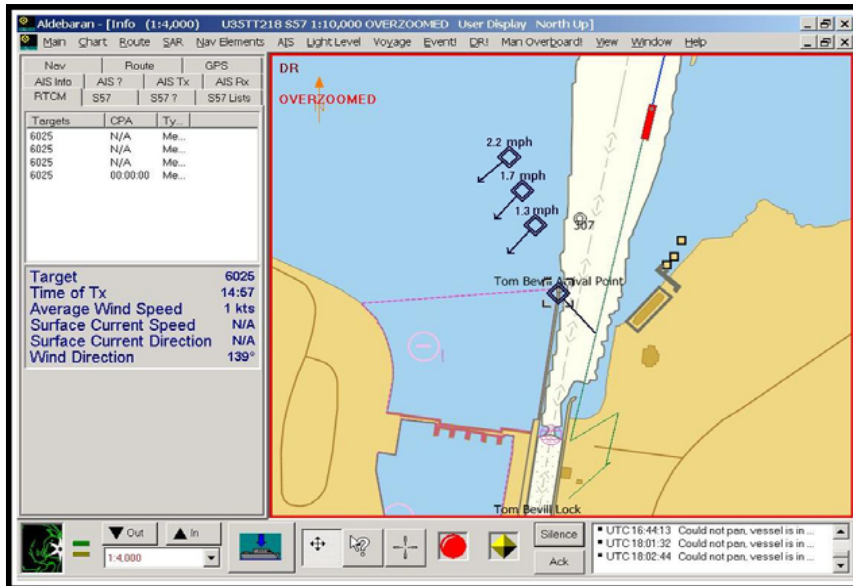


Real Time Current Velocity System



- Michael Winkler
- Danny Marshall



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RTCV Partners

- Corps
 - HQ
 - ERDC (CHL)
 - MVD
 - LRD
 - Mobile District
 - Pittsburgh District
 - Louisville District
 - St. Louis District
 - Rock Island District
 - St. Paul District
 - Huntington District
- Towing Industry
 - Ingram Towing
 - Kirby
- USGS
- USCG
- Equipment Suppliers
 - ADCP (CC Lynch & RD Instruments)
 - AIS Software (ICAN)
- Contractors
 - Maxscient



FY08 RTCV Install Locations

- **Real Time Current Velocity (RTCV) at navigation locks with severe outdraft.**
 - L & Dam #3 (Upper Miss)
 - Lock & Dam #22
 - Lock & Dam #25
 - Dresden Lock & Dam
 - McAlpine Locks & Dam
 - Smithland Locks & Dam
 - Emsworth Locks & Dam
 - Montgomery Locks & Dam
 - Racine Lock & Dam



