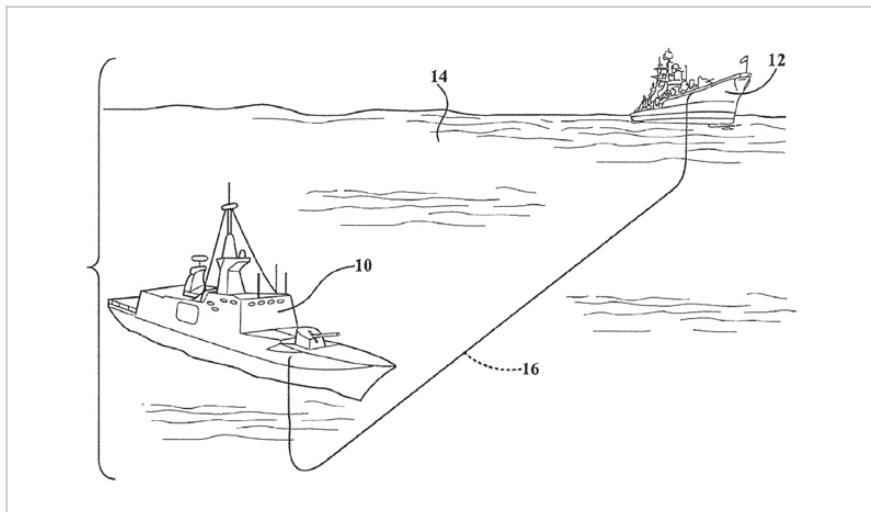


Composite Cable Assembly with Neutral Buoyancy

ID# 2013-4150



PennState



Application: Ship Communications

Technology Summary

This invention provides various embodiments of composite cable assemblies with functionally neutral buoyancy in fluid environments. Composite assemblies include an elongated element such as an optical-fiber cable having negative buoyancy plus one or more supplemental filaments having positive buoyancy, connected together as a composite assembly with functionally neutral buoyancy.

Application & Market Utility

There are a variety of situations in which it is desirable to submerge an elongated element in a fluid environment with the element suspended between the upper and lower boundaries of that environment; for example, communication cables in the ocean designed for ships to communicate to shore or to other locations at high data rates and with low rates of delay in signal transmission (known as low latency).

Overcomes drawbacks of existing solutions. Jacketed cable is expensive and bulky, "raw" optic fiber will sink in fluid, and satellite links demonstrate high latency.

Next Steps

Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL

4-7

Seeking

Investment | Licensing | Research

Keywords

- composite cable assembly
- neutral buoyancy
- submerged communication cable
- ship-to-shore communication
- low latency

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