

# Company Presentation



**AND**

*weatherguy*  *com*

**Marine Technology Society-Honolulu Chapter Meeting**

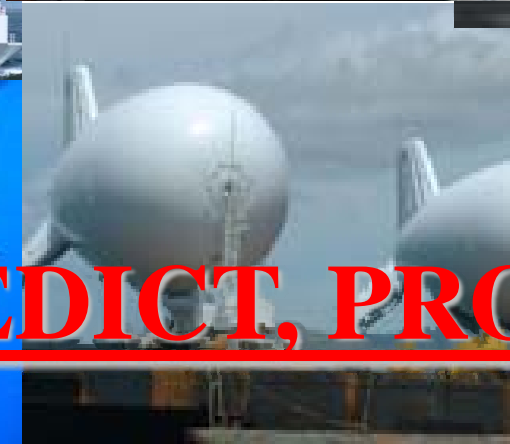
**01 April 2009**

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**rick@applied-marine.com**

# Mission Statement

weatherguy  com

“To apply accurate and specialized meteorological and oceanographic services for unique ventures anytime and anywhere in the world.”



**Motto: PREDICT, PROVIDE, PROTECT**

- Provides marine weather and oceanographic analysis, prediction, and interpretation services for:

- Voyage planning consultations/climatology
- Focused products for unique operations
- Legal and expert witness testimony

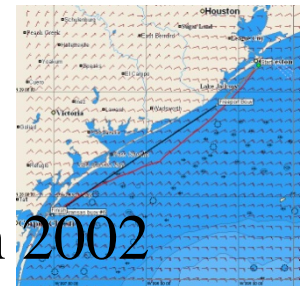


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**NORTH SHORE MOLOKAI  
WAVE STUDY  
FOLLOW-ON**

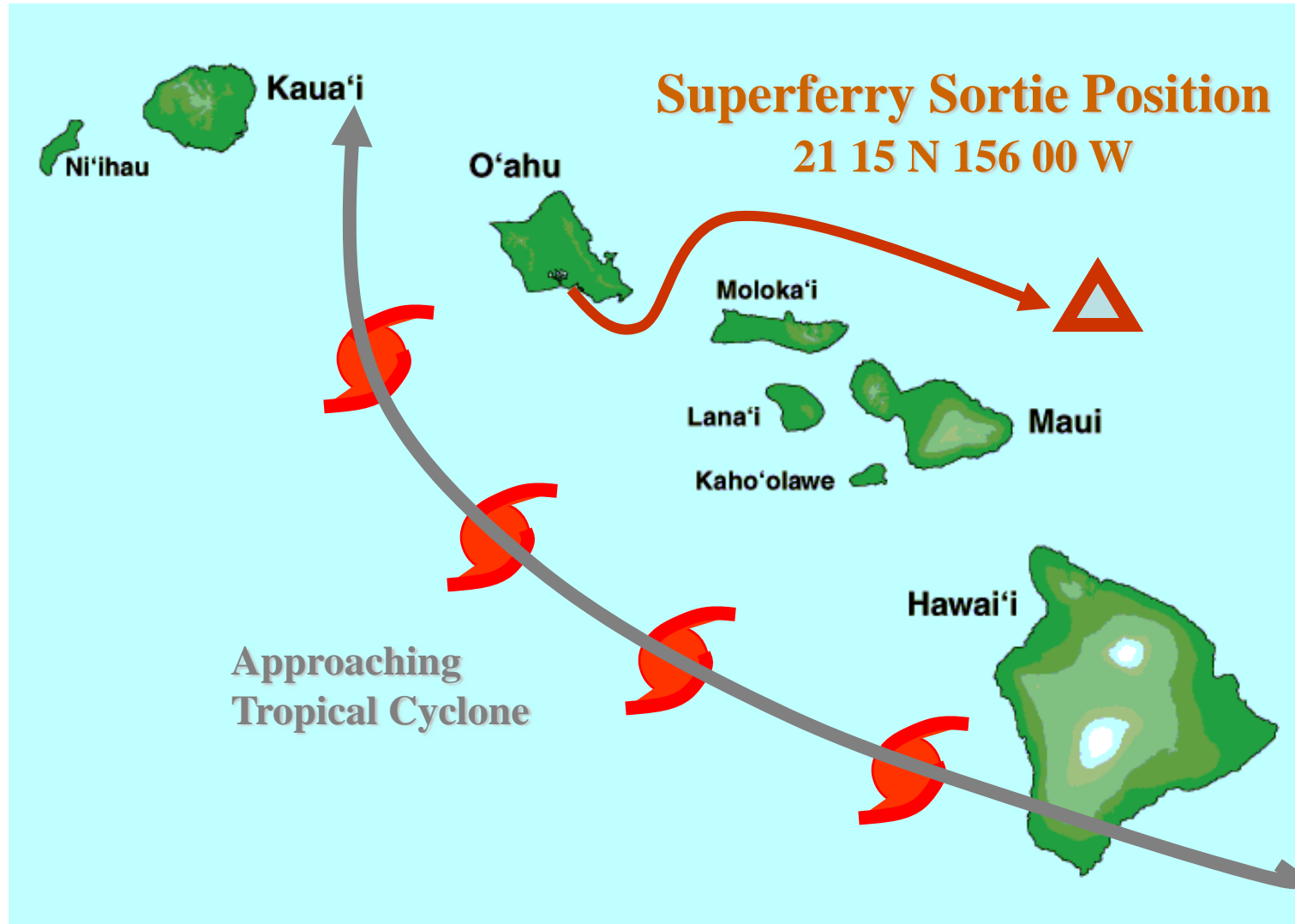
PREPARED FOR:  
MR. BILL ANASCO  
DIRECTOR OF MARINE OPERATIONS  
NORTH SHORE MOLOKAI

