

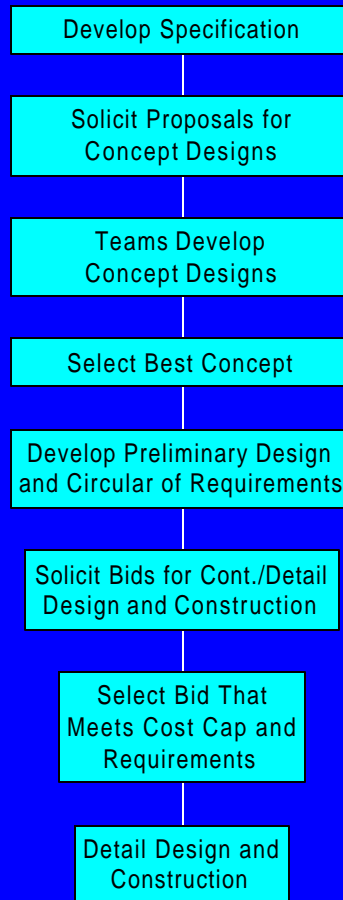
OCEAN Class AGOR Concept Development

Acquisition Approaches

Contract Design



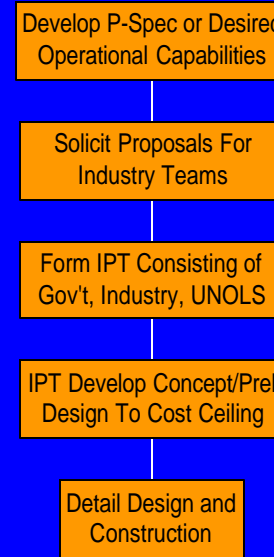
Circular of Requirements



(AGOR 23, 24, 25)

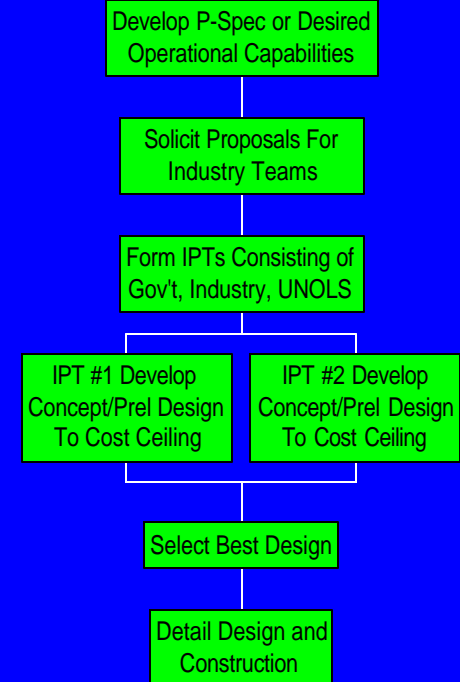
Integrated Product Team

1 Team



(AGOR 26)

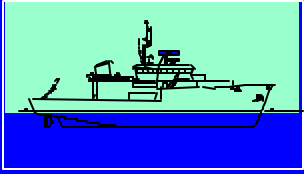
2 Team



*OCEAN Class AGOR
Concept Development Task*

UNOLS Winter Meeting

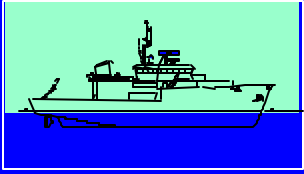
March 2004



OCEAN Class AGOR Concept Development

Task Overview

- 1) *Develop Concept Designs for 3 Hull Variants:
Monohull
SWATH
X Craft*
- 2) *Investigate New Technologies To Improve Reliability, Reduce Manning, and Reduce Life Cycle Cost*
- 3) *Develop Design Criteria and Requirements to Support Future Acquisition Efforts*
- 4) *Interface Regularly with ONR, NSF, and UNOLS Representatives and Incorporate Input and Feedback*
- 5) *Approximately 4 Month Effort Total - Completion Planned for May 2004*

