

**BOARD FOR BRANCH PILOTS MEETING
MINUTES**

The Virginia Board for Branch Pilots met on Tuesday, December 14, 2010, at the Virginia Port Authority, 600 World Trade Center, Norfolk, Virginia, with the following members present:

Charles R. Amory, Jr.
Captain Robert H. Callis, III
Bruce R. Cherry
Captain J. William Cofer
Captain Milton B. Edmunds
Thomas P. Host, III
William M. Martin, III
Captain John A. Morgan, Jr.
Meade G. Stone, Jr.

Staff present for the meeting were:

Gordon N. Dixon, Director
Mark N. Courtney, Deputy Director for Licensing and Regulation
Kathleen R. Nosbisch, Executive Director

Cynthia H. Norwood, Senior Assistant Attorney General, was present from the Office of the Attorney General.

Finding a quorum of the Board present, Mr. Cherry, President, called the meeting to order at 10:30 a.m.

Call to Order

Mr. Martin moved to approve the agenda. Mr. Amory seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone.

**Approval of
Agenda**

Captain Callis moved to approve the minutes from the November 2, 2010 board meeting. Mr. Host seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone. Captain Callis moved to approve the minutes from the December 8, 2010 committee meeting as amended. Captain Morgan seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone.

**Approval of
Minutes**

The Board reviewed a letter from Captain William G. Saunders, Jr., regarding an incident on November 5, 2010, involving the **STATSRAAD LEHMKUHL**.

**Captain William
G. Saunders, Jr.
- STATSRAAD
LEHMKUHL**

At 0230 on the 4th of November 2010, Captain Saunders was ordered to sail the tall ship STATSRAAD LEHMKUHL from Lynnhaven anchorage to the Otter Berth at Waterside in Norfolk, VA at 0500. Captain Saunders boarded the vessel at 0445 and conducted a Master/Pilot exchange with the captain of the ship. The captain presented Captain Saunders with a copy of the vessel particulars and pilot card, and ensured him that all of the ship's navigation and mechanical equipment was in proper working order. Captain Saunders noted from the information on the pilot card that the ship had a length overall of 321 feet 6 inches, a beam of 41 feet 4 inches, and a draft of 17 feet 8 inches. The pilot card also stated that the gross tonnage of the STATSRAAD LEHMKUHL was 1,516 gross tons, and was equipped with a left-hand turning variable pitch propeller and a bow thruster of 300 horsepower. The captain explained that the ship's rudder was large and both the rudder and the bow thruster were very effective.

The captain notified Captain Saunders that the ship had a timed arrival for 0900 at the Otter Berth and would dock bow-in, starboard side alongside. Captain Saunders informed the captain that there were flagpoles positioned at the north end of the Otter berth which the bowsprit could contact and suggested a stern-in, port side alongside docking. The captain stated that arrangements had been made for the bow-in, starboard side alongside docking to coordinate with a ceremony taking place at the berth. The captain and Captain Saunders agreed that Captain Saunders would pilot the vessel from Lynnhaven anchorage to a point in the channel just off of the berth. Captain Saunders notified the captain that the wind was blowing out of the South at less than 10 knots, they would arrive just after the slack before the ebb current, and that tugboats would be standing by at the dock to assist in docking. The captain informed Captain Saunders that he would dock the vessel and that he did not require the assistance of the tugboats.

Captain Saunders called the U.S. Coast Guard Joint Harbor Operations Center (JHOC) on VHF-FM Channel 12 to inform them of the vessel's IMO number, and their intentions to proceed from Lynnhaven anchorage to the Otter Berth. The STATSRAAD LEHMKUHL was granted permission to transit, and at 0500 they heaved anchor and proceeded inbound to the Otter Berth.

At 0813, Captain Ray Robbins of Robbins Towing called Captain Saunders to inform him that he was standing by off of the Otter Berth with tugboats to assist the STATSRAAD LEHMKUHL in its docking maneuvers. At this time, the STATSRAAD LEHMKUHL was approaching buoy "29" of Lambert's Bend. Captain Saunders notified the captain of the STATSRAAD LEHMKUHL that he was in communication with the tugboats, and the captain, again, refused the assistance of the tugs.

At 0845, the STATSRAAD LEHMKUHL was approaching buoy "36" of Town Point Reach. The current in the area was approximately less than 0.25 knots and the wind was blowing out of the South at 5-10 knots. The captain of the STATSRAAD LEHMKUHL informed Captain Saunders that he had his crew in position forward to give him distances to the forward bulkhead of the berth, as well as crew in position to get a forward spring line ashore once in the berth. Captain Saunders reminded the captain of the flagpoles at the north end of the Otter Berth and suggested that the ship be brought alongside before proceeding ahead to the vessel's final position. The captain took the conn at buoy "36" of Town Point Reach on a course of 150 degrees True, at a speed of 3 knots over ground to proceed toward its berth.

At approximately 0900 the STATSRAAD LEHMKUHL approached the Otter Berth, and the vessel's speed over ground was less than 1 knot before the bow crossed the outer dock on the east side of the Otter Berth. Once inside the Otter Berth, a forward spring line was made fast, however, the bowsprit of the STATSRAAD LEHMKUHL contacted the eastern most flag pole on the north end of the berth and knocked it down onto the ground before the vessel was brought alongside into its final position. All lines were made fast and Captain Saunders disembarked the STATSRAAD LEHMKUHL.

After review and discussion, Mr. Martin moved that the letter be filed and that the Board take no action, as there appears to be no violation of the Board's regulations or statutes. Mr. Amory seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone.

The Board reviewed a letter from Captain David B. Ware, regarding an incident on November 20, 2010, involving the **NYK RIGEL**.

Captain David B.
Ware – NYK
RIGEL

On Saturday, November 20, 2010 at 0500 Captain Ware was ordered to pilot the container vessel NYK RIGEL from Cape Henry to Norfolk International Terminal. The vessel was ordered to dock starboard side alongside at North Berth #2. The vessel's length is 964 feet 11 inches, its beam is 105 feet 8 inches and its deepest draft that morning was 37 feet 6 inches.

Captain Ware boarded the vessel at 0450 at Cape Henry. The captain informed Captain Ware of the vessel's draft, maneuvering characteristics and that the vessel had a 2600 horsepower bowthruster. They discussed the transit to the terminal and Captain Ware presented the captain a signed copy of the Master-Pilot information exchange card. The captain informed Captain Ware that he had no questions, at which point Captain Ware then assumed the conn of the vessel.

The weather was clear with a sustained 20-25 knot Southwest wind. There was 2.8 feet of tide with a flood current of about .5 knots. At approximately 0715, Captain Ware piloted the vessel past red buoy "10" Norfolk Harbor Reach where the Moran docking master, Captain Mark Scanlan boarded the vessel from a Moran tug. After they discussed their berthing assignment and the deepest draft, engine speed and heading of the vessel, Captain Scanlan assumed the conn of the vessel. At that time the engine order was dead slow ahead and the vessel's speed over ground was approximately 5 knots. Captain Scanlan made the tug JAMES MORAN (a 5,200 horsepower tractor tug) fast with a line to the ship's port quarter and used the tug CAPE HATTERAS (a 4,200 horsepower twin screw tugboat) to push on the vessel's starboard bow.

