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(54) Title: RESONANT FREQUENCY DETECTION FOR ALGAE CONTROL SYSTEM

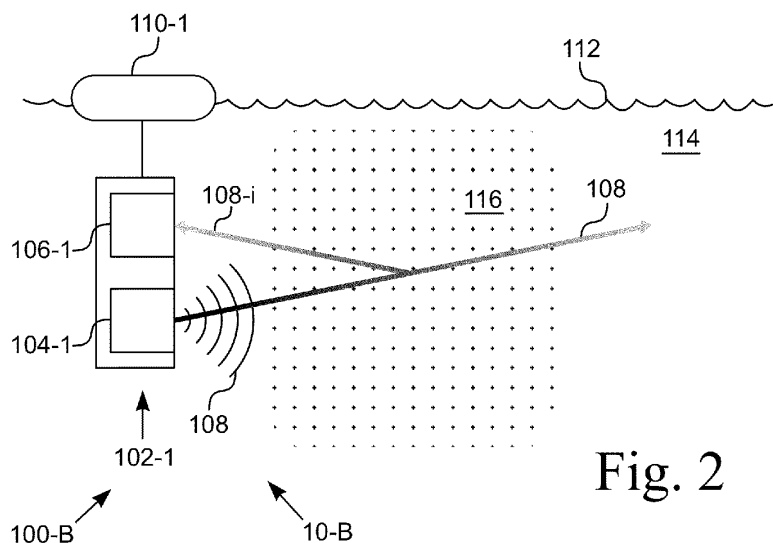


Fig. 2

(57) Abstract: Apparatus for a resonance detection system (100) that determines resonance of bio-organisms (116) in a body of water (114). A controller (402) causes a transducer (104) to emit ultrasonic waves (108) at multiple frequencies. In one embodiment, a sensor (106) measures the amplitude of reflected ultrasonic waves (108). In another embodiment, the sensor (106) is positioned away from the transducer (104-1) and measures the amplitude of those ultrasonic waves (108). The controller (402) performs a trend analysis (112) of the measured data to determine a resonant frequency (302-2). After determining a resonant frequency (302-2), the controller (402) causes the transducer (104) to emit ultrasonic waves (108) at the resonant frequency (302-2). In one embodiment, a global positioning system (408) provides geographic location and direction information for determining the location of any detected algae blooms (116).

[Continued on next page]

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