Summary of the Evolution of the Ultimate Littoral AUV, the Biomimetic Swimming/Walking RoboLobster

Lobster
Designed by: Mother Nature
Development Time: 100 Million Years

1st Generation Walking RoboLobster
Designed by: Massa Products and Northeastern University
Development Time: 13 Years

2nd Generation Swimming/Walking RoboLobster
Designed by: Massa Products
Development Time: 3 Years
Autonomous Ambulatory Robot Based on the American Lobster

- System based on actual neural networks in the lobster walking system
- Ideal platform for shallow water mine counter-measures
  - Uses hydrodynamics, not weight, to achieve stability in turbulent water
  - Can walk in any direction
  - Can be outfitted with inexpensive acoustic navigation, communication, and mine detection systems
- System feasibility proved by work on government funded contracts and grants
- Massa is developing a production engineered fleet ready model under a multiyear government contract
Lobster Biotelemetry System

- Teamed with Northeastern University
- Monitors neural activities of lobsters in the ocean
- Transmits information from lobsters via high speed acoustic data link
  - Communication concept overcomes shallow water reverberation problems
- Hand-held sonar allows the diver to find and recover lobsters