance on solar energy
- Can help prevent deep discharge of battery and extend battery life
- Allows buoys to be placed in previously inaccessible areas

Your Mission

- Will be given all specifications of battery, lantern and buoy
- Open ended
- Design Faraday Generator that uses wave motion to charge battery
- Reasonable assumptions can and have to be made for variables

Contact Info

- Email: ccgfaraday@gmail.com

Shivang Dube: 1-343-998-4613
Karl McVey: 613-862-8185