

Seafloor Search with Remote Sensing Instrumentation: Lessons Learned

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2006 International Marine Technicians Symposium
17 October 2006



Idealized Search Technique

✍ Preparation

- Interviews
- Historical Data
- Operational Conditions
- Search Planning
- Resource Planning
- Stage Equipment
- Assemble/Interview Search Team and Crew

✍ Mobilization

✍ Execution

- Nested Searches - the collection of increasingly higher resolution data over smaller and smaller areas.
- Processing – real-time versus post-processing.
- Multi-sensor Approach.
- Prioritize Targets.

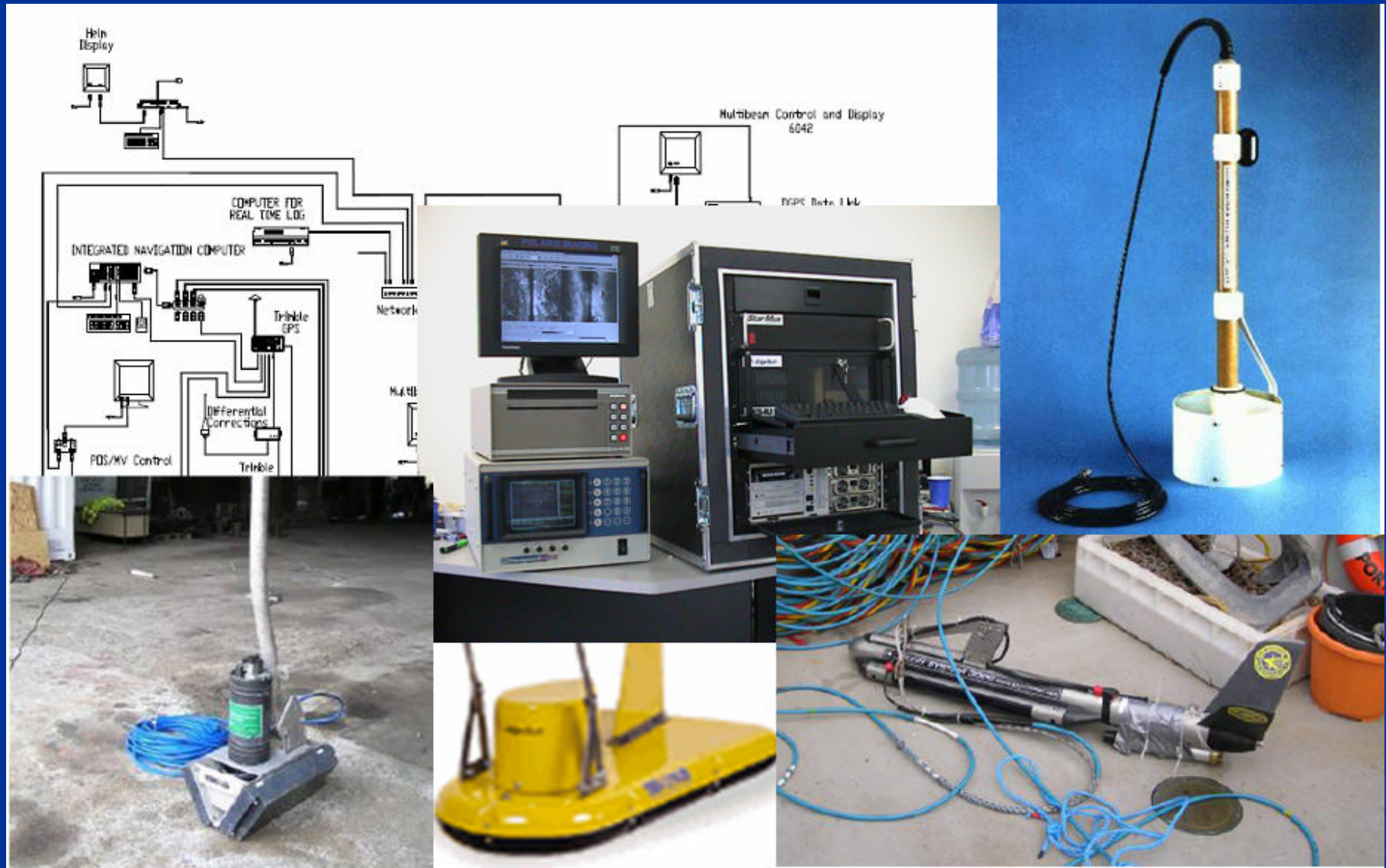
✍ Verification

... there is a disconnection between theory and real-world application.

