The Electric Launch Reimagined

Introducing the all new eCraft 20

Rufus Van Gruisen

eCraft Yachts

Clean Quiet Electric
Electric launch, circa 1897

Electric propulsion at Chicago World's Fair, 1893

Electric launch by Duffy Boats, 1970
Modern Classics

Current models from Elco Motor Yachts
Tesla Motors: changing the public’s attitude to electric vehicles
Design Objectives

- To develop a recreational launch
  - sightseeing
  - fishing
  - swimming
  - picnicking, cocktail cruise

- Easy and fun to operate

- Sufficient range for day’s boating

- Comfortable interior

- Showcase current technology
Opportunities for Design Improvements

- Hull Shape
- Storage Batteries
- Electric Motor
- Speed Control
- Steering
- Recharging
Battery Options

Absorbed Glass Mat (AGM)

Lead Acid

Lithium
Vintage motor

Pod drive with 48V, 6.5kW, permanent magnet synchronous motor
Motor Controller

Solid state motor controller

Battery management display
Steering control

Steering processor

Rotating pod and skeg

Joystick for throttle and steering
Design - First Sketch
Design – Hull Forming

3D Hull model showing bulkheads, stringers and keel
Construction Drawings
Underway
A speed of 5.5 knots requires approximately 55 Amps.
At 5.5 knots the batteries provide a range of 40 nautical miles
Battery Recharging

From any 115V, 15A receptacle

From a marina shore power outlet
Further Development Opportunities

- Solar Charging
  - On board
  - Dockside

- Yacht Club launch, hotel ferry

- Dual pod drive with auto positioning

- Inductive charging dockside

- Hydrogen fuel cell
Conclusion

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Questions?

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