PREPARED BY:  
MR. ROBERTA A. BROWN  
INVESTIGATOR



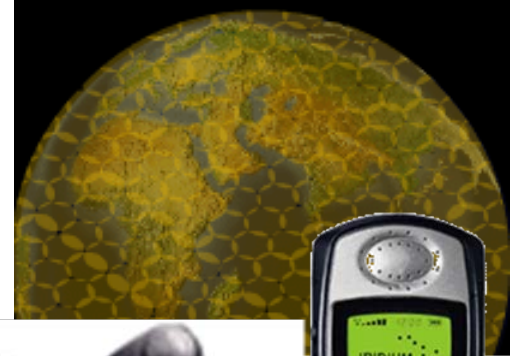
- Founded in 1997 (part time operation)
- Formed partnership in 2000, Full time operations in 2002
- Specialized product development that saves time and operating costs at reduced risk
- Always keeping safety and asset protection first priority.

# Sortie Recommendations



## The World Really is Flat

- Business made possible by advances in communications technology:
  - 1) satellite/cellular telephone,
  - 2) HF radio email,
  - 3) SATCOM-internet email access at sea.
- High speed internet access to ingest data and produce products
- Maintain communication relevancy
- Low operating costs
- Can provide service from and to anywhere on the planet

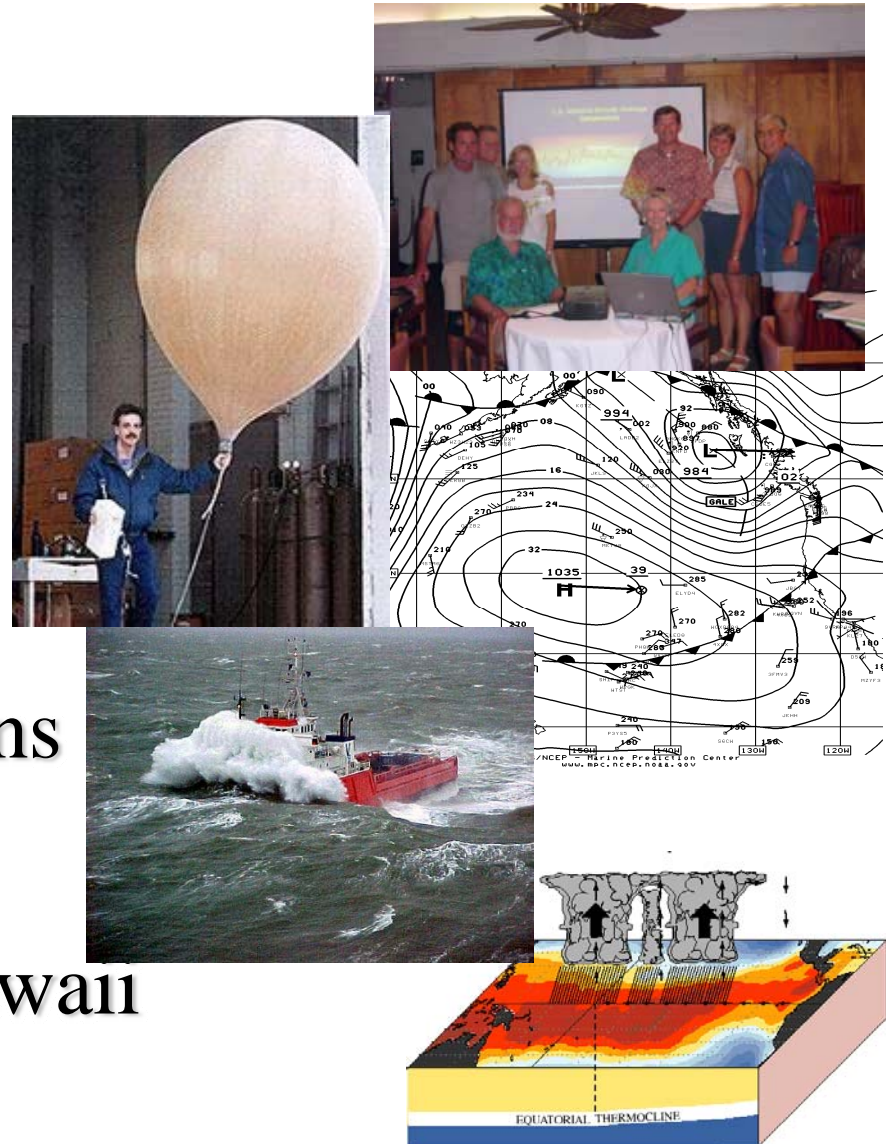


- 24 years of Naval Service
- 7 years of business operations post Navy career
- Analysis and prediction expertise in atmospheric and ocean sciences
- Commercial products parallel Navy operational products
- Degreed Meteorologist/Oceanographer,  
MS: Naval Post Graduate School  
BS: Penn State University
- Practical application, interpretation, and understanding: not just computer model output



# Outreach

- Training Seminars
- Meteorology Classes
- High School Career Days
- Boy Scout Merit Badge
- Informational Presentations
- Initiated Safety at Sea Awareness Program in Hawaii



# *Applied Marine Solutions*

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- Company Start-up in May 2004:
- Software development for DoD (U.S. Navy)
- Presently transitioning CEROS R&D software application:
  - PEO program of record
  - CTF-34, Pearl Harbor
  - NAVAIR Bartberger Modeling and Simulation Laboratory
- Relationships/Clients:
  - Naval Air Systems Command
  - CEROS/DARPA
  - University of Washington, APL
  - University of Hawaii- Hawaii Research Mapping Group (HRMG)
  - Lockheed Martin
  - BAE Systems
  - TEC, Inc



# *Core Attributes*

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- Small business operating in Hawaii
- Qualified High Technology Business-QHTB
  - Beneficiary of ACT 221/215
- Disabled Veteran owned company
- HUBZone certified by SBA
- Maintain classified facilities clearance at the **SECRET** level
  - Employees hold U.S. Gov security clearances

# *Company Precepts*

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- Integrity
- Under promise, over deliver
- Develop long term relationships
- Maintain Navy contacts
- Familiar with Navy management,  
both administrative and operational
- Stay on knife's edge of software technology
- Technology transition is a contact sport

