

5 Conclusion

In this paper, we proposed an accurate positioning system using acoustic signals with two different frequencies. Based on the phase difference between the two acoustic signals the accuracy of the range data could be improved so that the maximum error was 0.006m. Using the improved range finder, the accurate positioning system could be achieved. The positioning system could be implemented as the compact and light weighted device by using the sophisticated IC technologies. The navigation experiments were successfully conducted in the test tank.

Furthermore, the AUV was practically used as a monitoring platform to measure the conductivity and the temperature at the sea in the shallow sea.

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