



Accurate catch monitoring system drastically cuts cost of calculating fish size and weight

Patent Title/ Inventor:

CatchMeasure, Inventors: Glenn Chamberlain and Dr. Brian Rothschild, Patent application filed 2010

Application:

UMass Dartmouth researchers have developed a more accurate method for fishermen to estimate the length and weight from piles of fish by using an technique (photogrammetry) used successfully in other applications. CatchMeasure can provide more real-time analyzable data collected at sea, reduce the need for an expensive on-board human monitor and minimize needless waste from fish dumped overboard .

Benefits:

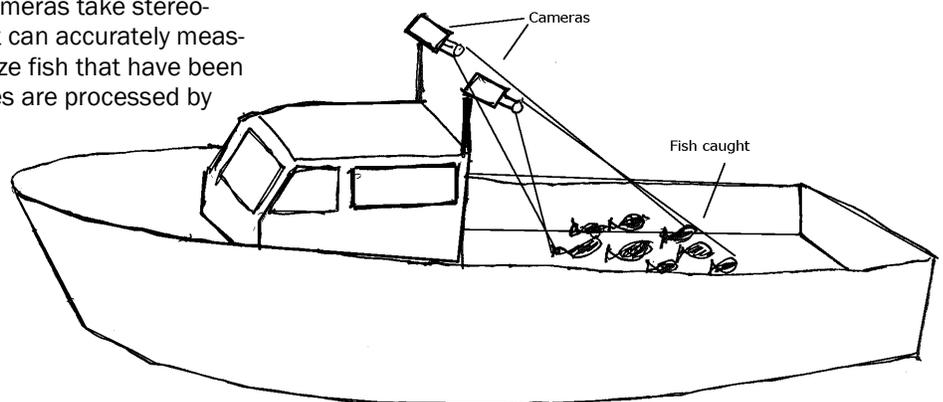
- Dramatically increases accuracy in measuring catch composition, weight and volume from images obtained during trips at sea
- Can be adapted to most fishing boats
- Applicable /adaptable to many different species.
- Significant potential cost savings compared with manual monitoring systems and other (automated) systems.

Technology Abstract:

The use of cameras in fisheries management has commonly been restricted to electronic monitoring. In these cases, bycatch and discarding incidents are recorded on film but catches are not estimated. Some pilot studies have demonstrated the effectiveness of estimating catches using video cameras, but these studies have been limited to certain gear types, fisheries, and geographic areas. UMD's CatchMeasure system can quantify catches from images taken at sea and captured using digital still cameras. Other systems used to quantify catches cannot do so at sea and do not use still cameras or photogrammetry. Currently available systems estimate catches after landing the fish at either the processing plant or harbor but have not been adapted to at-sea use by fishing vessels in the U.S. and are more appropriate for research applications or management systems where full retention (landing) of catch is a requirement.

This invention is a dramatic cost improvement compared with the current option for characterizing catches and making weight estimates at sea. The Northeast Fisheries Observer Program can currently provide accurate weight and length measurements by assigning human observers to sea aboard commercial fishing vessels, but placing an observer on board a vessel is costly. This cost is currently assumed by the federal government but will become an industry responsibility in 2013 as mandated by law. This cost also means that a relatively low percentage of fishing trips are covered by the observer program. This UMD technology would reduce program and operation costs and provide a higher volume of data for fisheries management and analysis.

CatchMeasures cameras take stereoscopic images that can accurately measure and characterize fish that have been caught after images are processed by UMD.



Available for Licensing

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