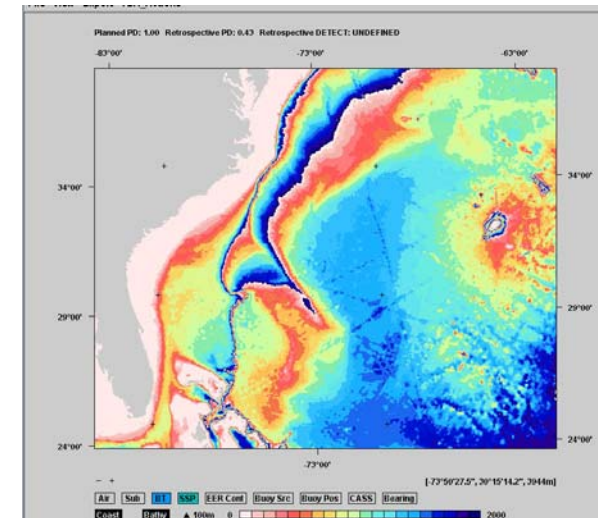
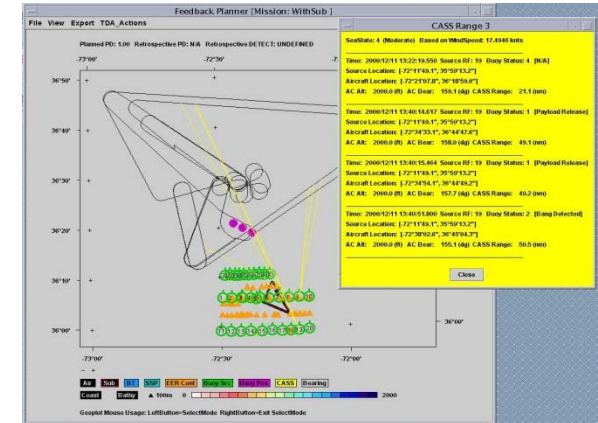
# *R & D Talents*

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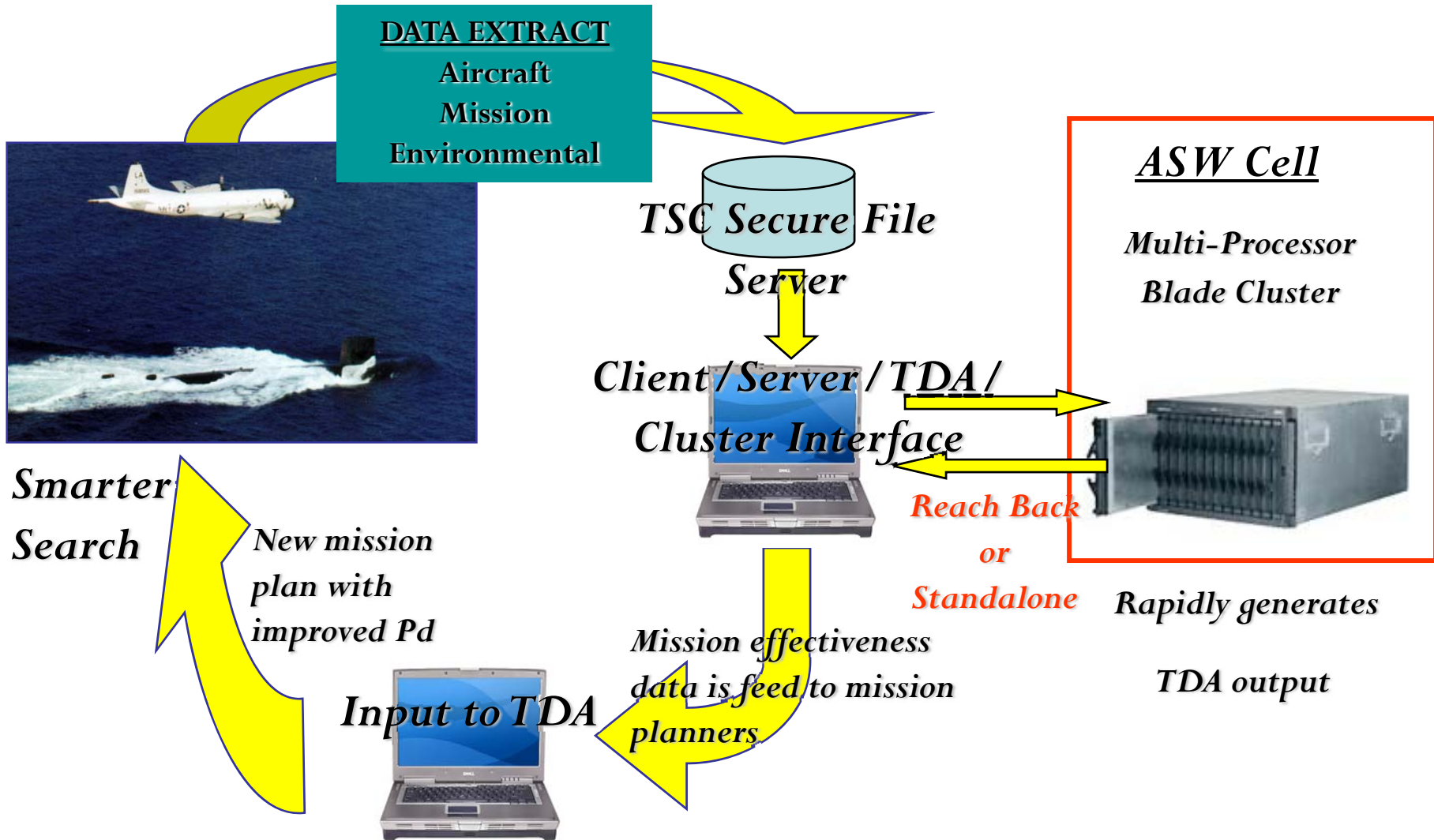
- Senior level software engineering development and programming for DoD
- Extensive expertise in design and engineering in developing large scale software packages integrating systems from a variety of sources
- 25+ years programming expertise in C, C++, SQL, Java, XML, JSP, and GUI development
- Analysis and prediction expertise in atmospheric and ocean sciences
- Integration expertise in web based applications that use SOAP and HTTP/HTML protocols to communicate between client and server
- Expertise in integrating systems that allow users to access a secure XML or object oriented database
- Parallel processing on multi-processors in cluster node hardware
- Systems administration expertise including operating system integration for Linux and Solaris, on Dell, Sun, and IBM systems

