Resources

Overall strategic financial goal

Research Paper

1. Google Scholar
2. Research Gate
3. Journal

1. Research Paper 1 - Research Gate
2. Research Paper 2 - Research Gate
3. Research Paper 3 - IRJET
4. Research Paper 4 - IRJET
5. Research Paper 5 - IJCSMC
6. Research Paper 6 - IJIRSET
7. Research Paper 7 - IRSR

Videos

1. Youtube
2. Research Videos

1. Video 1 - TED
2. Video 2 - TED
3. Video 3 - TEDxTalk
4. Video 4 - PureLi

How can we transfer data efficiently in saline water with the help of Light Fidelity?

Light Fidelity uses visible light spectrum to transmit data from one point to another also this was brought to commons peoples notice by Mr Harald Hass in the year 2011 during one of this Ted-Talk. LiFi connections occur almost instantaneously because light travels at extremely fast speeds. This results in faster transmission of data and faster internet connections – about 100 times faster than speeds achievable by WiFi.

Timeline

Distrubution of time for working with RRS and reseach

Timeline

Task	Tentative Submission Month/ Week	Final Submission Month/ Week
Submit the Proposal	March/ 3 week	March/ 3 week
Meeting with Supervisor	March/ 4 week	March/ 4 week
Finalizing the Idea	April/ 2 week	April/ 2 week
First Interview	April/ 3 week	
Writing the 1000	May/ 1 week	
Meeting with Supervisor	May/ 2 week	
Writing the 2000	June/ 2 week	
Meeting with Supervisor	June/ 3 week	
Collecting Apparatus	May/ 2 week	
Meeting with Supervisor	May/ 3 week	
Starting the Experiment	July/ 1 week	
Second Interview	June/ 3 week	
Writing the 3000	August/ 1week	
Meeting with Supervisor	August/ 2 week	
Writing the 4000	August/ 4 week	
First Draft	September/ 2 week	
Meeting with Supervisor	September/ 3 week	
Final Draft	October/ 2 week	

RRS

Every Saturday I fill the RRS of the week prior where I add all my Research Paper, Links to Website I refers and my own reflections.

Google Drive

I have been maintaining a Google Drive where I put all the the reserch suff while I am reserching on my Extended Essay

Apparatus

The technical Equipment required for this Extended Essay

9 Volt Battery

Laser Diode

100 ohm Resistor

Aux Jack

Solar Panel

Decible Meter

Speaker

Other Lab Apparatus

Variable

A quantity whoes value change

Independent Variable -->

Salinity of Water

0%
5%
10%
15%
20%

Using Distilled water, we can change the concentration of salt in water. Distilled Water with 0 TDS and 0 dissolved salt.
1. For first 0% salt test we can fill all 5 boxes with pure distilled water and no salt to be salt to added to it. (100ml of solution only use 100 gram of pure distilled water)
2. For second 5% salt test we can fill all 5 boxes with pure distilled water and add it. (100ml of solution add 95 gram of water and 5 gram of salt)
3. For second 10% salt test we can fill all 5 boxes with pure distilled water and add salt to it. (100ml of solution add 90 gram of water and 10 gram of salt)
4. For second 15% salt test we can fill all 5 boxes with pure distilled water and add salt to it. (100ml of solution add 85 gram of water and 15 gram of salt)
5. For second 20% salt test we can fill all 5 boxes with pure distilled water and add salt to it. (100ml of solution add 80 gram of water and 20 gram of salt)

Distance

8.5cm
10cm
13cm
16.5cm
19cm

1. Using plastic box or glass box which will hold saline water in it and on one end there will be the transmitter and on the other there will be a receiver.
2. This is because if we put electrical component in water there are chances of the component getting damage.
3.The box is going to be of different lengths e.g., 8.5cm, 10cm and so on.
4. I will use five such box.

Dependent Variable -->

Decible of Sound

1. First on the receiver module attach the AUX wire to the speaker and by using the a Decibel meter we will measure the sound received.
2. The data in the first table of 0% Salt concentration will act as the constant for all the other data.

Angle of Light

1. The angle of the light that leave's the transmitter will be at 90° or perpendicular to the ground. To measure it we will use Incense stick to produce smoke because of which we will be able to see the laser light.
2. On the receiver module the point on the solar panel where we see the laser dot, we will be measured using a protector the angle of light.
3. The data in the first table of 0% Salt concentration will act as the constant for all the other data.

Voltage

1. On the receiver module there will be connection which will be connected to the multimeter that will record voltage received the solar panel.
2. The data in the first table of 0% Salt concentration will act as the constant for all the other data.

Constant Variable -->

Temperature

Temperature of the solution will be constant and the temperature of the room where the experiment will be constant

Solar Panel

The solar panel used will be the same in all the test. The area of the solar panel exposed to light will also be constant.

Angle of Light

The output angle of the light in the transmitter will be at 90 degree and will be same in all test.

Intensity of Light

The intensity of the light will be the same as the same laser diode will be used in all the tests.