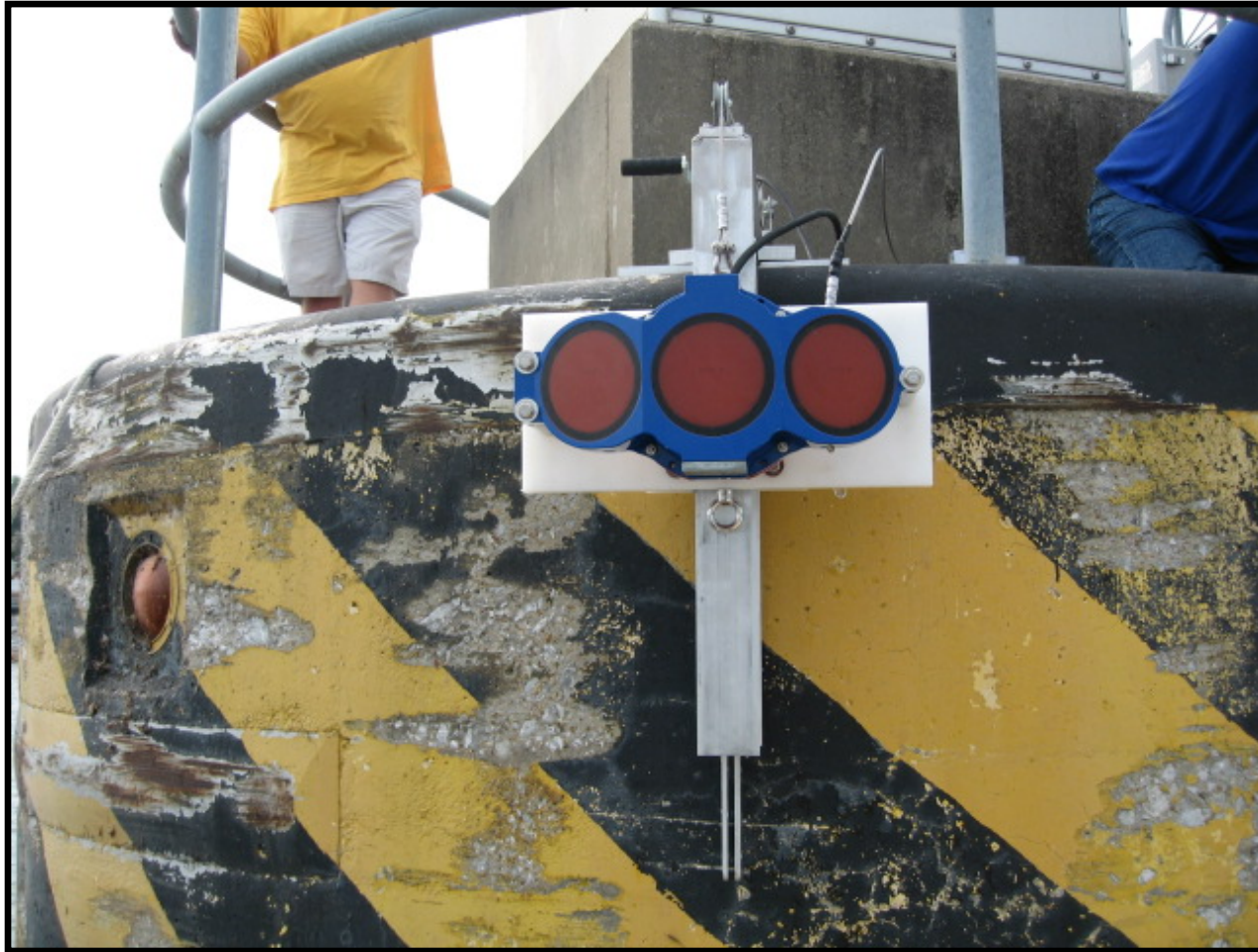
RTCV Deployment



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ADCP Mount



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Wind Meter



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ADCP/Wind Control Station



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RTCV Workstation



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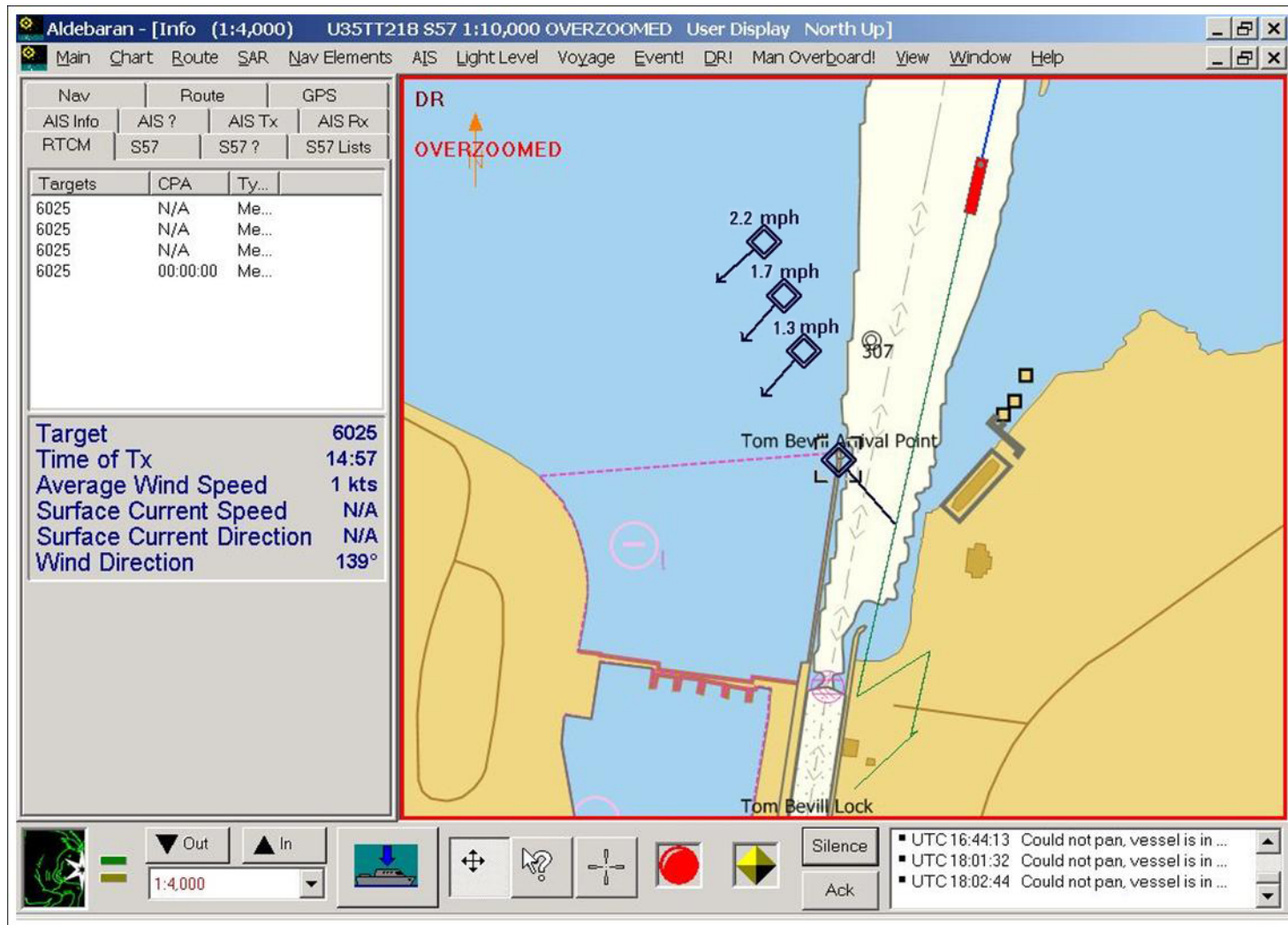


AIS Translator Program

The screenshot shows the AIS Translator program window. At the top, there are buttons for 'Start Logging', 'Stop logging', 'Hide', and 'Exit'. Below these is a tabbed interface with tabs for 'Latest', 'Com Ports', 'Location', 'AIS Settings', 'Email', 'Thresholds', and 'Debug'. The 'Latest' tab is selected. The main content area is divided into several sections: 'Time of Last Readings' with input fields for 'ADCP' and 'Wind'; 'Position 1 Data' with input fields for 'Direction' (Degrees) and 'Speed' (Miles Per Hour); 'Position 2 data' with input fields for 'Direction' (Degrees) and 'Speed' (Miles Per Hour); 'Position 3 data' with input fields for 'Direction' (Degrees) and 'Speed' (Miles Per Hour); and 'Wind Data' with input fields for 'Direction' (Degrees) and 'Speed' (Miles Per Hour). Each section has a title in blue text. The window has a standard Windows XP-style title bar and a status bar at the bottom.