Stage Equipment



Learn Equipment Operation and Maintenance in Advance



Include Sensor Limitations in Planning

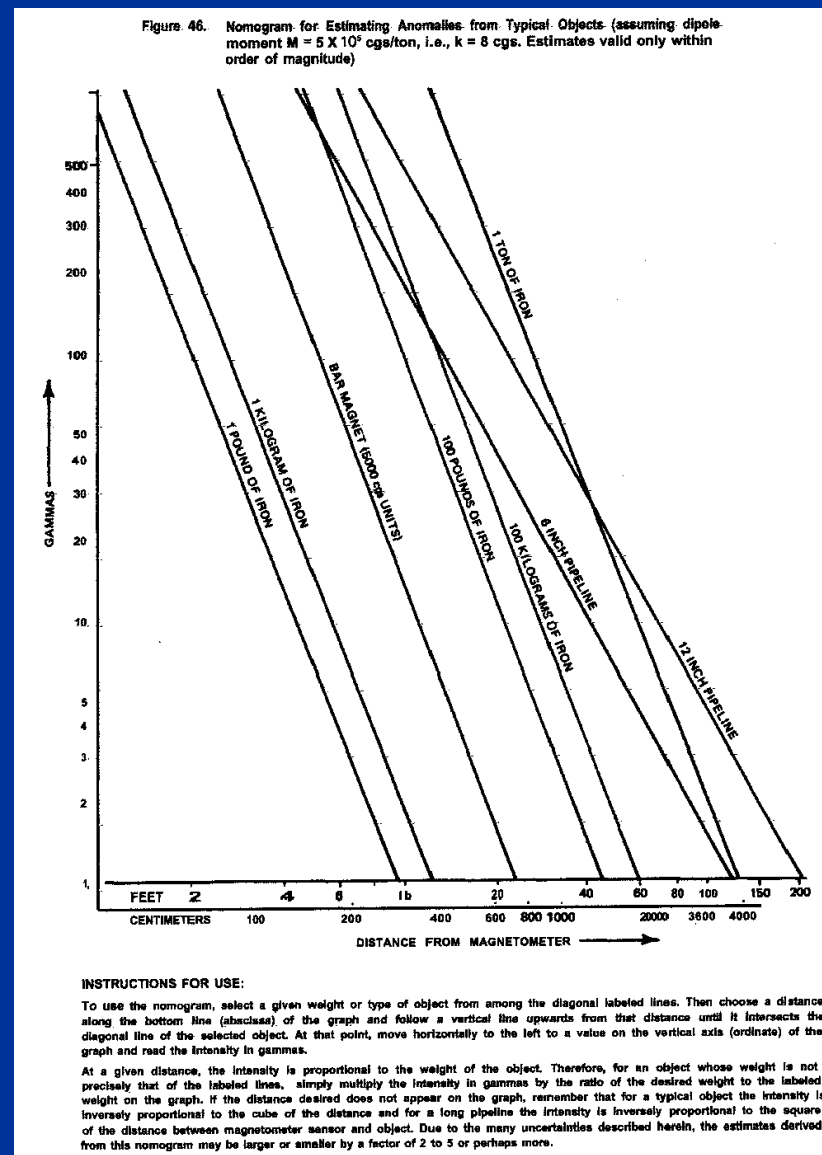
For 1 Kg. Iron

- 50 Gammas at 4 feet
- 10 Gammas at 8 feet