At approximately 0720 Captain Scanlan turned the vessel into the NIT North Channel bow first, with the plan to turn the vessel inside the NIT North Berth approach channel and berth the vessel starboard side alongside the berth. The maneuver was proceeding routinely, with Captain Scanlan backing the vessel SLOW ASTERN to reduce it's headway during the approach. As the vessel was approaching the berth Captain Scanlan ordered "HALF ASTERN." Captain Ware was monitoring the RPM and noticed there was no response, and also observed that the mate standing watch at the telegraph did not respond to the HALF ASTERN order. Captain Scanlon also observed there had not been a response to his order and repeated his order of "HALF ASTERN" and this time the mate responded. But at this point the bow of the vessel appeared close to the berth so Captain Scanlan ordered "FULL ASTERN." The bulbous bow of the vessel then made contact with the dock.

At 0735 Captain Scanlan backed the vessel to NIT North Berth #1 and docked the vessel safely alongside. There was damage to the bow of the ship, and some damage to the dock. There were no injuries or petroleum spilled in the water.

Captain Cofer reported that the Coast Guard has not completed its investigation of the incident. Mr. Martin moved to delay any action until the February 2, 2011, board meeting. Captain Callis seconded and requested additional information be provided by Captain Ware prior to further consideration of the incident, including the two positions of the ship preceding the incident and an updated chart that includes Berth 2. The Board requested that Ms. Nobsch draft a letter to Captain Ware requesting the additional information be provided before the February 2, 2011, board meeting. The Board agreed by consensus.

Captain Edmunds provided the Board with a report of the meeting of Examination Administrators from December 7 and 8, 2010. The Examination Administrators reviewed the renewal applications for the 2011 calendar year and presented the following report:

Exam
Administrators
Report

The following branch pilot licenses were presented for renewal: Lorenzo D. Amory, III; E. Waightstill Avery; John Brockington Beasley, Jr.; Charles I. Boggs, Jr.; Robert H. Callis, III; Julian Wythe Whiting Chisman, III; James William Cofer; William L. Counselman; William G. Diggs; Ernest W. Dodson, Jr.; Robert Henley Dozier, III; Milton B. Edmunds; Michael S. Eubanks; Mark S. Evans; Tazewell Fitzgerald; Nelson Turner Gray; Herbert R. Green, III; Nathaniel T. Green, II; Kevin D. Hartz; W. S. Harwood, III; David H. Heath; Charles H. Hoffman; Robert Lee Holland, Jr.; Richard Keith Hope; Brian Keith Hudgins; Chadwick M. Jamison; Jacob R. Johnson; John Allison Jones, Jr.; Benjamin B. Lee; Joseph R. McKnew; Dale Allen Meyer, Jr.; John A. Morgan, Jr.; John G. Phillips, Jr.; Robert L. Prodan, II; Frank M. Rabena; Roy A. Rector, Jr.; Torrence A. Rogers; Thomas D. Rutter; Gustave B. Schill; Luther J. Stallings, III; Gilbert R. Swink, III; James South Trimble; David B. Ware; Jonathan D. Worth; and Clarence M. Young.

The members of the Examinations Administrators Committee reviewed the renewal application paperwork and deemed the individuals qualified pursuant to § 54.1-906 of the *Code of Virginia*. Captain Edmunds moved to approve the renewal applications of the above-listed unlimited licensees. Captain Callis seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan, and Stone. Captains Callis, Cofer, Edmunds, and Morgan abstained from voting on their respective licenses.

The following limited branch pilot licenses were also presented for renewal: January N. Collins, Adam L. Halstead, Charles A. Huffman; William G. Saunders, Jr.; Joseph M. Schacherer III; and Benjamin L. Speckhart.

The members of the Examinations Administrators Committee reviewed the renewal application paperwork and deemed the individuals qualified pursuant to § 54.1-906 of the *Code of Virginia*. Captain Edmunds moved to approve the renewal applications of the above-listed limited licensees at their respective limitations as of December 31, 2010. Captain Morgan seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Miller, Morgan, and Stone.

Captain Callis reported that no ship has transited the York River above Pages Rock in over five years. Therefore, Mr. Amory moved to waive the

requirements of subsection C.3 of regulation 18 VAC 45-20-20, pursuant to subsection C.4 of regulation 18 VAC 45-20-20, for transit above Pages Rock on the York River for the following branch pilots due to no ship traffic: Robert H. Callis, III; William L. Counselman; William G. Diggs; Mark S. Evans; Tazewell Fitzgerald; Nelson Turner Gray; Charles H. Hoffman; and John A. Morgan, Jr. Mr. Host seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone. Captains Callis and Morgan abstained from voting on their respective licenses.

Captain Cofer provided a report on the Virginia Pilot Association's Apprenticeship Program. A letter from Captain Ware of the Apprenticeship Committee of the Virginia Pilot Association recommended that there be no additions or revisions to the Virginia Pilot Apprenticeship Training Program.

**Review of
Virginia Pilot
Association's
Apprenticeship
Program**

Mr. Martin moved to approve the Apprenticeship Program, adopt the program and delegate the operation and administration of the program to the Virginia Pilot Association for 2011. Mr. Stone seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan, and Stone.

Mr. Stone, Committee Chair, reported that the Pilot Classification Committee reviewed statistics provided by Captain Ware and did further analysis based on the information. Mr. Stone commended Captain Ware for the information provided in his report. Mr. Stone then turned the floor over to Captain Callis, who proceeded with an in-depth PowerPoint presentation of the analysis and recommendation of the Committee.

**Report from the
Pilot
Classification
Committee**

Captain Callis provided information on why ship weight was changed from units to gross tons. The vast majority of pilot organizations use gross tons and it is internationally accepted as well. Ships continue to increase in draft and gross tons. Due to current classification limitations of gross tons and draft, limited branch pilots are missing opportunities for ships in certain classifications and also sea days. Increasing classifications exposes limited branch pilots to larger ships and more sea days, to better prepare them for an unlimited license. Captain Callis informed the Board the last increase to gross tons was 2001.

Captain Callis made the following recommendations for the Board's consideration:

- Alpha remains 16,000gt/25' maximum draft
- Bravo 24,000gt/28' to 25,000/28' maximum draft
- Charlie 28,000/30' to 32,000gt/32' maximum draft
- Delta 32,000gt/32' to 38,000gt/34' maximum draft
- Echo 36,000gt/34' to 42,000gt/36' maximum draft

Foxtrot 40,000gt/38' to 46,000gt/40' maximum draft
Golf 50,000/42' to 55,000gt/42' maximum draft
Hotel 60,000gt/46' to 64,000gt/46' maximum draft

After further review, discussion and consideration of the health, safety and welfare of the citizens of the Commonwealth, the Board agreed that all limited branch pilots would require further examination before their classifications could be increased. Captain Cofer indicated this was how increases in gross tons have been made throughout the pilot's history. Captain Callis moved to adopt the proposed increases in gross tonnage and draft for the limited branch pilot licenses to be effective after the February 1, 2011, examinations. Mr. Martin seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone.

Ms. Norwood informed the Board that pursuant to § 54.1-100 of the *Code of Virginia*, a review had been conducted of the Board's regulations and there were no conflicts in its regulations with the Constitution of the United States, the Constitution of Virginia, the laws of the United States, or the laws of the Commonwealth of Virginia.

Review of Regulations Pursuant to §54.1-100 of the Code of Virginia

The Board recessed from 11:57 a.m. until 12:05 p.m.

Recess

Ms. Nosbisch informed the Board that the proposed regulations are at day 127 of the proposed stage and are at the Governor's office for approval. Once the regulations are approved and signed, the regulations must proceed to the Registrar's office within 14 days to be published. A 60-day comment period will follow, and then the proposed regulations will come back before the Board to adopt the regulations.