Current Vectors on IENC



RTCV & AIS

- Automatic Identification System
 - VHF Radio Transmission
 - Ship-to-ship, ship-to-shore, and shore-to-ship communication of information (e.g., vessel identity, destination, cargo, position, speed, course)
 - AIS is a shipboard digital broadcast system that continually transmits and receives voiceless exchange of vessel navigational information
- AIS Transmits RTCV Data, RTCV needs AIS to deliver message



Forthcoming Inland USCG AIS Rule

- Announcement published October 31st, 2005
- Extend to all U.S. navigable waters
- Potentially could effect 17,000 vessels.
 - Commercial self-propelled vessel of ≥ 65 feet
 - **No exceptions**
 - Towing vessel ≥ 26 feet and > 600 hp
 - Vessels carrying ≥ 50 passengers
 - Hi-Speed vessels carry ≥ 12 passengers
 - Certain dredges / floating plants, and
 - Vessel moving certain dangerous cargoes
- Forthcoming rulemaking will address timeline
 - Reasonable time will be given for installation/use
 - Waiver provisions already exist



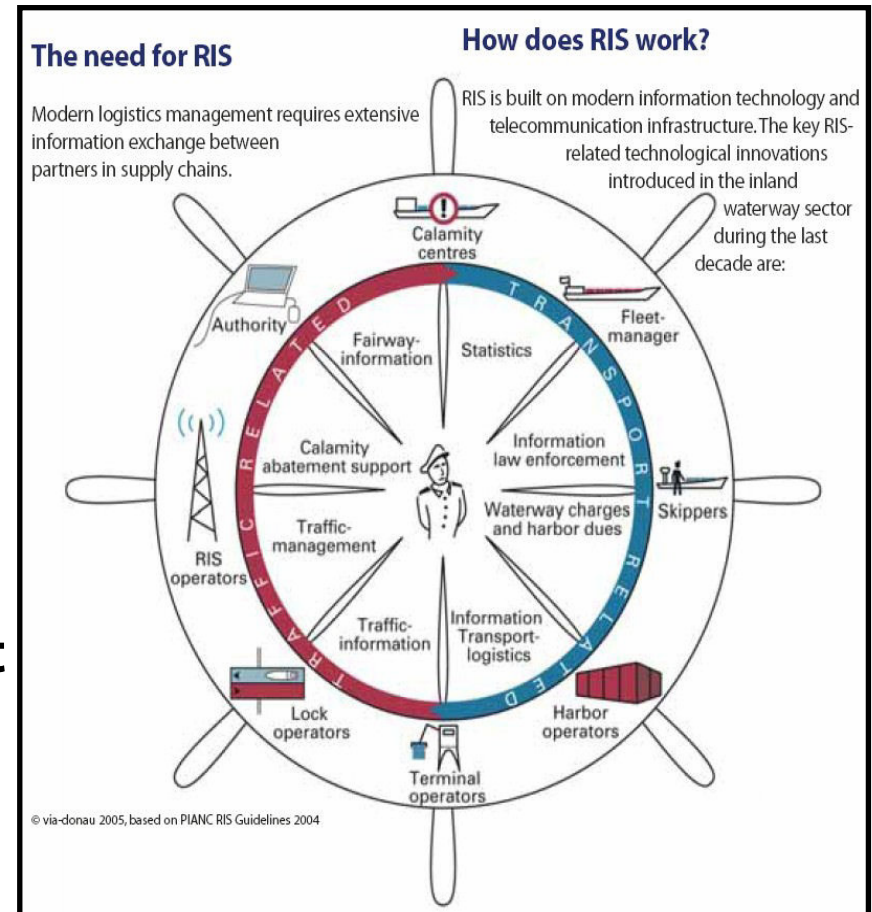
AIS Benefit for the Corps

- Improve Safety at Corps Projects
- Improve Levels of Reliability
- Improve lock and traffic management strategies
- Real Time Operational data – to the vessel
 - Electronic Navigation Charts Updates
 - Lock condition (available, queue)
 - Real time current and wind velocities
 - River stage, water releases
 - Navigation safety information (hazards, AtoN status, etc.)

