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2016 AQ Summit: Innovation Update by Richard Frost

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Crows and Strawberries
MAPC Overview

• History
  – Founded in 1986, employee owned, military & commercial customers

• Key technologies developed by MAPC
  – Unmanned marine vessels
  – Vessel launch and recovery
  – Specialty ship systems (deck systems, acoustic arrays, vessel design)
  – Marine vessels and platforms (buoys, docks, floats, subsea stations)

• Specific Projects
  – Bath Iron Works – Automated marine crane for Littoral Combat Ship & deck systems for DDG1000
  – Hyundai Heavy Industry – Rudders, Canards, HPUs, and bridge controls for 3600-ton SWATH
  – Woods Hole – Certification requirements for 6,500 meter ALVIN conversion
  – U.S. Navy – Hybrid electric UUV
  – Power generation from hydrothermal vents
  – Air-droppable life raft pod for Sikorsky helicopter

• Organization
  – 60 person company: 25 engineers, 25 technicians, 10 QA, Management, and Accounting
  – Staff includes naval architects, mechanical engineers, electrical engineers, materials scientists, ocean engineers, and software engineers
  – 10 engineers with extensive at-sea experience

• MAPC value proposition
  – Appropriate technology developed, tested, and produced
DDG 1000 Personnel Safety Barriers

Photo credit Gordon Chibroski/Portland Press Herald
Sub-sea Power and Communication
Air-droppable Life Raft Pod
Unmanned Boats
GARC and Towed Payloads
Launch and Recovery
Modelmaking and Tank Testing
Tactical Sensor Mast
MAPC Technologies & Possible Aquaculture Applications

- Stone and Associates and Open Ocean Aquaculture
- Acadia Harvest
- Oyster Cage Flipper
- Green Crab capture
- Floating Solar
- Unmanned Surface Vessels (USVs)
  - Survey vessels
    - Towed, AUV, and ROV options
  - Offshore supply
- High speed crew boats
Oyster Cage Flipper
Oyster Cage Lifter?
Sensors and Automation

- Acadia Harvest
Green Crabs
Floating Solar
Open Ocean Aquaculture
Offshore Service Vessels
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