Regulatory Review Update

Captain Cofer introduced Captain Clarence Young. Captain Young gave a presentation of the portable piloting navigations systems and Personal Pilot Units (PPUs) that the pilots are now using for navigational purposes. Captain Young reported that these systems have revolutionized navigational safety; however, the pilots cannot rely solely on the systems because of changes in buoy placement and eroding sandbars. Pilots must also utilize trade skills, local knowledge, visual lookout and radar.

PPU Presentation

At 12:26 p.m., Captain Morgan moved that the Board for Branch Pilots convene a closed meeting under the Virginia Freedom of Information Act to confer with legal counsel relating to the Walter Hugh McCrory, Jr. appeal, a matter lawfully exempted from open meeting requirements under the "consultation with legal counsel" exemption contained in §2.2-3711.A.7 of the *Code of Virginia*. The following non-members will be in attendance to reasonably aid the consideration of the topic: Gordon Dixon, Cynthia Norwood, Kate Nosbisch and Mark Courtney. Mr. Stone seconded the motion which was unanimously approved by Messrs. and Captains: Amory,

Closed Meeting - Discussion of Walter Hugh McCrory Appeal

Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan, and Stone.

At 12:43 p.m., Captain Callis moved to adjourn the closed meeting and to immediately reconvene in open meeting. Mr. Stone seconded the motion which was unanimously approved by Messrs. and Captains: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone.

Open Meeting

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board for Branch Pilots has convened a closed meeting on this date pursuant to an affirmative recorded vote, and in accordance with the provisions of the Virginia Freedom of Information Act; and

WHEREAS, §2.2-3712 of the Code of Virginia requires a certification by the Board that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board certifies that, to the best of each member's knowledge, (I) only public business matters lawfully exempted from open session requirements by Virginia law were discussed in the closed meeting to which the certification applies, and (II) only such business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board.

VOTE: 9-0

AYES: Amory, Callis, Cherry, Cofer, Edmunds, Host, Martin, Morgan and Stone.

NAYS: 0

Ms. Nosbisch informed the Board that their Financial Disclosure statements were due to the board offices by December 27, 2010.

Other Business

Mr. Dixon provided a press release regarding a budget amendment to be made by Governor McDonnell supporting OpSail 2012. OpSail 2012 will commemorate Virginia's role in the War of 1812 and is expected to make a significant economic impact in the Hampton Roads area. OpSail 2000 was attended by 2 million people and generated \$58 million.

Conflict of Interest forms and travel vouchers were completed by all members present.

Conflict of Interest Forms

There being no further business, the meeting was adjourned at 12:49 p.m.

Adjourn

Bruce R. Cherry, President

Gordon N. Dixon, Secretary

LIMITED BRANCH LICENSE PROPOSAL

DECEMBER 14, 2010



LIMITED BRANCH LICENSE PROPOSAL

TOPICS

- RECENT HISTORY OF LICENSE INCREASES
- LICENSE LIMITATIONS AND PROPOSAL
- CURRENT APPRENTICESHIP PROGRAM REQUIREMENTS
- PAIRING OF LICENSES FOR TRACKING TRANSPARENCY
- THE FUTURE OF SHIPPING AND OUR CONCERNS
- LICENSE TRACKING AND REVIEW

LIMITED BRANCH LICENSE PROPOSAL

SHIP UNIT TO GROSS TONNAGE CONVERSION AND INCREASE

- THE CONVERSION OF THE UNIT SYSTEM TO GROSS TONS
- SMALL INCREASE WITH GROSS TONNAGE CONVERSION
- VARIABLES IN THE CONVERSION
- SINGLE TONNAGE SIZE IN ALL CLASSIFICATIONS
- SINGLE MAXIMUM DRAFT IN ALL CLASSIFICATIONS
- NO CONSIDERATION OF STANDARD SHIP SIZES

LIMITED BRANCH LICENSE PROPOSAL

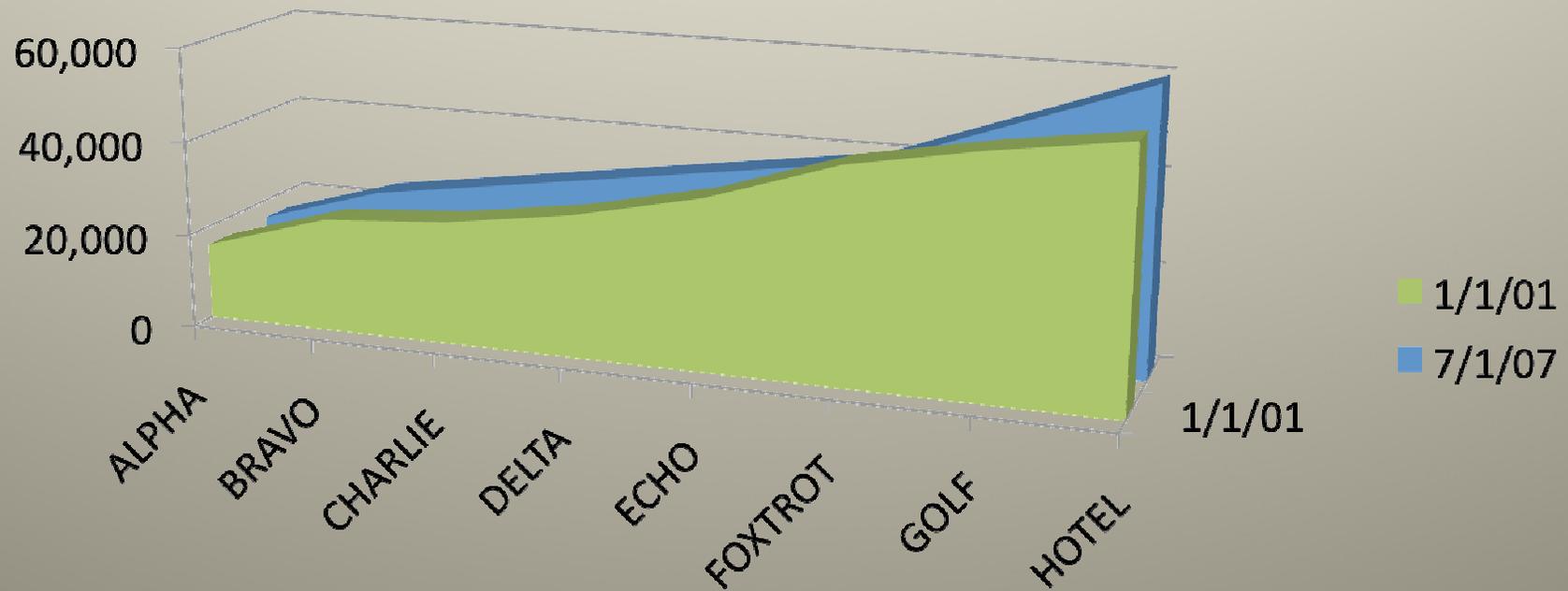
NUMERICAL COMPARISON OF LAST INCREASE (2001-2007)

LICENSE	2001*	2007
ALPHA	16,000 GRT/25'	16,000 GRT/25'
BRAVO	24,000 GRT/27'	24,000 GRT/28'
CHARLIE	26,000 GRT/29'	28,000 GRT/32'
DELTA	30,000 GRT/31'	32,000 GRT/34'
ECHO	36,000 GRT/33' →	36,000 GRT/36'
FOXTROT	43,000 GRT/38' →	40,000 GRT/40'
GOLF	50,000 GRT/42' →	50,000 GRT/42'
HOTEL	54,000 GRT/45'	60,000 GRT/46'

* 2001 TONNAGE FIGURES ARE APPROXIMATE DUE TO AN ESTIMATED CONVERSION FROM SHIP UNITS TO GROSS TONS (GRT)