For 100 Kg. Iron

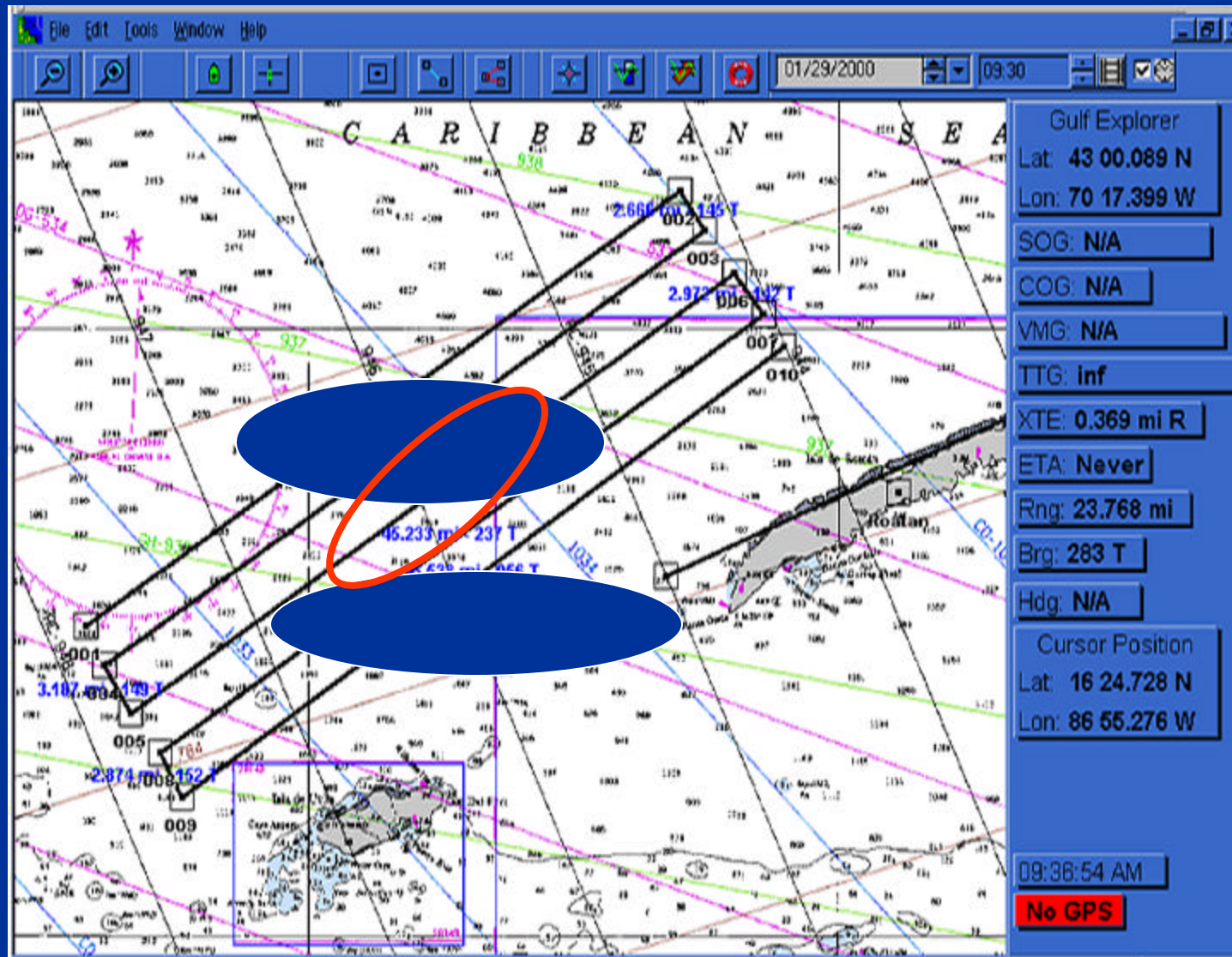
- 50 Gammas at 24 feet
- 10 Gammas at 38 feet

Example: At a line spacing of 10 meters and a tow altitude of 10 meters, 100 lbs. of iron could have an anomaly < 5 gamma.

