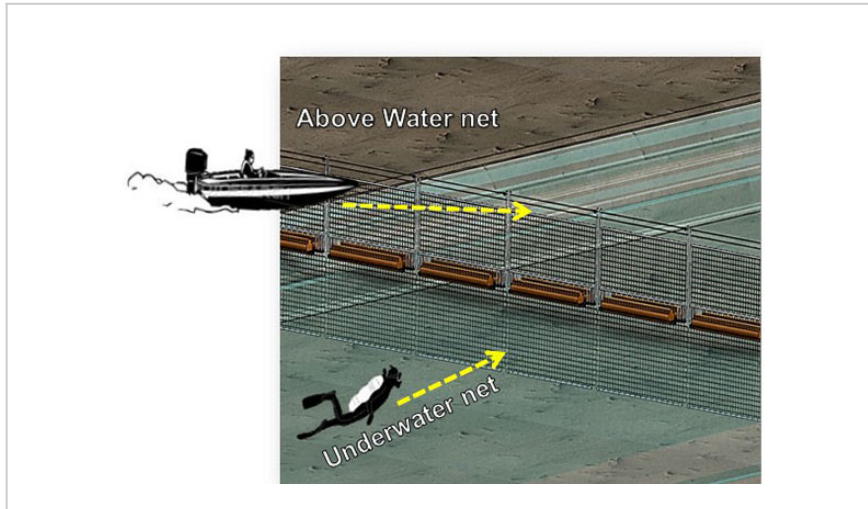


Improved Undersea Intrusion Detection Using Raw Optical Fiber

ID# 2015-0910



PennState



Above Water & Underwater Detection

Technology Summary

This invention discloses a low cost, rapidly deployable, underwater intrusion detection system (IDS) that can reliably monitor/ protect a large area. This new IDS suspended raw optical fiber under the water; however, it suspends it in the water column away from potential threats that might break the fiber. Then the optical fiber has low cost/simple buoyant threads attached along its length (either/both rising or sinking threads); if any significant intruder interacts with the fiber or threads, nearly the exact location of that interaction can be instantly reported (easy to sense the location of the fiber bend). All components are biologically safe, cause no environmental impact, and are in-place disposable. The extreme low cost of both the components and their deployment infer that new markets may be willing to invest and expand their underwater IDS.

Application & Market Utility

Low cost components; easy/fast deployments. Simultaneous multiple/all depth coverage; area/volume coverage options. Instant/reliable disturbance location and categorization. Environmentally friendly and undetectable.

Next Steps

Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL

4-7

Seeking

Investment | Licensing | Research

Keywords

- Undersea intrusion detection system
- port security
- fiber optics
- pipelines
- oil platforms

Researchers

Randy Young

Technical Director and Research Professor

Office of Technology Management Contact

Rokita, Joseph
jjr152@psu.edu
814-863-6336



Invent Penn State is a Commonwealth-wide initiative to spur economic development, job creation, and student career success. Invent Penn State blends entrepreneurship-focused academic programs, business startup training and incubation, funding for commercialization, and university-community collaborations to facilitate the challenging process of turning research discoveries into valuable products and services that can benefit Pennsylvanians and humankind. Learn more at invent.psu.edu.

Penn State is an equal opportunity, affirmative action employer, and is committed to providing employment opportunities to all qualified applicants without regard to race, color, religion, age, sex, sexual orientation, gender identity, national origin, disability or protected veteran status.