LIMITED BRANCH LICENSE PROPOSAL

GRAPHICAL COMPARISON OF LAST INCREASES



LIMITED BRANCH LICENSE PROPOSAL

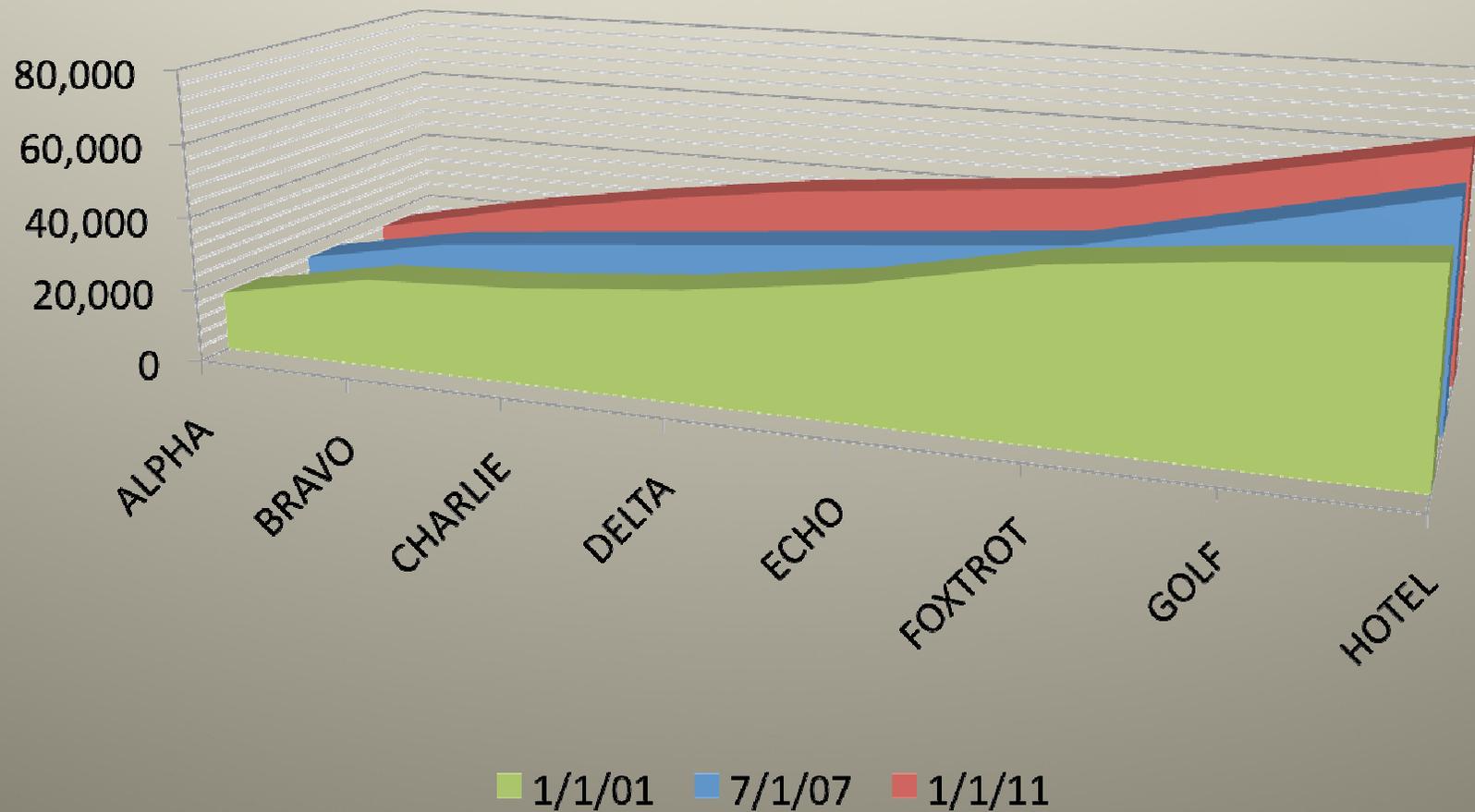
NUMERICAL COMPARISON OF INCREASES AND PROPOSAL

LICENSE	2001*	2007	PROPOSED 2011
ALPHA	16,000 GRT/25'	16,000 GRT/25'	16,000 GRT/25'
BRAVO	24,000 GRT/27'	24,000 GRT/28'	25,000 GRT/28'
CHARLIE	26,000 GRT/29'	28,000 GRT/30'	32,000 GRT/32'
DELTA	30,000 GRT/31'	32,000 GRT/32'	38,000 GRT/34'
ECHO	36,000 GRT/33'	36,000 GRT/34'	42,000 GRT/36'
FOXTROT	43,000 GRT/38'	40,000 GRT/38'	46,000 GRT/40'
GOLF	50,000 GRT/42'	50,000 GRT/42'	55,000 GRT/42'
HOTEL	54,000 GRT/45'	60,000 GRT/46'	64,000 GRT/46'

* 2001 TONNAGE FIGURES ARE APPROXIMATE DUE TO AN ESTIMATED CONVERSION FROM SHIP UNITS TO GROSS TONS (GRT)

