Underwater Data Instrumentation

Saleh

Lift Bags

Inductive Coupling Connector

Inductive Power System for Autonomous Vehicles

http://slideplayer.com/slide/6616958/

Wireless High Speed Underwater Communication

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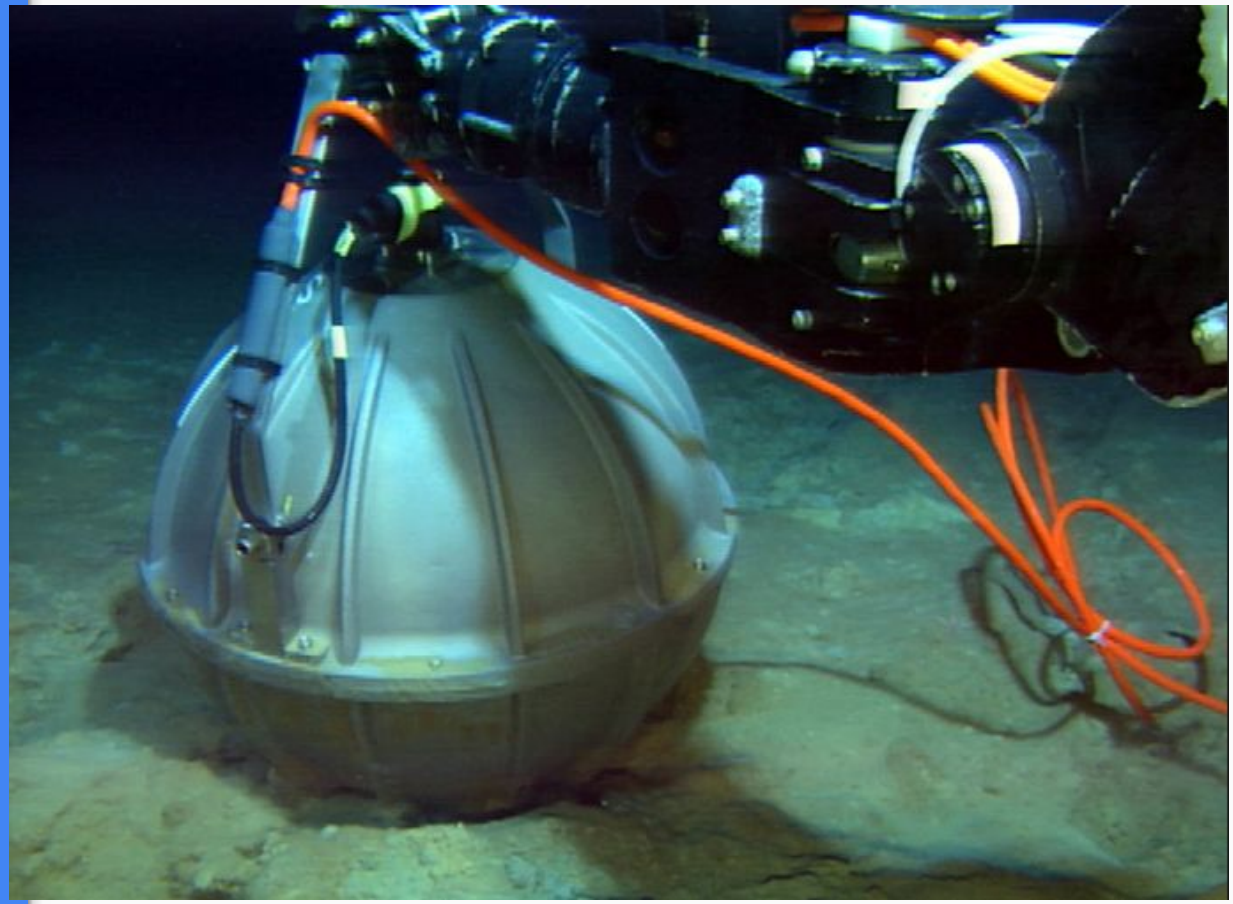
Abstract: Current methods for underwater wireless communication rely on sonar, which uses a much lower frequency, and therefore is incapable of achieving high rates of data transfer. Sonar also affects marine mammals and fish in a way that is not fully understood at this time. Our main objective is to create a prototype device using commercial off the shelf (COTS) hardware that can achieve a wireless high speed (1 TB/hr) communications link that is usable over a short range while submerged in seawater. Electromagnetic waves such as WiFi suffer greatly underwater due to attenuation, which results in a very short range of signal strength. In order to achieve our goals of increased signal strength and greater range our group decided to develop a high gain antenna, commonly called a cantenna, which will work underwater. Our solution; will allow for WiFi (5.8 GHz) to have a greater range underwater; and therefore solve the issue. The cantenna is theoretically able to transfer up to 1 TB of data per hour. This work, performed in partnership with the Applied Physics Lab of the University of Washington, and our main client OceanGate Inc., will enable submersibles to communicate with each other underwater and exchange data. To date we have finished all of the preliminary calculations for both 2.4 and 5.8 GHz, ordered materials, and have started to build the prototype.

Receiving Wifi (underwater??)

http://www.uwb.edu/getattachment/mechanical/overview/program-structure/capstone/capstone-projects/capstone-projects2016.pdf

https://www.uwb.edu/getattachment/research/undergraduate-research/undergrad-symposium/2016-Compendium-(1).pdf

Ocean Bottom Seismometer (OBS)



Intelligent Adaptable Monitoring Package (IAMP)

Acoustic Doppler Velocimeter (ADV)

Final point

A one-line description of it

This is the most important takeaway that everyone has to remember.

Thanks!

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