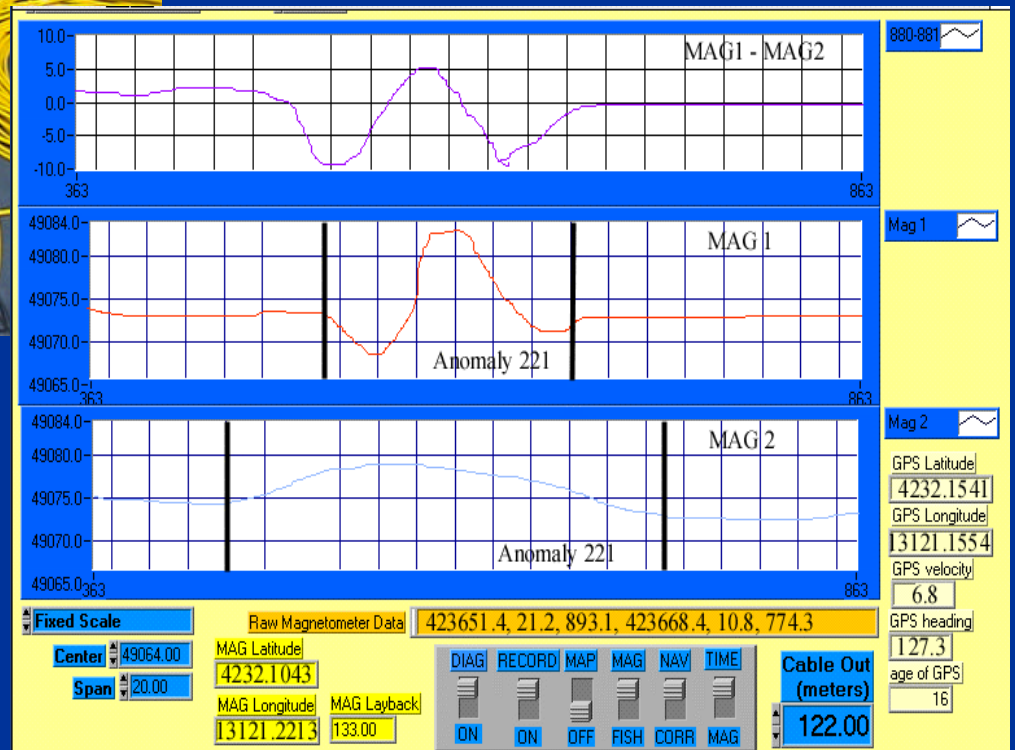


Plan Search and Evaluate Constraints in Advance

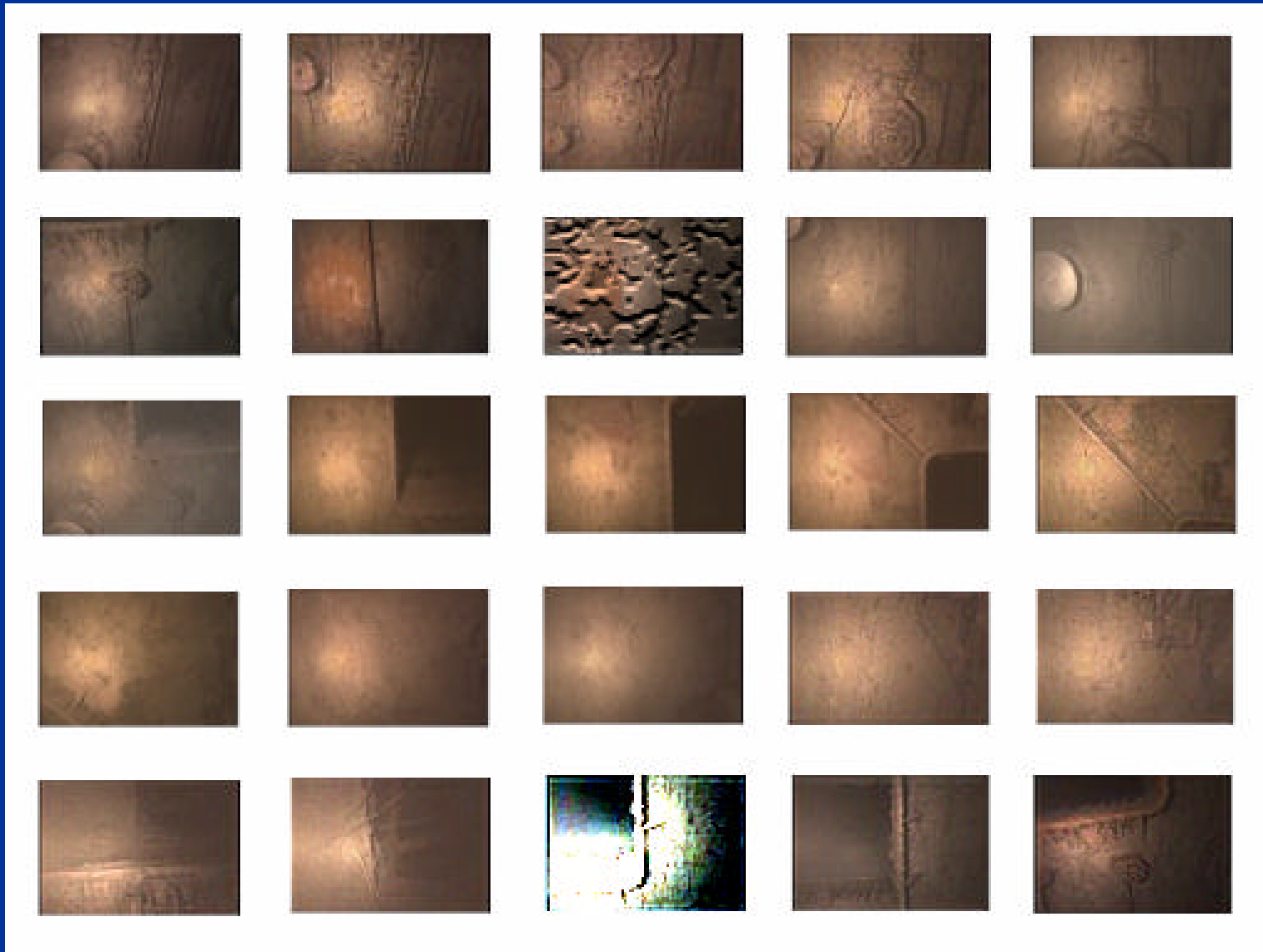