LIMITED BRANCH LICENSE PROPOSAL

GRAPHICAL COMPARISON OF THREE INCREASES



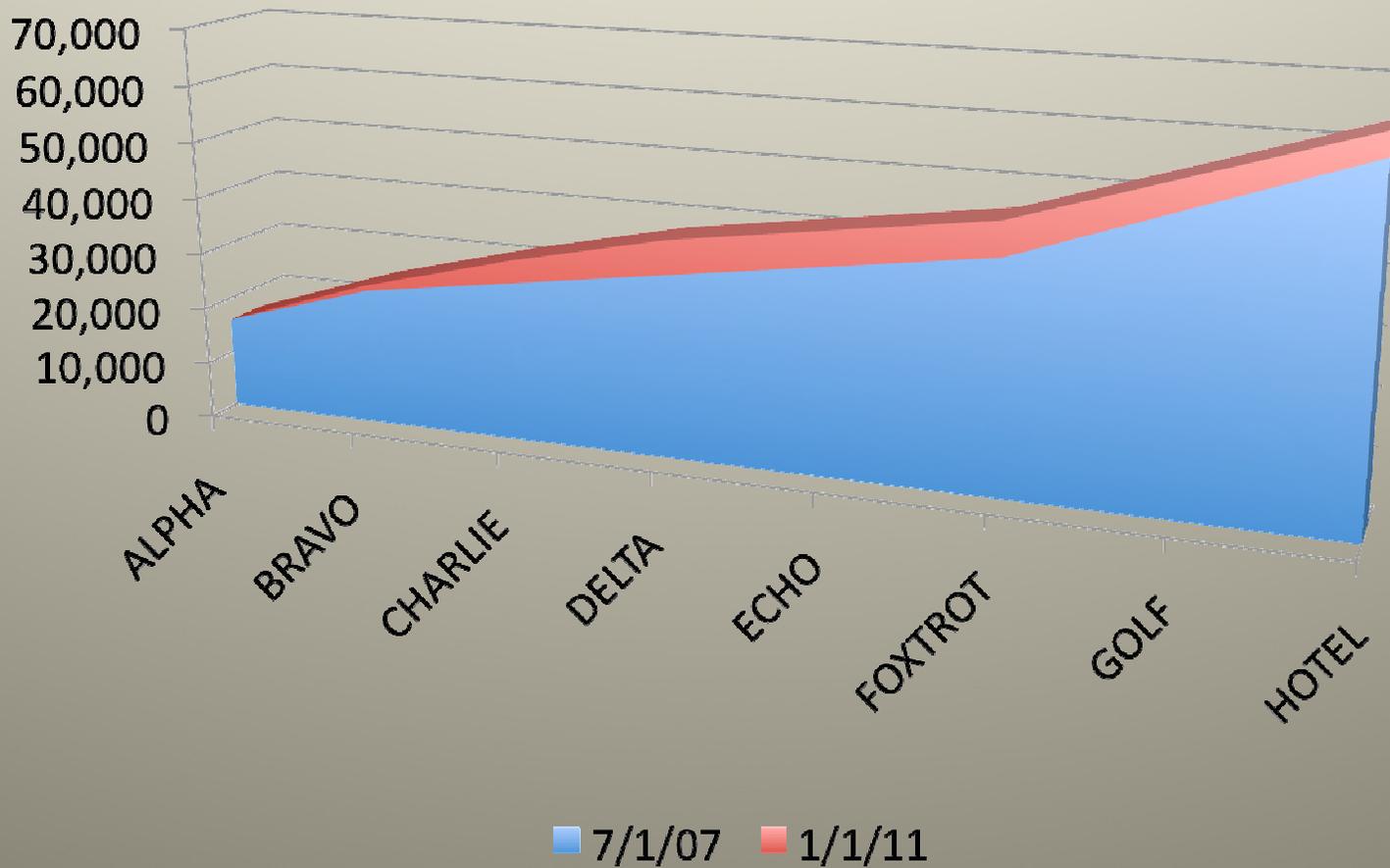
LIMITED BRANCH LICENSE PROPOSAL

LICENSE LIMITATIONS AND PROPOSAL

- ALPHA TONNAGE AND DRAFT WILL REMAIN THE SAME
- ALL OTHER CLASSIFICATIONS TO INCREASE MODERATELY
- VESSEL TRAFFIC AUDIT BY LICENSE CLASSIFICATION
- CAPTURE OF COMPLETE STANDARD SHIP CLASSES
- DRAFT INCREASE PROPORTIONATE TO TONNAGE INCREASE

LIMITED BRANCH LICENSE PROPOSAL

GRAPHICAL ANALYSIS OF THE PROPOSED INCREASE



LIMITED BRANCH LICENSE PROPOSAL

APPRENTICESHIP PROGRAM REQUIREMENTS

- FIRST CLASS FEDERAL PILOT LICENSE IS ACQUIRED DURING THE DELTA LICENSE
- 360 SEA DAYS REQUIRED FOR INLAND MASTER'S LICENSE
- ONE SEA DAY IS A MINIMUM OF FOUR HOURS WORK
- LICENSEES IN CERTAIN GRADES ARE MISSING NEEDED SEA DAYS
- MISSED OPPORTUNITY TO GAIN EXPERIENCE FOR THE NEXT LICENSE INCREASE

LIMITED BRANCH LICENSE PROPOSAL

STANDARD SHIP CLASSES TYPICALLY IN HAMPTON ROADS

CONTAINERSHIP CLASS BY TONNAGE AND TEUs

- PANAMAX >50,000 GRT <5,000 TEUs
- POST PANAMAX >60,000 GRT >5,000 TEUs
- NEW PANAMAX >150,000 GRT 14,000 TEUs

BULK CARRIER CLASS BY TONNAGE

- HANDYMAX <50,000 GRT
- PANAMAX >50,000 – 70,000 GRT
- CAPE CLASS >150,000 GRT

GRT – gross tons TEU – twenty foot equivalent unit

LIMITED BRANCH LICENSE PROPOSAL

LICENSE PAIRING FOR GREATER TRANSPARENCY

	7/1/2007	PAIRED	1/1/2011	PAIRED
• ALPHA	270		270	
• BRAVO	121	391	131	401
• CHARLIE	54		92	
• DELTA	48	102	71	163
• ECHO	33		111	
• FOXTROT	127	160	161	272
• GOLF	171		79	
• HOTEL	145	316	117	196

VESSEL NUMBERS ARE THE RESULT OF AN AUDIT OF ALL SHIPS ON RECORD REQUIRING A LIMITED BRANCH PILOT FROM NOVEMBER 2009 – OCTOBER 2010.

LIMITED BRANCH LICENSE PROPOSAL

THE FUTURE OF SHIPPING AND OUR CONCERNS

- PANAMA CANAL EXPANSION, 2014
- NEW-PANAMAX VESSELS
- NEW PASSENGER SHIP CLASSES
- SEALANES, TIDE SHIPS AND RIVERS

LIMITED BRANCH LICENSE PROPOSAL

PANAMA CANAL EXPANSION

CURRENT MAXIMUM VESSEL DIMENSIONS OF CANAL

965' LOA X 106' BOA X 39.5' DRAFT

NEW MAXIMUM VESSEL DIMENSIONS OF CANAL

1,200' LOA X 160' BOA X 49.9' DRAFT

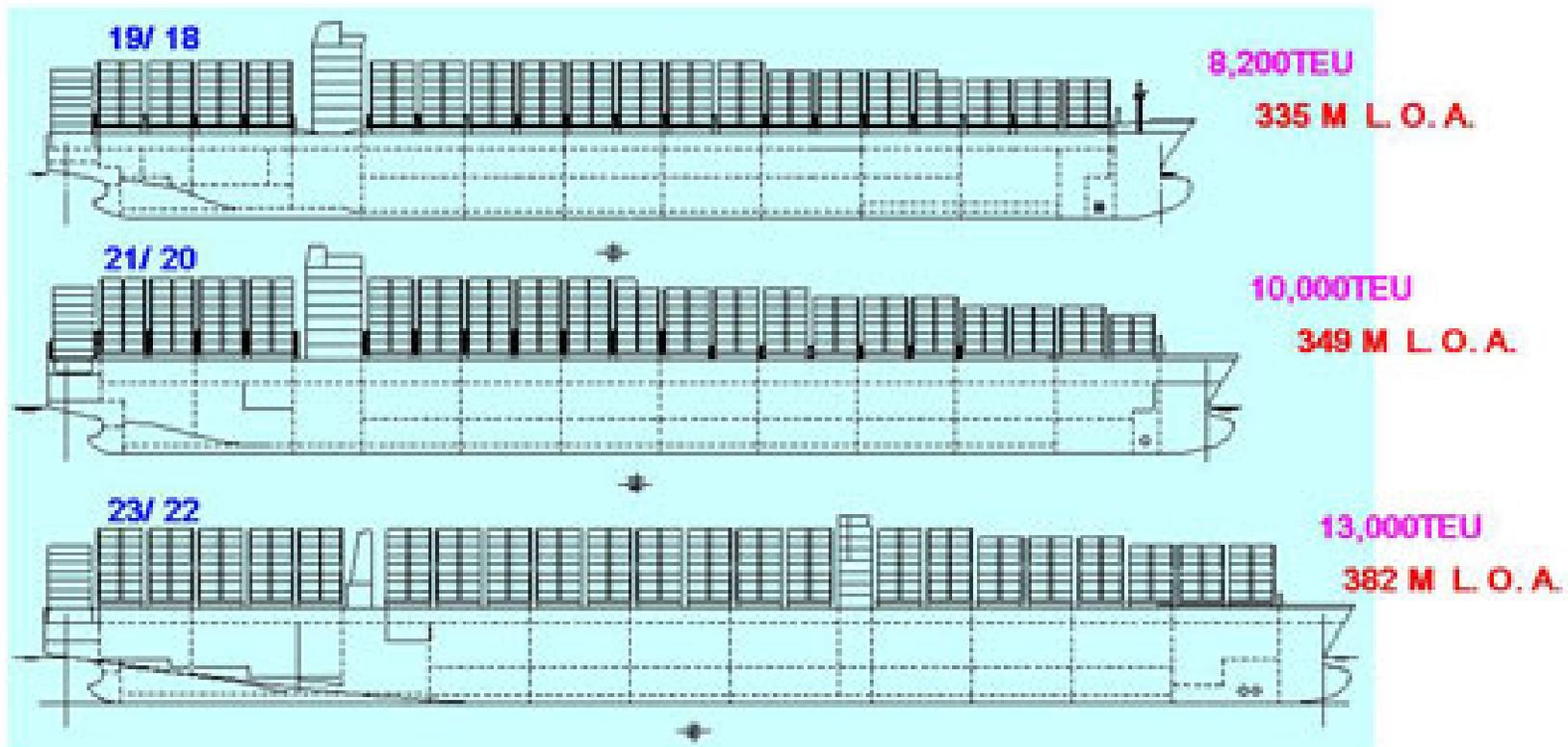
NEW MAXIMUM DRAFT IS SIMILAR TO HAMPTON ROADS (50')

