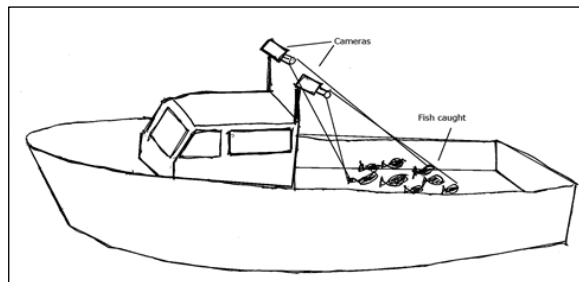


- Title** *Methods and systems for determining fish catches (UMD 10-04)*
- Inventors:** *Glenn Chamberlain et al.*
- Applications:** Improved method for counting fish catches and for distinguishing species, to allow compliance with regulatory quotas.
- Benefits:**
- Dramatic improvements in accuracy in measuring catch composition, weight and volume in real-time
  - Ability to be adapted to most fishing boats
  - Applicability to many different species of fish
  - Significant potential cost savings compared with manual monitoring systems and other automated systems.
- Technology Description:** Federal fishery regulations that establish quotas for certain fish species require fishing vessels to record and store an increasing percentage of their fishing trips. Currently, a fishing vessel could use a CatchMeter, which quickly identifies and assigns species to fish as they pass along a conveyer belt, but this system is only practical for processing plants and large research vessels. The alternative would be manual counting by a human observer. 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. This method can provide more real-time analyzable data at sea, eliminate the need for an expensive on-board human monitor and minimize needless waste from fish dumped overboard. The system uses two digital still Single Lens Reflex cameras mounted in waterproof housings. The SLR cameras' better resolution improves photogrammetric measurement precision compared to many digital still cameras and video cameras, and images taken by SLR cameras require less storage space and less time to analyze than video images.
- Patent Status:** This technology is the subject of a pending U.S. patent application.



CatchMeasures cameras take stereoscopic images that can accurately measure and characterize fish that have been caught.

**For more information:** David J. Glass, Ph.D.  
Technology Transfer Consultant  
University of Massachusetts Dartmouth  
UMass office: 508-910-9815  
Cell: 617-653-9945  
[dglass@umassd.edu](mailto:dglass@umassd.edu)

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