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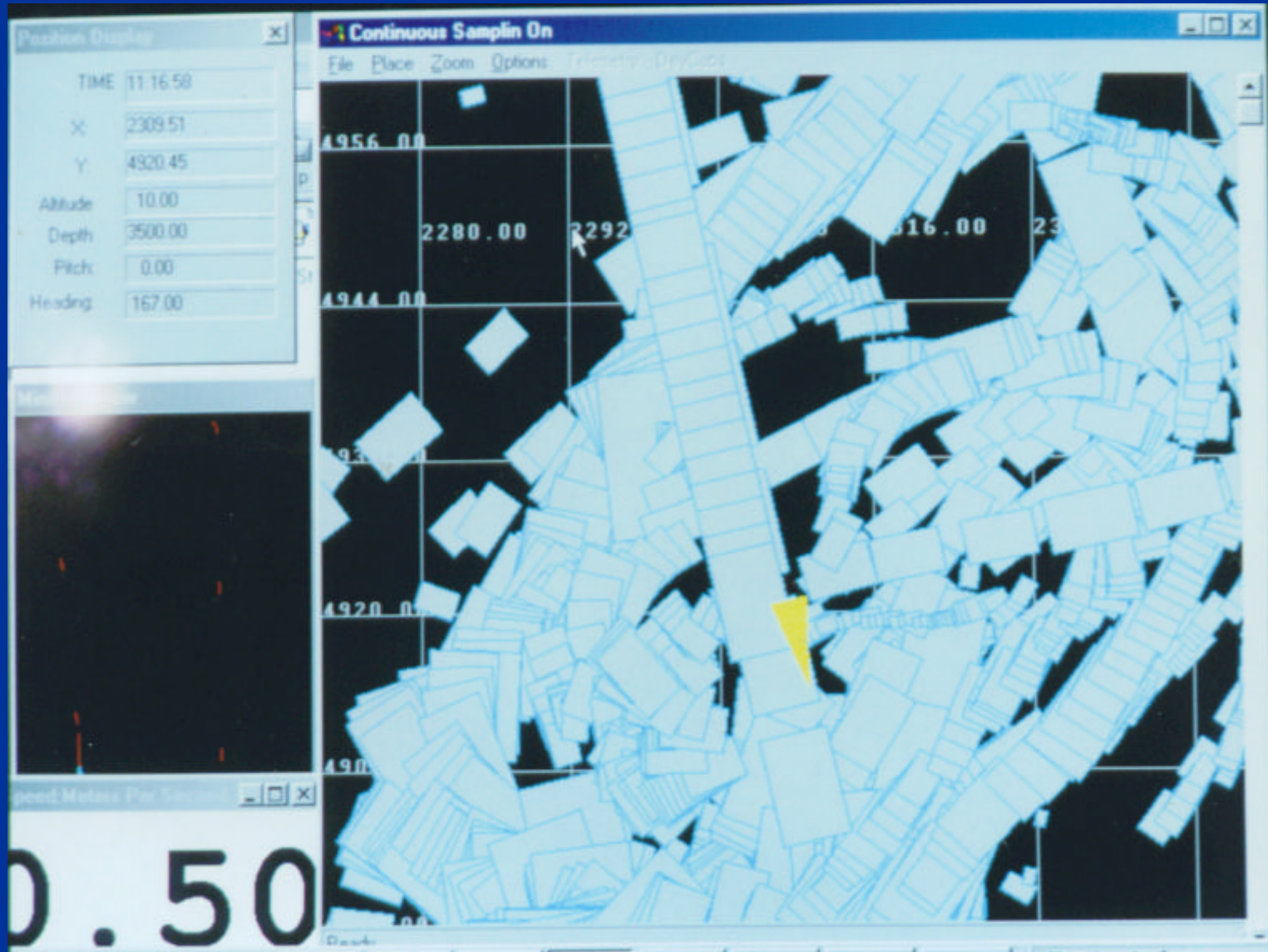
Leverage Concurrent Data Collection