LIMITED BRANCH LICENSE PROPOSAL

POST PANAMAX CONTAINERSHIP PROGRESSION

Comparison of Profiles (Post-Panamax)

Bay NOs.(40')
on deck/ in hold



LIMITED BRANCH LICENSE PROPOSAL

COMPARISON OF VESSEL CLASSES BY DATE IN GROSS TONS

VESSEL TYPE	2001	2007	TODAY
PASSENGER SHIP	100,000 GRT	135,000 GRT	220,000 GRT
PANAMAX C/C	>50,000 GRT	>50,000 GRT	>50,000 GRT
POST-PANAMAX C/C	>60,000 GRT	>60,000 GRT	>90,000 GRT
HANDYMAX BULKER	<40,000 GRT	<40,000 GRT	<40,000 GRT
PANAMAX BULKER	>40,000 GRT	>40,000 GRT	>40,000 GRT
CAPE BULKER	>90,000 GRT	>90,000 GRT	>90,000 GRT
NIMITZ CARRIER	>100,000 GRT	>100,000 GRT	>100,000 GRT
UNLIMITED	>100,000 GRT	>140,000 GRT	>170,000 GRT

LIMITED BRANCH LICENSE PROPOSAL

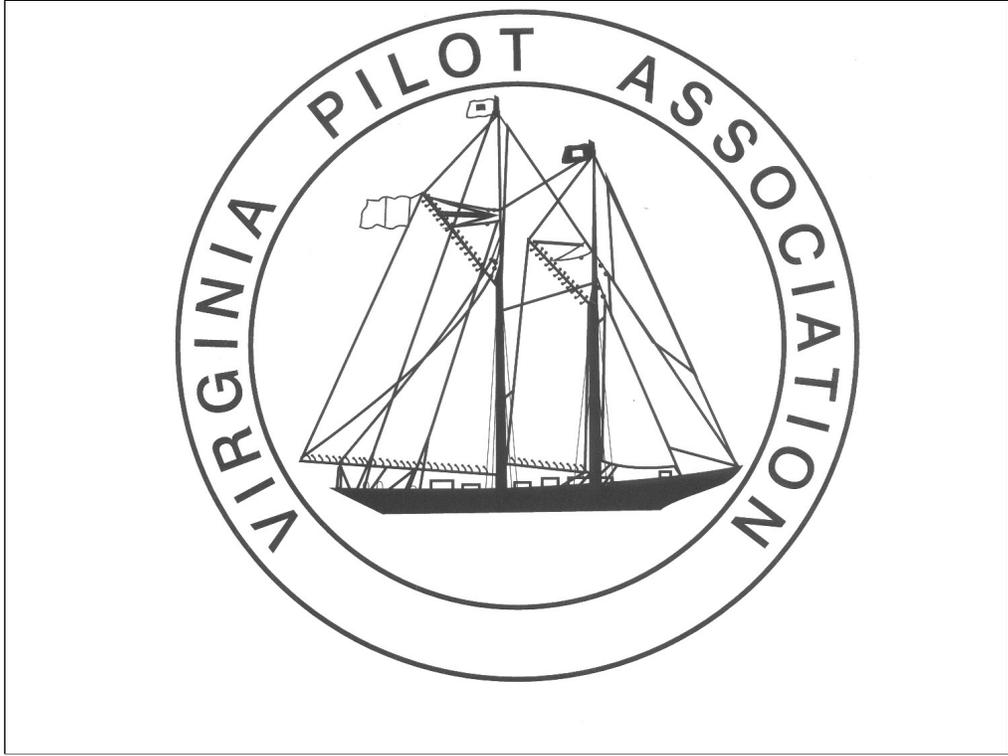
ANNUAL APPRENTICESHIP REVIEW

- EACH YEAR THE APPRENTICESHIP COMMITTEE REVIEWS THE VIRGINIA PILOT APPRENTICESHIP PROGRAM FOR NEEDED CHANGES AND UPDATES
- THE APPRENTICESHIP COMMITTEE SEEKS RENEWAL APPROVAL FROM THE BOARD AT THE END OF EACH YEAR
- THE APPRENTICESHIP COMMITTEE SHOULD MAKE LICENSE TRACKING PART OF THEIR ANNUAL PROGRAM REVIEW
- LICENSE TRACKING DATA SHOULD ALSO INCLUDE A DRAFT COMPONENT

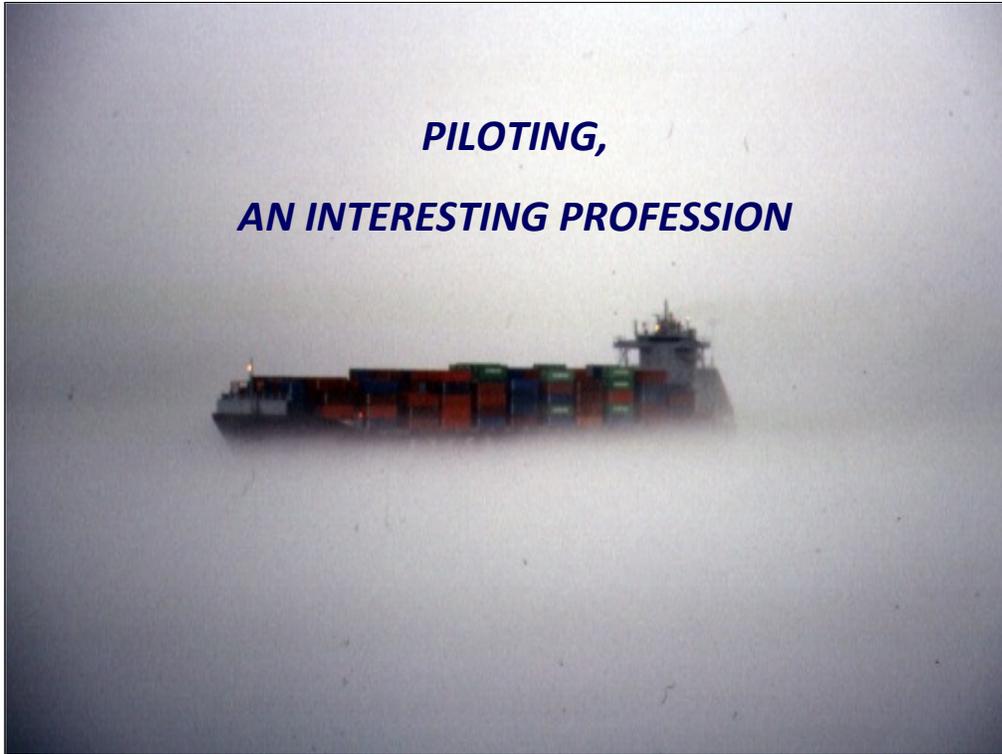
LIMITED BRANCH LICENSE PROPOSAL

DISCUSSION AND CONCLUSION





***PILOTING,
AN INTERESTING PROFESSION***



Trust But Verify

- *“... entire weight of the seafaring tradition is that nothing is to be trusted.”*