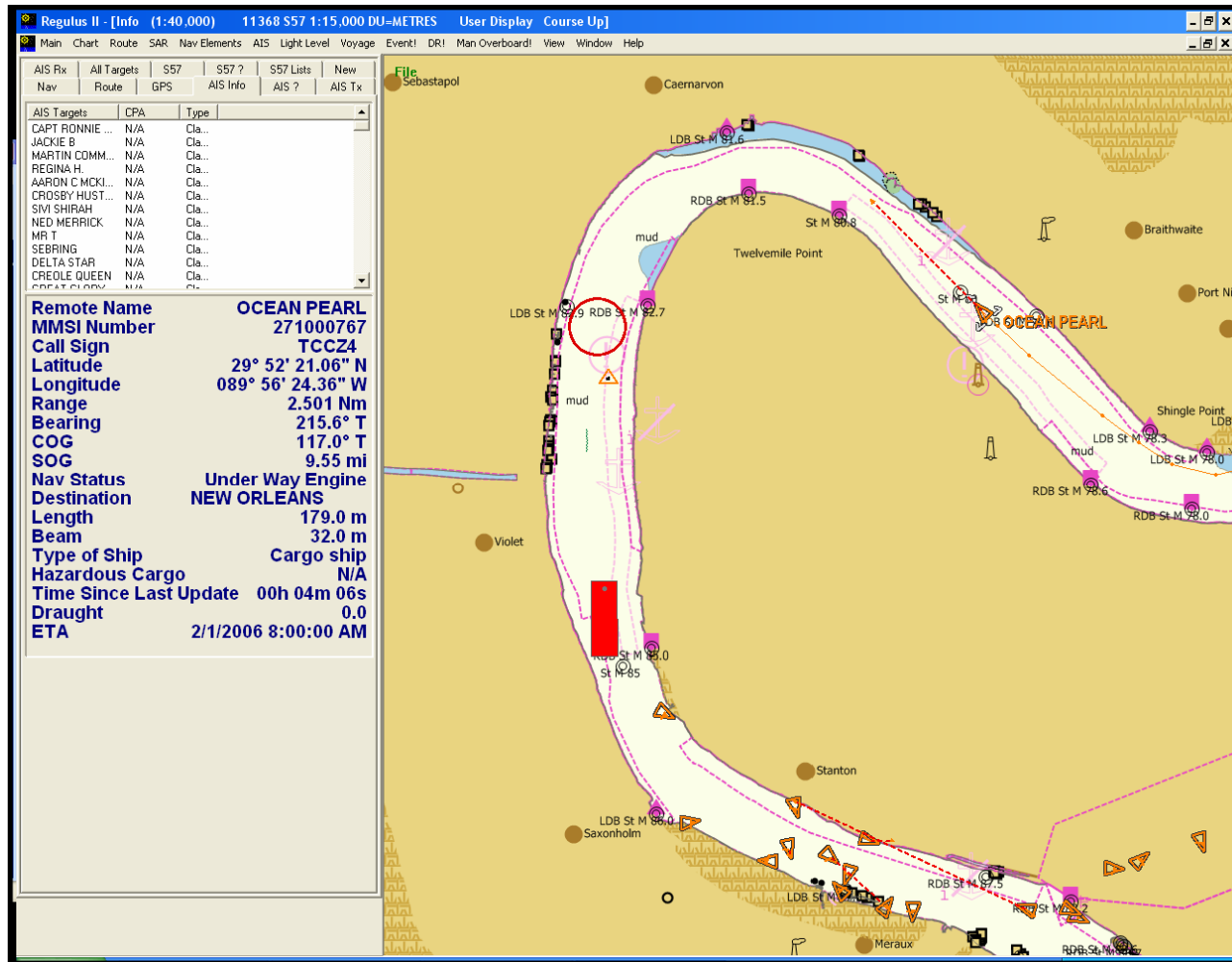


AIS only Part of RIS Services

- AIS for ECDIS / ENC / RADAR
- Electronic Ship Reporting
- Notices to Mariners
- VTS Vessel Traffic Service
- Calamity Abatement Service
- Dangerous Good Monitoring
- Channel Management
- Lock and Bridge Management
- Tourism Services
- Transport Logistic Service
- Statistic Services