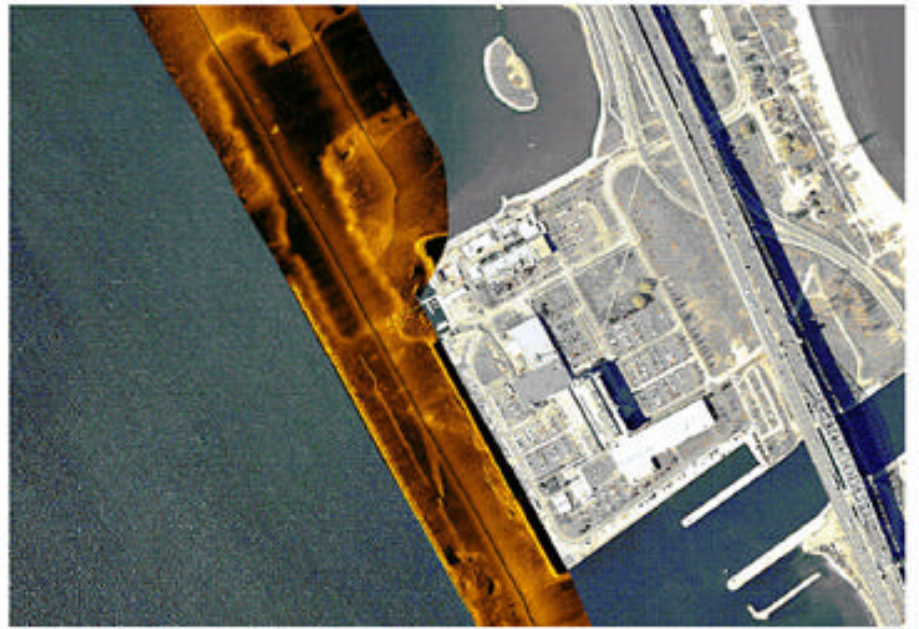
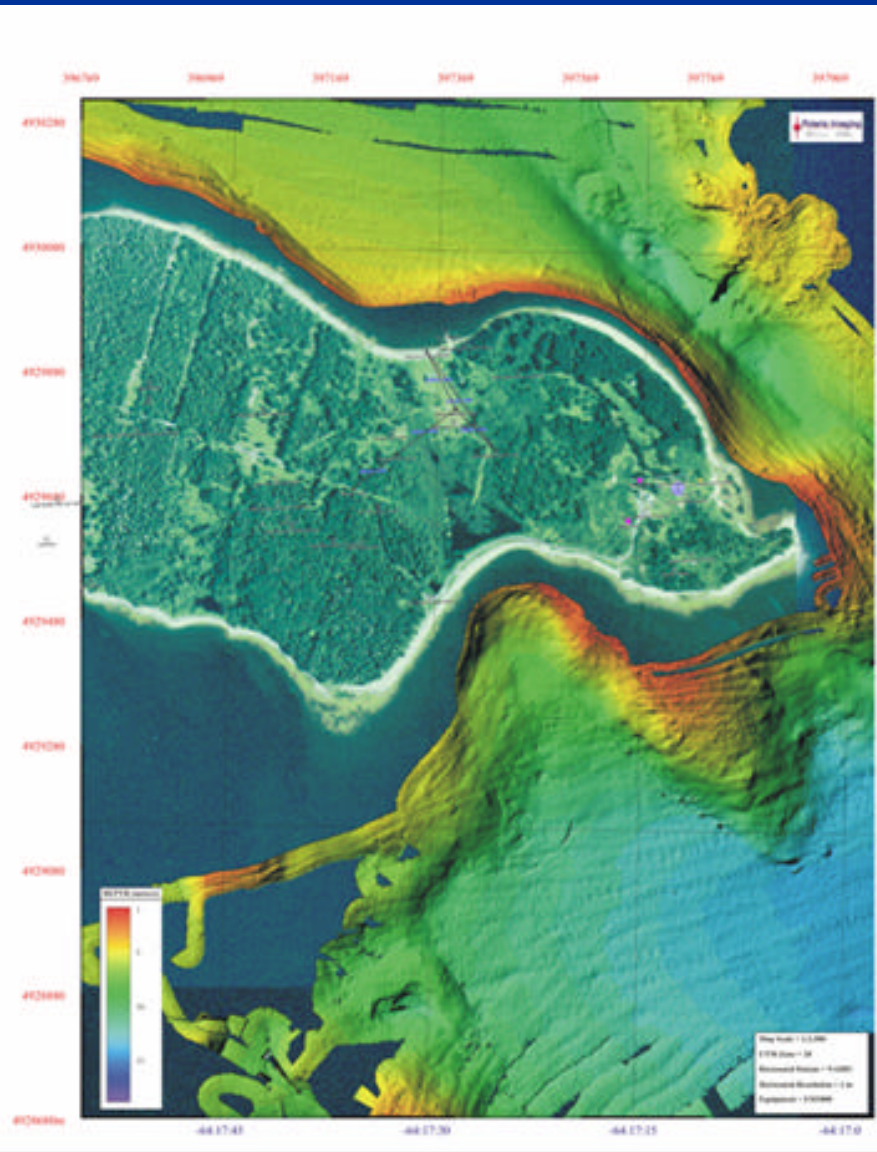
Verify Data Quality in Real Time