- Kendra, “Looking Out The Window”

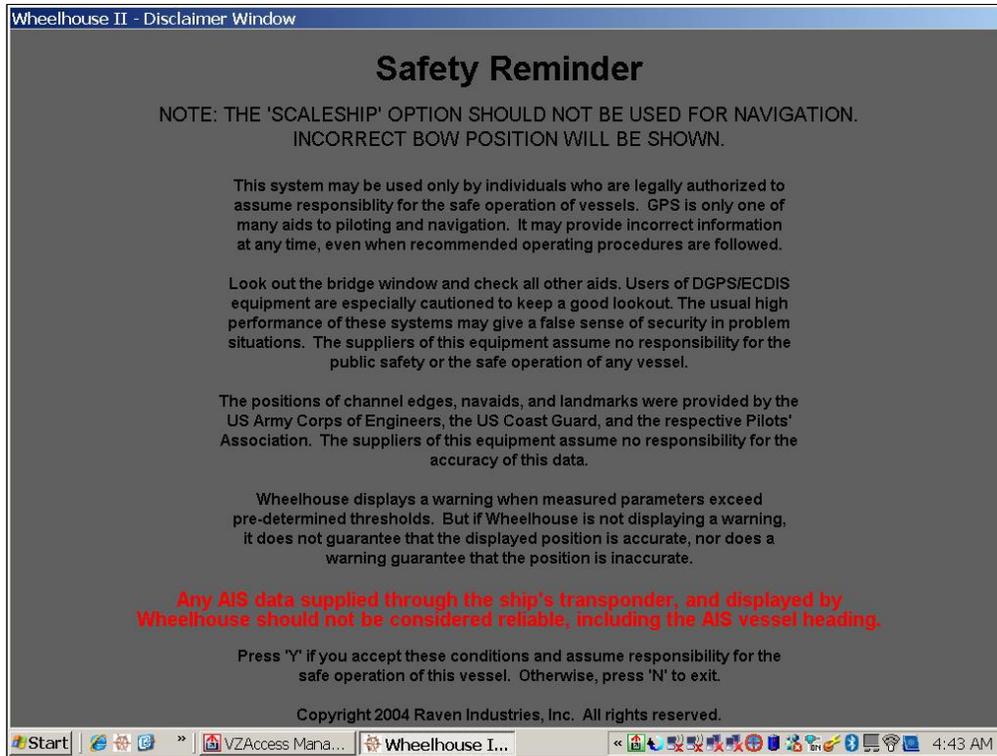
3

Even NOAA says on their charts Warning: “The Prudent Mariner will not solely rely on any single aid to navigation, particularly on floating aids...”

Additionally.

Why? All Charts, Paper, electronic or otherwise has an accuracy lifetime...Sandbars erode and re-form in different locations or positions, bridges are built, buoys are moved, changed and have their light characteristics altered...and boats sink!

So, NO CHART REMAINS 100% correct indefinitely. Updates are needed and come with an associated cost...



Even today, there is a constant reminder of the inherent inaccuracies in even the very best systems

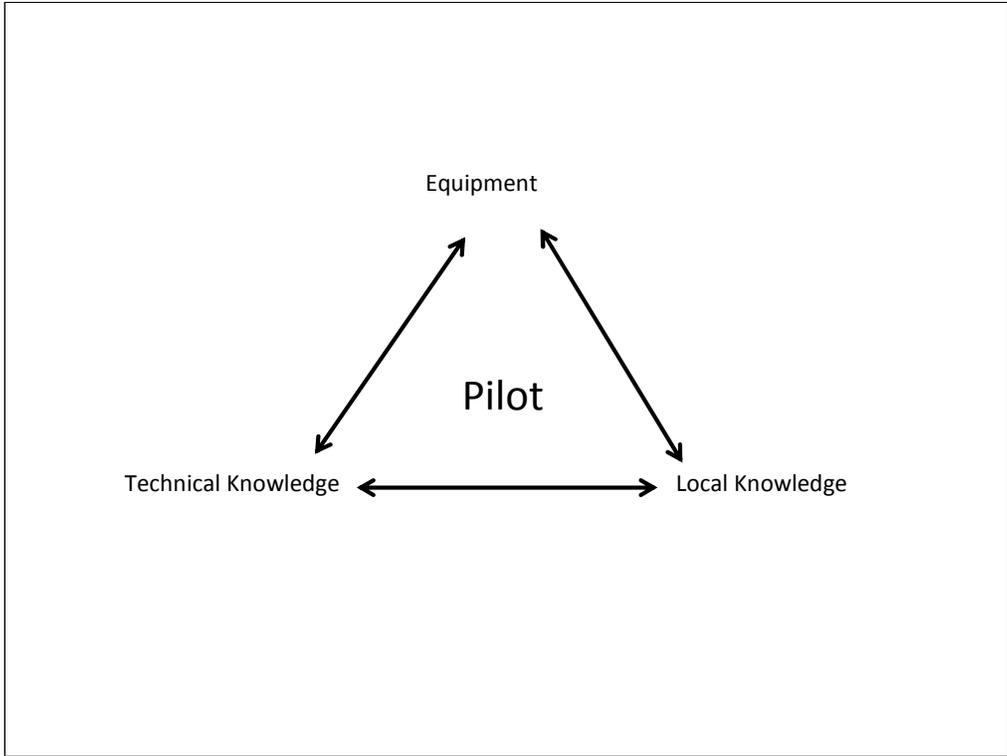
- *Trade Skills*
- *Local Knowledge*
- *Pilots Visual Lookout*
- *Radar*

5

Throughout history, these are the tools of the Maritime Pilot. In confined waters, pilots are tasked with the charge of safe navigation in inland waters, Protecting the waters of the Commonwealth, while maintaining a standard of operational efficiency

The Pilot must collect, digest, and sort out all pertinent navigational data while maintaining situational awareness in order to make proper and timely navigational decisions

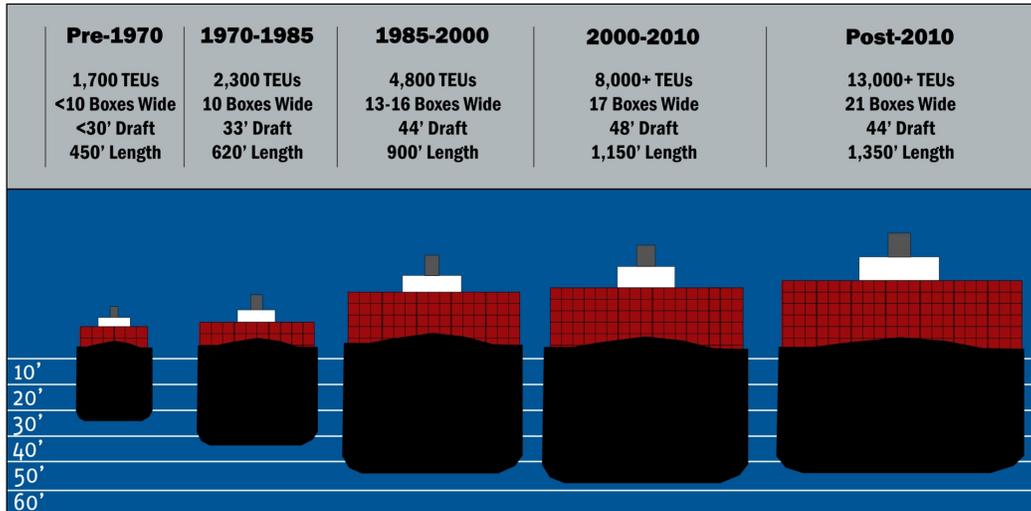
It is imperative that the pilot maintain Situational Awareness: What you can see out of the bridge window is aspect! Radars and Arpa's fail to provide proper aspect without timely calculations