# Feedback Planner

- “Feedback Planning” mission planning software application
  - Open Architecture, Web services, COTS
- Automation concept for hardware/software toolset that rapidly plans, re-plans, and reconstructs U.S. Navy anti-submarine acoustic search missions for multi-static active systems
- Seven year development effort (2003 – 2009)
- Funding to date ~ \$1.4M
- Application receiving pull from PEO PM

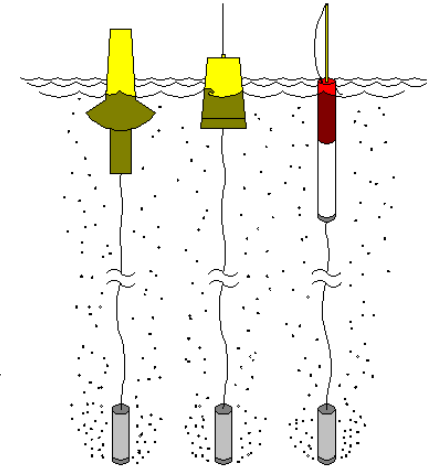


# Feedback Planner Concept

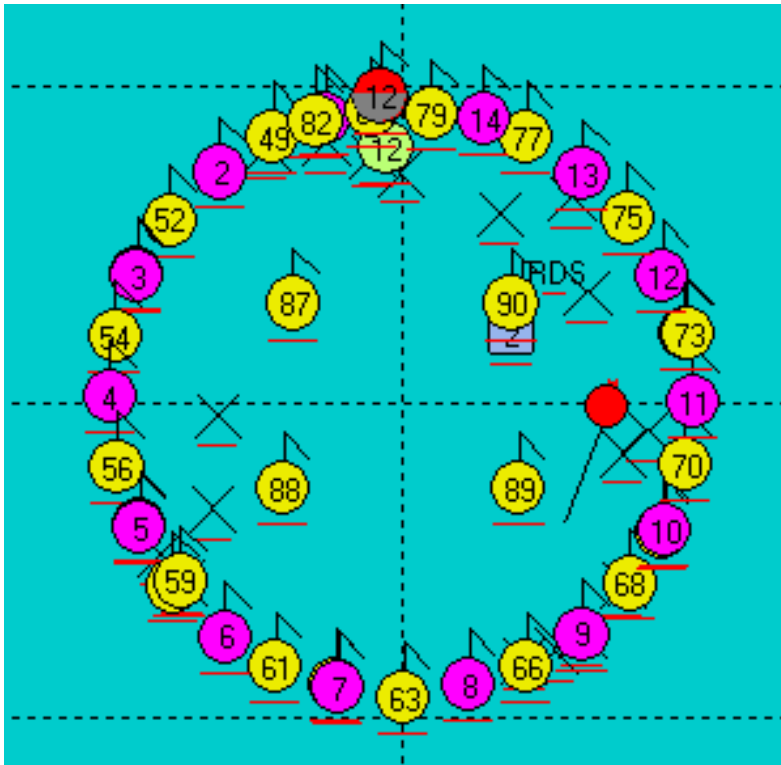


# Multi-Static Acoustics

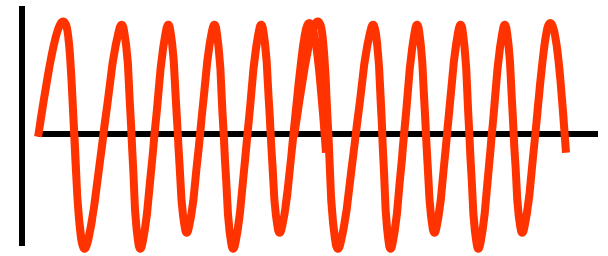
Single Probability of detection (PD) value  
not adequate to define search options



Sensor depth



Frequency



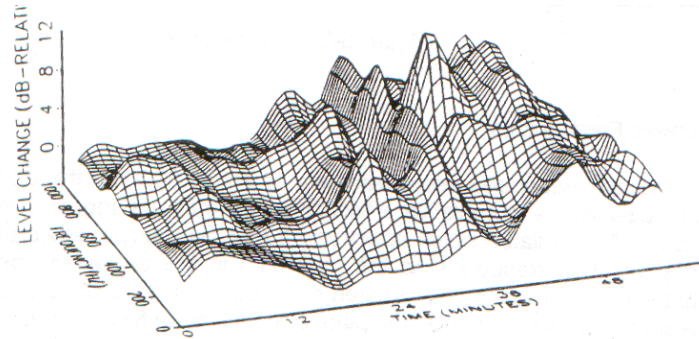
Target depth



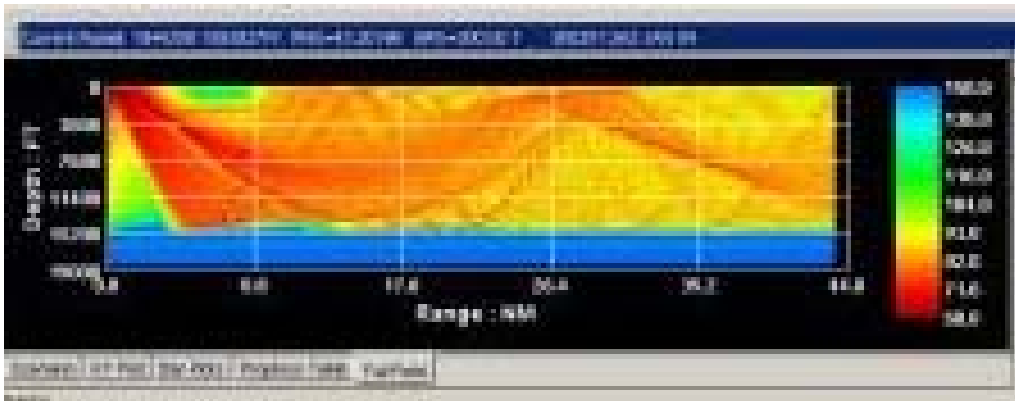
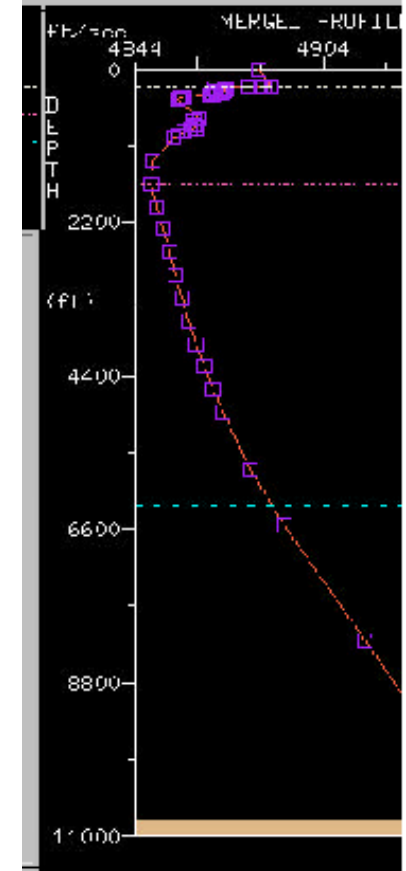
# Oceanographic Variability

Ocean environment is complicated, highly variable, and under sensed.