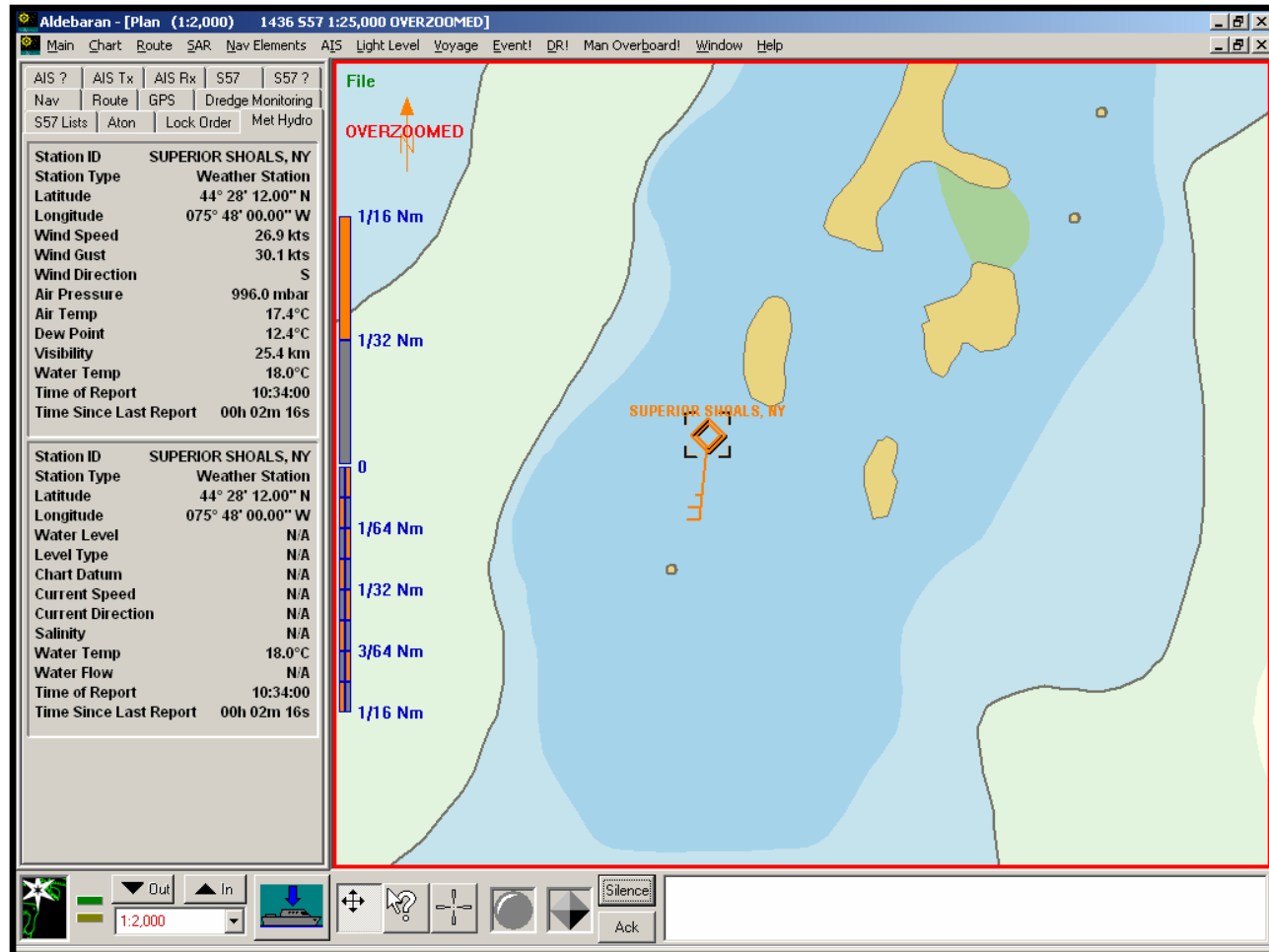
Vessel to Vessel Interaction



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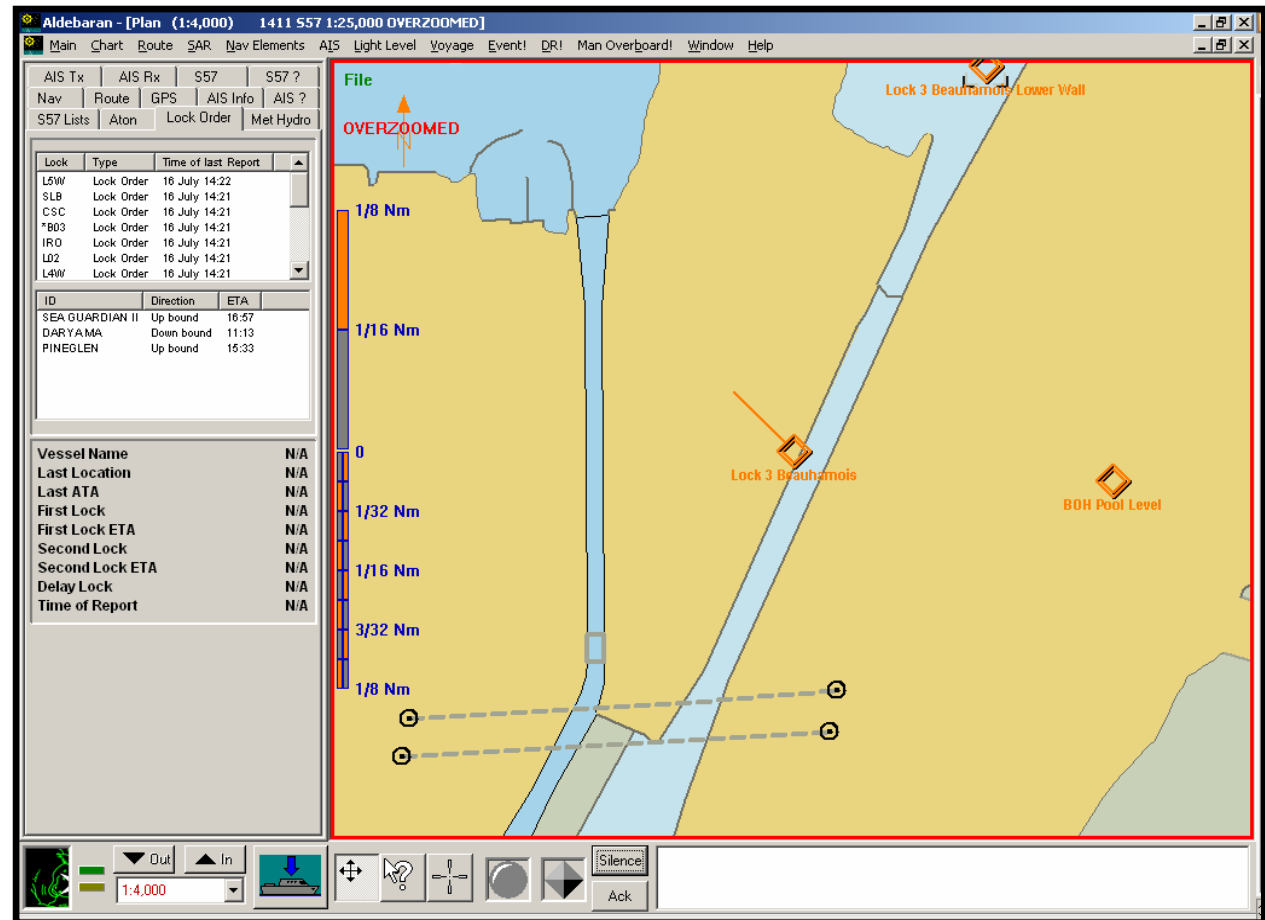


Meteorological & Hydrological Reporting



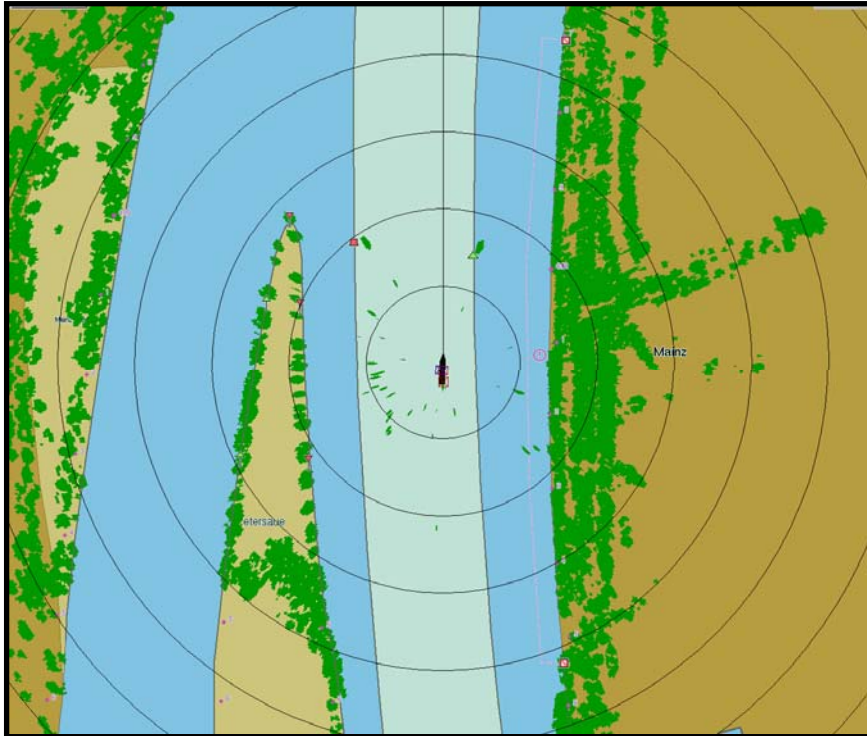
Lock Order Message

- Used by Saint Lawrence Seaway since 2002
- Improves efficiency, lock utilization, mitigates racing & wait time
- Allows Locks to perform Maintenance based on que
- Allows industry to save fuel

