**ABSTRACT FOR FINAL YEAR PROJECT**

This project is a remittance to the existing system where we have come up with an idea of combining laser waves and acoustic waves. We all know that light and sound can be used for data transmission through air. We have implemented an advancement for technology by using these waves underwater for the communication of naval submarines. The LASER BEAM (blue laser or green laser-450nm) can be used as a light source to transmit data from the base station or satellite to the Submarine underwater as Laser light has higher intensity, efficiency, as well as better visibility and performance quality .It provides a much simpler communication system and reducing the complex wiring., the Sonar waves (10 Hz to 100 MHz) are used for transmission of data if the light source fails. Since laser cannot penetrate through some objects we wanted to overcome that deprivation using acoustics which was previously existing .As laser is Omni directional there wouldn’t be any parsing of the data. The data received from the base station or ship or satellite is decoded using a DTMF (DUAL TONE MULTI FREQUENCY) decoder which decodes the audio or light wave frequencies into BCD numbers and an LCD display to project the output. Laser beam technology has increased the distance of RS-232 interface from approx. 10 m up to 500 m, so monitoring equipment can be placed at a significant distance and without wiring to computer. This method can be used to overcome errors which are occurring during maximum transmission rate in existing system and it is more efficient. This low cost device is capable of 115.2 kbps speed and distance of 500 m and is ideal for applications where round the clock monitoring is necessary. This bypasses the limitations involved in the use of electromagnetic waves and acoustic waves for underwater communication.