Verify Coverage in Real Time



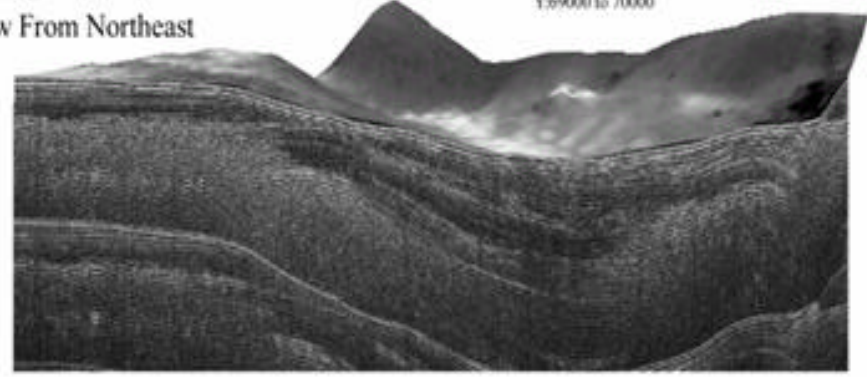
Exploit multi-sensor data products



Example SWM mosaic with an imported geo-referenced satellite image in the background as a base map.
 Courtesy of Darryl Kneak.

Area #2
 View From Northeast

X: -100500 to -99500
 Y: 69000 to 70000



Prepare for the Worst Case.



Top Ten Tips for Executing a Successful Seafloor Search

1. Prepare for the worst case scenario.
2. Never delete data.
3. Spares, especially spare cables.
4. Stage search and test equipment and test before using.
5. Learn all system functions before deployment.
6. Use a known target to calibrate the systems on the boat each day of the search.
7. Record plenty of notes daily. Use a chart as a working incident/target log.
8. Post-process data daily. Verify quality and coverage.
9. Leverage concurrent data collection and exploit multi-sensor data products.
10. Be prepared to cancel operations.

Questions?