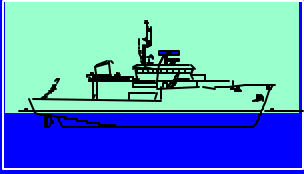


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Concept Development

1) Develop Concept Designs

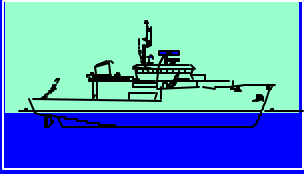
- *3 Hull Types - Monohull, SWATH, X Craft*
- *Analyze Powering, Seakeeping, and Ability to Meet Science Mission Requirements (SMRs)*
- *Develop Construction Cost Estimates*
- *Determine Crew Sizes and Operating Costs (day rates)*
- *Provide Recommendations On Prioritizing SMRs*
- *Make Recommendation On Most Suitable Hull Type*



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2) Investigate New Technologies

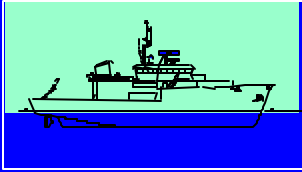
- Improve Reliability*
- Reduce Manning (biggest day rate impact)*
- Reduce Life Cycle Cost*
- Improve Sonar Performance By Reducing Bubble Sweepdown*
- Improve Overside Handling in Rough Weather*
- Investigate Expanded Use of Containerized Lab Vans*



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*3) Preliminary Acquisition Planning and
Documentation to Support Next Phase*

- *Develop Documentation to Support Next Phase*
 - *Prioritized SMRs*
 - *Design Requirements*
 - *P-Spec*
 - *Desired Operational Capabilities*



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Concept Development*

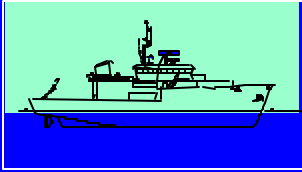
*4) Interface Regularly With UNOLS, NSF, and ONR
Representatives*

- Email Coordinated Through UNOLS Office*
- Periodic Status Update Meetings*
- Web Based Conferencing*
- Questions, comments, or other input*

Dan Rolland

drolland@jjma.com

703-395-7924



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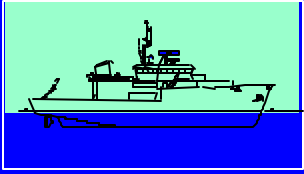
The X Craft:

- High Speed Twin Hull Technology Demonstrator
- Evaluate Mission Modularity Concepts

Length/Beam:	73 m / 20 m (approx)
Disp:	1000 LT (approx)
Propulsion:	Gas Turbine/Diesel
Propulsor:	Waterjets
Speed:	50 knots calm seas; 40 knots SS 4
Range:	4,000 NM @ 20 knots
Operability:	Operational through SS 4; survivable through SS 6
Mission Bay:	Support mission packages in ISO 20'x8'x8' containers - multi-purpose stern ramp - side RO/RO ramp



- Under Construction - Planned Completion is Summer 2004
- Hydrodynamic Experiments Planned for FY 2005



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Evaluating X Craft Suitability For Oceanographic Research:

1) Speed and Range:

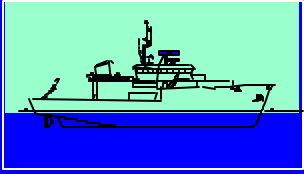
- X Craft Hull Form is Designed Primarily For High Speed (50 knots)*
- Evaluate Suitability For Lower Speed AGOR Mission*
- Investigate Costs and Benefits of Speed Higher Than SMRs*
- Increase In Displacement Necessary to Accommodate Increased Fuel Load*

2) Seakeeping:

- Evaluate Impact of High Speed Hull Form On Seakeeping*
- Evaluate Durability of Aluminum Structure In Higher Sea States*