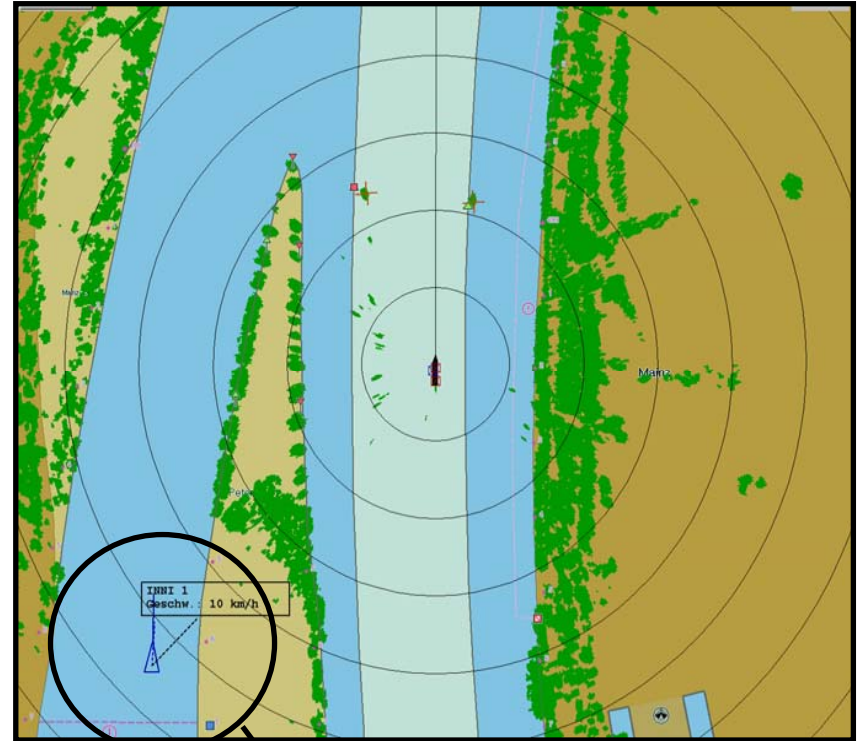


Looking Behind an Island

Radar Display



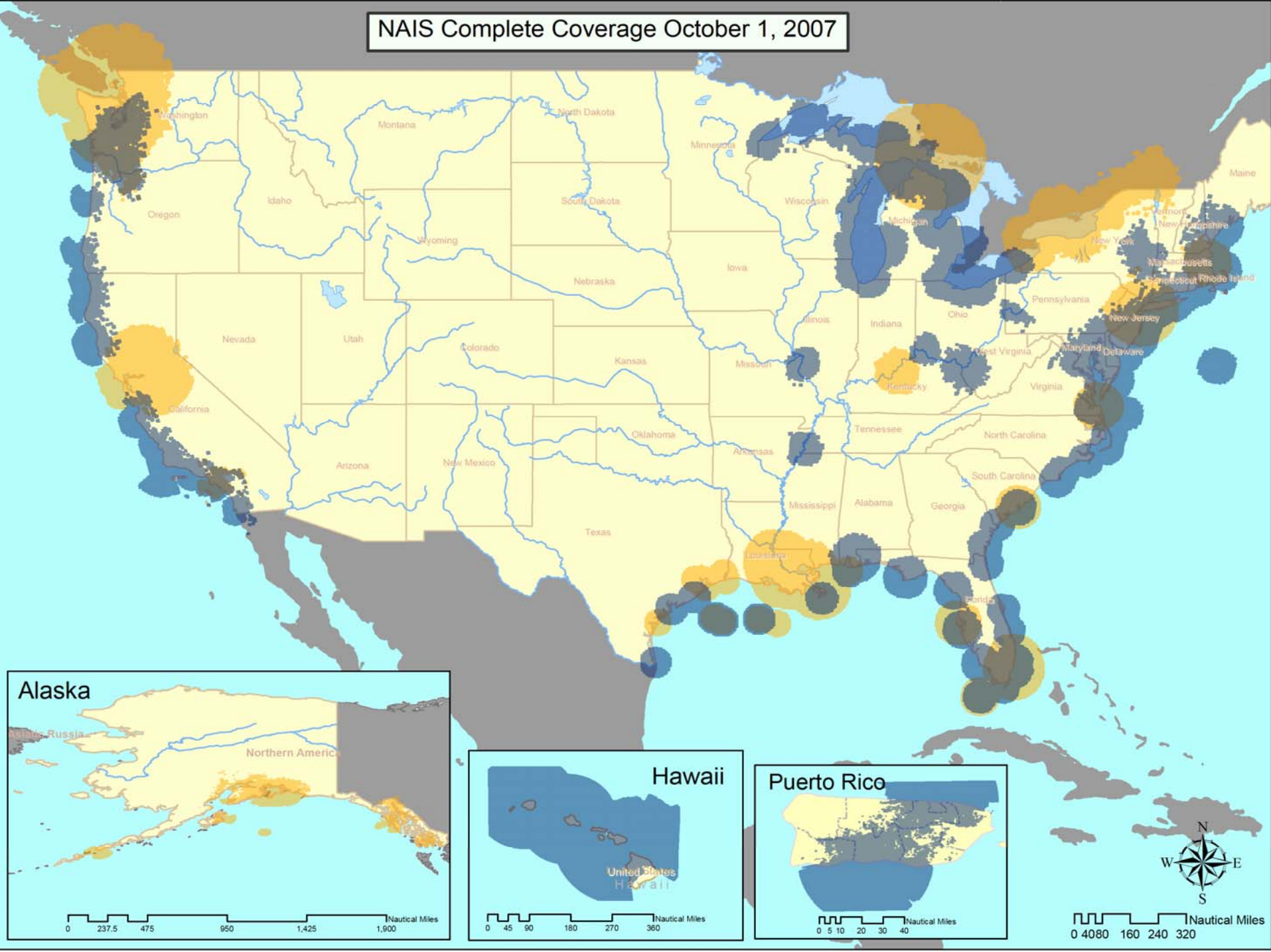
AIS and Radar Display

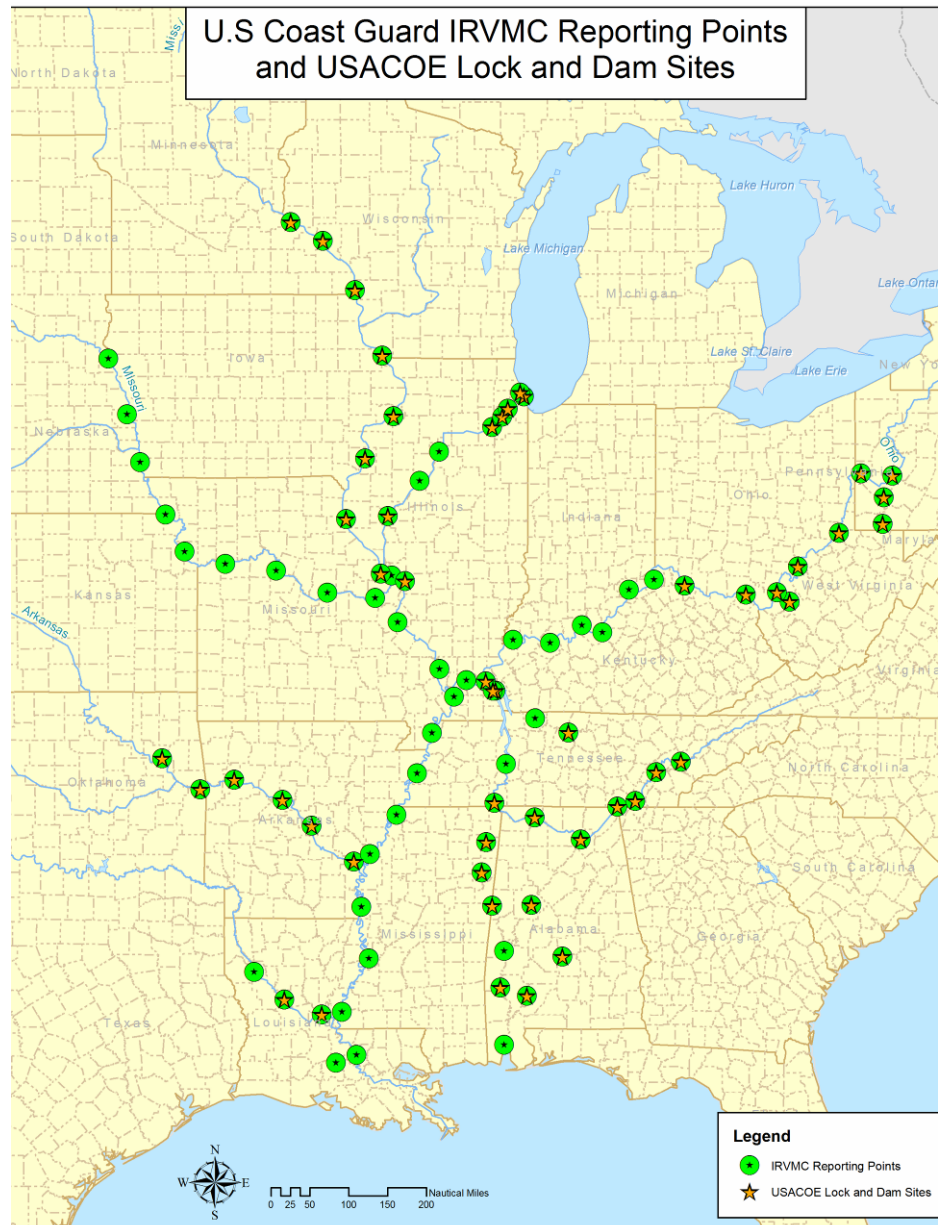


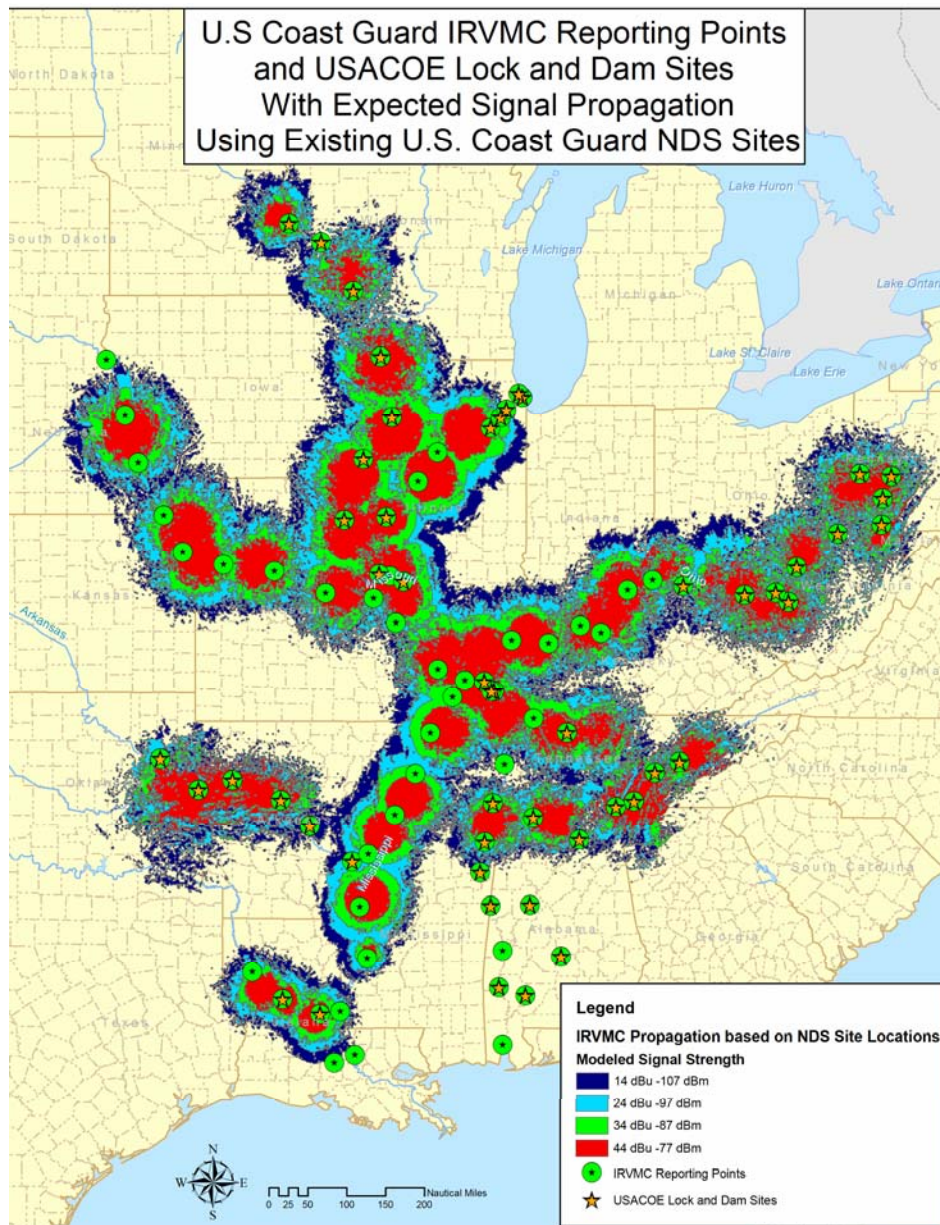
AIS Symbol



NAIS Complete Coverage October 1, 2007





