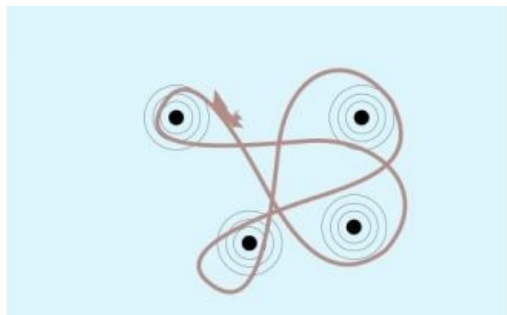


Unmanned Surface Vehicle as Aid for LBL Positioning



The unmanned surface vehicle (USV) market is expanding, with more and more remotely controlled and autonomous USVs becoming available as commercial products. While environmental monitoring and data collection remain the primary target for lightweight USVs, EvoLogics recently tried out a rather atypical but very promising approach for using its Sonobot. The vehicle turned out to be well suited for calibration and testing of long-baseline (LBL) positioning systems, opening up a wide range of new applications.

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A typical LBL underwater acoustic positioning system uses an array of at least three seafloor-mounted transponders that form the system's baseline. Before putting the system into operation, these baseline nodes are carefully located in absolute coordinates. When the system is operational, baseline transponders respond to acoustic interrogation signals from the target transceiver, which then calculates distances between itself and each transponder of the baseline array to derive its position.

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