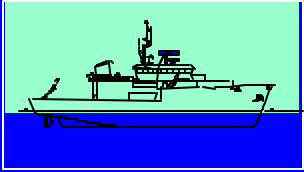
3) Mission Bay Modularity

- Evaluate Benefits for Oceanographic Research*



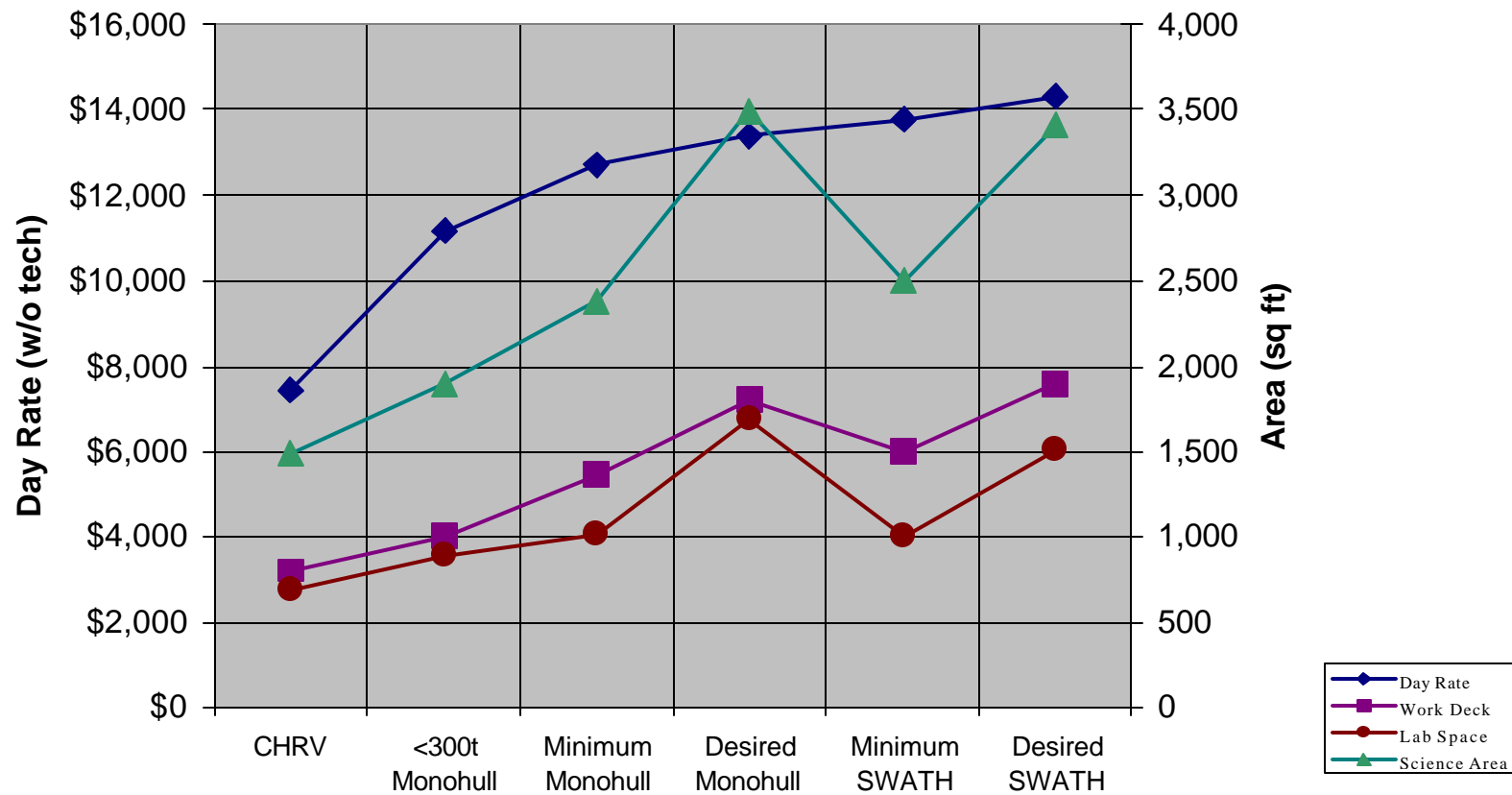
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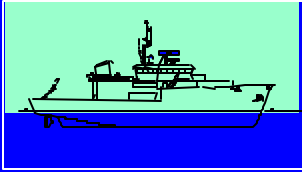
REGIONAL Slides



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Lab and Deck Area For AGOR Variants

