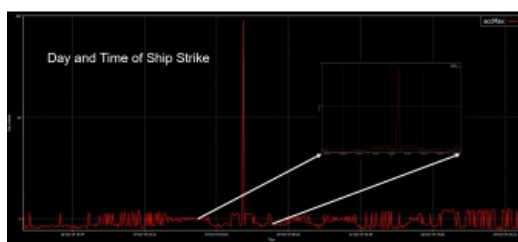


This is How a Wave Sensor Adds Ship Strike Alerts



As more and more oceanographic buoys are being deployed around the world, incidents of ships striking these buoys are also increasing. At times, the impact of the strike can be severe enough to damage a buoy or even knock it off its mooring and set it adrift. Without a clear time frame of when the strike occurred, there has been no way to determine the cause of costly (and often hazardous) buoy damage.

US-based SeaView Systems has found a solution to this problem. Its SVS-603 wave sensor has now been enhanced with ship strike detection capabilities which can trigger an alert based on buoy motion parameters that indicate a ship strike or other anomalous conditions. The alert allows prompt response to assess potential damage. The date and time associated with the alert can then be matched to nearby ships at the time of a strike, based on Automatic Identification System (AIS) data.

Costly Buoy Damage

"The addition of the SVS-603 wave sensor's ship strike alert capability is a tool in monitoring harbour buoys that are damaged all too frequently," said Captain Pete Dolan of eProNav, a provider of expert consulting and system design services for marine navigation. "Connecting the alert information from the SVS-603 with readily available AIS information makes it possible to connect a strike with local vessel traffic, information that is extremely useful in determining conditions and potentially responsibility for costly buoy damage."



SVS-603 wave sensor ship strike alert

This figure shows a timeline of acceleration data from the SVS-603 wave sensor. The inset is a close-up of the day where the strike (sharp peak) occurred.

SeaView's Systems Development Manager Ed Celkis sees this sort of enhancement as a natural extension of the platform of capabilities in the SeaView wave sensor and a reflection of the way that microelectronics is dramatically changing traditionally mechanical systems. "With the fast micro-controller and onboard electronics which are central to the SVS-603's algorithmic capabilities, we have a platform which can readily be extended to add these kinds of features," said Celkis.

Captions: A harbour buoy shows the damage that is likely the result of a ship strike. This kind of damage can be both costly and hazardous (photo courtesy of Capt. Pete Dolan).

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