**Method:**

The method is proposed for 2D location of vehicle on the surface of water. The location is achieved using low rate absolute positioning data and high rate relative positioning data. In this experiment, for the absolute location 1450 positions of Ultrashort baseline (USBL) are measured and for relative position data 19992 grayscale images of 16 bit is taken by SONAR. SONAR images are converted to odometry data and for measuring change in x and y position following equation is used. The vehicle travelled for 61 minutes to cover 693 meters distance.