Ambient Noise



Sound Speed

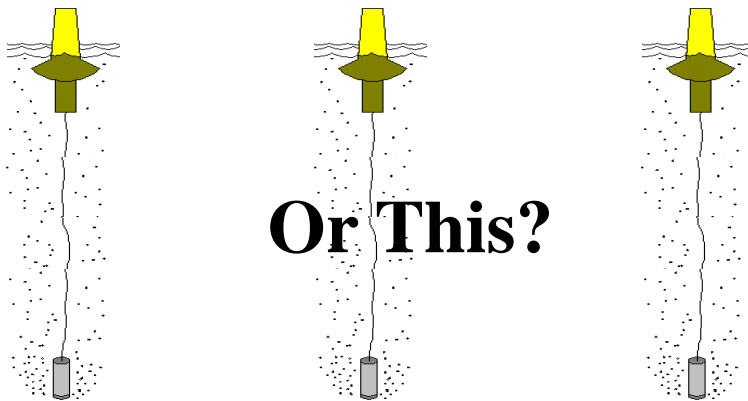
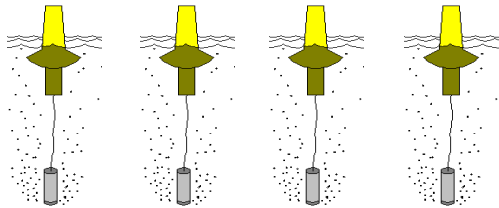


Transmission Loss

# Tactical Assessment

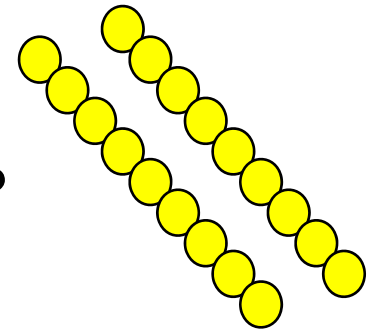
- Product to Mission Planners come as suggestions in redefining pattern locations, spacings and depth settings or likelihood for success. Enhanced tactics for higher Pd.

**This?**

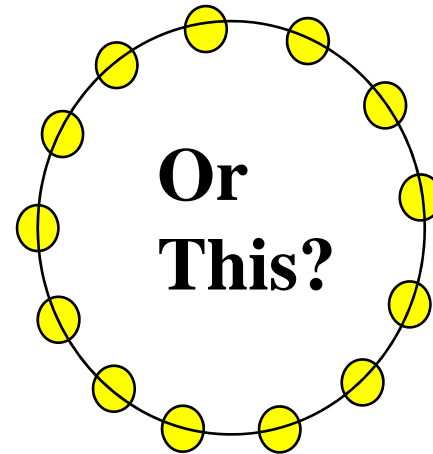


**Or This?**

**This?**



**Or  
This?**





# Much Appreciated Support From .....



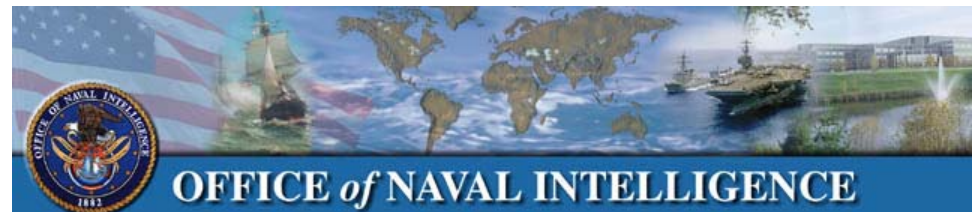
*Commander Patrol &  
Reconnaissance Wing TWO*



*SPAWAR-TSC & 780*



*Naval Undersea  
Warfare Center  
Keyport*



# Questions ?

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