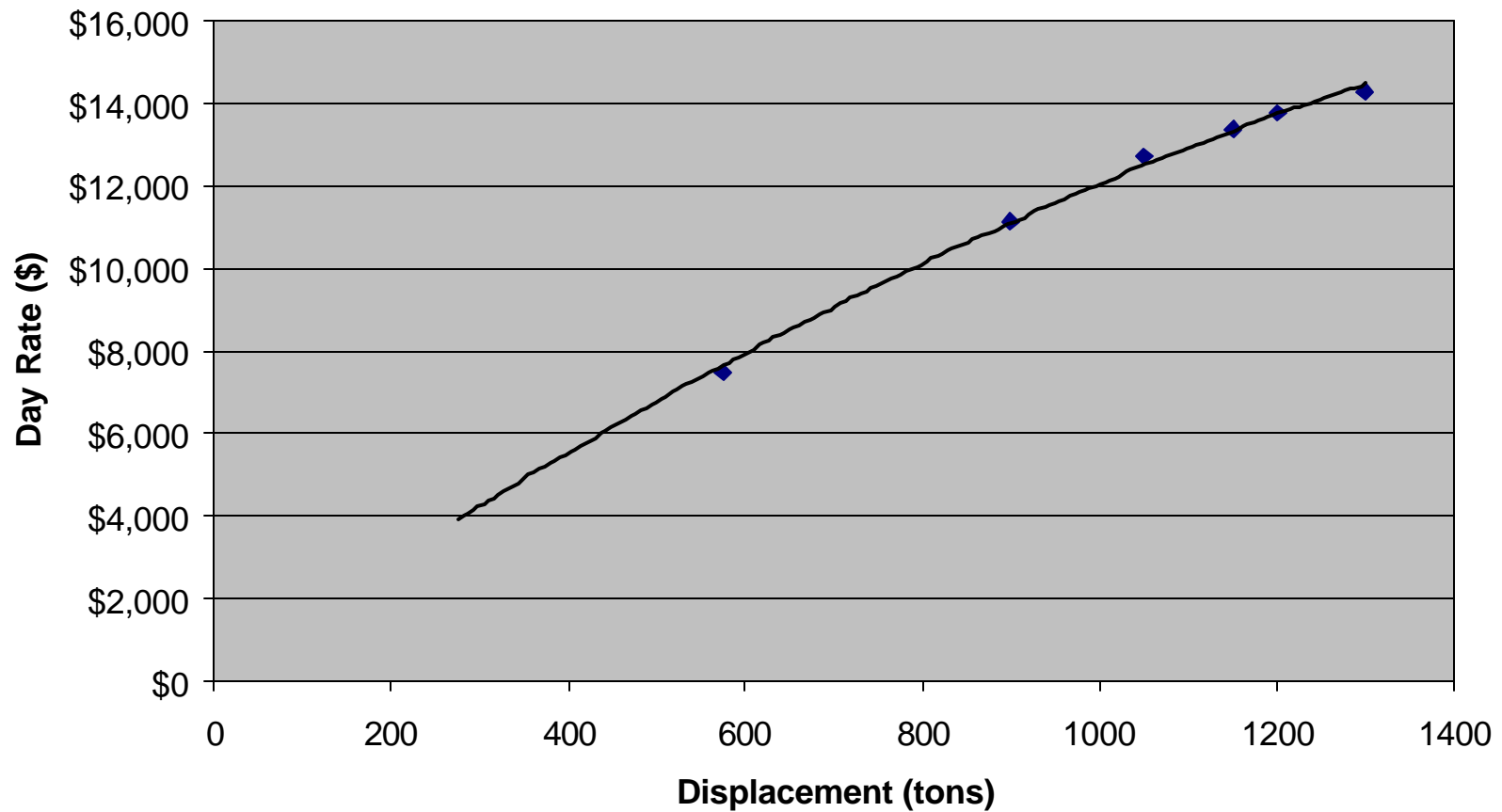


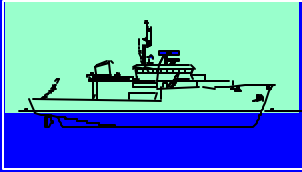


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Day Rate Vs. Displacement for AGOR Variants





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Day Rates For AGOR Variants