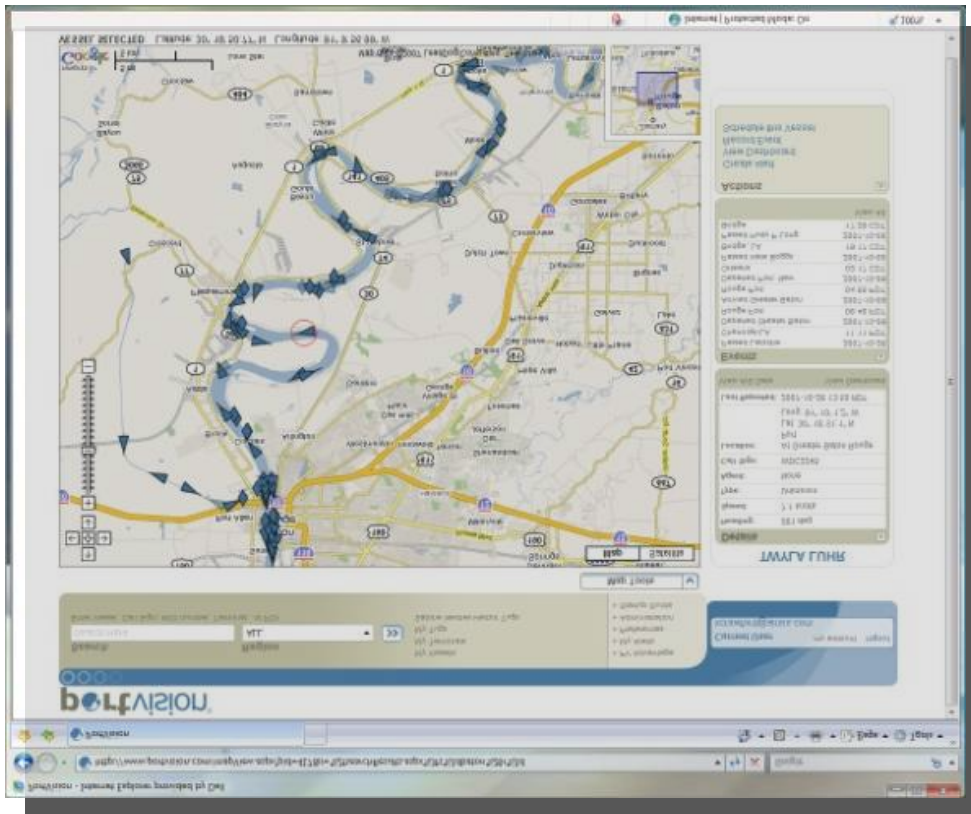


PortVision

- AIS has come a long!
 - Terminals, inspectors, agents, pilots, tugs, port authorities, carriers, shippers, lawyers, insurance companies, law enforcement, marine service companies, non-maritime government
- What started as a government mandate, is now ***benefiting*** industry!



PortVision, Government Applications Improve Safety & Efficiency



- **Dangerous Good Monitoring**
- **Channel Management**
- **Lock and Bridge Management**
- **Allows Locks to perform Maintenance based on que**



Questions?

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