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Ultrasonic Low Power Energy Aware Acoustic Data Modem for Underwater Data Communications in Underwater WSN

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***Abstract* – In the past years we have seen many developments and research have been done on Underwater Acoustic communication due to its applications as in military, disaster prevention, and objects, monuments and other resource detection inside the sea. Since there's a vast application of this, so underwater research work should be further investigated and designed to make further improvement in it. However, many researches are also going on to develop communication technique in underwater sensor networks. Previously underwater communication done by Radio frequency but RF-based communication is not much successful because of some drawbacks. First one is that radio waves need large antennae and high transmission power. And due to this low transmission power its limit is also very limited and we can't receive good signal if its range increase more the 120cm, finally we have concluded that if we want Underwater communication then Acoustic data communication is the best technique in comparison to Radio wave and Ultrasonic . Our aim is to develop an acoustic modem for underwater communication, which will be an energy concern, and we also use Low power and increase the data rate. It is so because we know that it's very tough to recharge the battery deep inside the sea. As a consequence we should design an acoustic modem which uses low power or low energy and its better that the modem cost should be low.**

***Keywords*— Acoustic, Underwater communication, Acoustic modem, Underwater transducer, Ana log transceiver.**