Container Ship Evolution

The Port of Virginia is the Only East Coast Port That Can Handle Any of These Ships



Container shipping, without a doubt, has lowered the per-unit cost of transporting goods. This effect has been magnified by the ever-increasing size of the vessels and the requisite economies of scale. The largest of these vessels can carry nearly 4,000 40-foot containers that are compatible with both rail and highway equipment. Those shiplines that cannot afford the larger vessels will be forced out the major trades or acquired by the larger carriers. Even the larger carriers have trouble filling these ships with their own cargo, hence the emergence of new alliances and vessel sharing agreements. Several years ago, shiplines each operated their own fleets of vessels and filled those vessels with their own cargo. As competition became fierce, these competitors became partners and operated joint services.

Another important point to ponder is the decline of US-flag registered vessels calling terminals in the US. In the case of the VPA, nearly half of the vessels calling the terminals were US flagged in 1963; last year, there were only 170 in nearly 2,200 vessel calls (7.8%).

- *Trade Skills*
- *Local Knowledge*
- *Pilots Visual Lookout*
- *Radar*
- *PPNS/PPU*

9

Along with the evolution of ships, technology has surged forward developing new and user-friendly tools keeping pace with the continued growth of these large vessels.

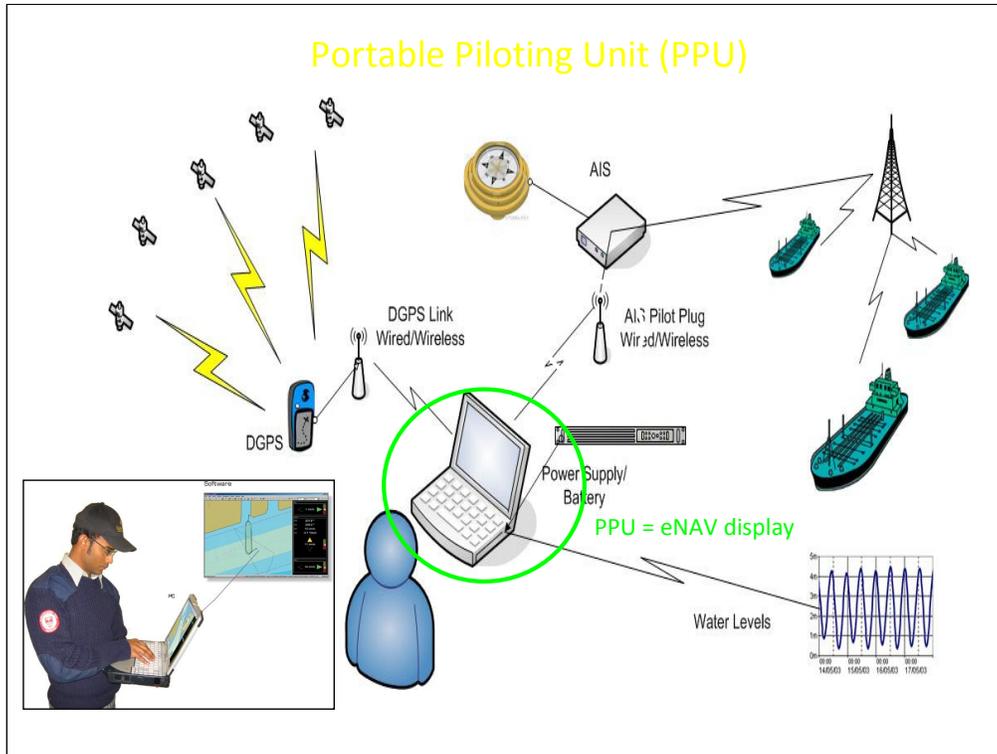
TWO GIANTS COMPARED



	▲ REGINA MAERSK	HARRY S. TRUMAN ▼
Length:	1,043 ft.	1,096 ft.
Beam:	137 ft.	134 ft.
Speed:	25 knots	30+ knots
Crew:	15	5,680
Power plant:	Diesel	Nuclear
Horsepower:	74,600	280,000
Capacity:	6,000 20-ft. containers	80+ aircraft

The Virginian-Pilot

However; What works well for large districts may be impractical or cumbersome for a geographically smaller or different area. There is simply, No single solution can meet the needs of all pilotage districts.



Portable Pilot Navigation Systems or (PPU's) were first conceived in the early 1980's as a research project between Capt. Joseph F. Bradley of The Pilots' Association for the Bay and River Delaware assisted by the USCG and a Division of John Hopkins.

As developed, the system was intended to be a self-contained Pilot –carried waypoint navigational system driven by Differential Loran-C. These units were heavy and cumbersome but provided basic COG, in knots, XTE in feet, and Rate of divergence from the CL in fps.

In 1991, With the emergence of GPS, and the USCGs' Differential service (DGPS), work with the portable system was shifted from Loran-C to one based ON GPS.

AT THIS POINT: USCG R& D and John Hopkins participation in the project ended and The Virginia Pilots' Association began.

Starlink Inc., Raytheon Service Company, and the Virginia Pilots joined Capt. Joseph F. Bradley of The Pilots' Association for the Bay and River Delaware in the project with the goal of turning the PPNS into a commercially viable product.

Starlink engineers wrote a custom navigation program with the age old adage, "Keep it simple Stupid". The system made use of a laptop computer integrated with a DGPS receiver-antenna to create a self-contained system that weighed ~13 lbs and required shipboard power to operate. Using Data provided by the USACOE within the system, consistent position accuracies of <2m were seen.

In 1994, The Pilots' Association for the Bay and River Delaware became the first U.S. based pilotage group to equip all of its pilots with a PPNS and The Virginia Pilots' Association soon followed. In the last 16 years more than 30 U.S. pilot groups have equipped their pilots with systems produced by one of several companies.

GPS

- Satellite-Based Global Navigation System
- Created and Operated by the USA (DOD)
- Original intent – Solely to enhance military defense capabilities
- GPS capabilities have expanded to provide highly accurate timing and position information in civil applications
- DGPS- Differential Global Positioning System

An in-depth study of GPS is required to fully understand it, but not to see how it works or what it can do for you. Simply, 24 satellites (+ 2 spare = 26 total) in 6 orbital paths circle the earth twice each day at an inclination of approx 55 degrees to the equator...which in theory places at least 12 satellites “in view” at any given time. This constellation of satellites continuously transmits coded positional and timing information at high frequencies. GPS receivers with antennas (in clear-view) of the satellites, pick up these signals and use the coded information to calculate a position in an earth coordinate system.

Note: GPS is an accurate worldwide “all-weather” positioning system that provides +/- 100m 3 dimensional accuracy [note: 50m Horizontal - 70m Vertical]

DGPS- works by placing a high-performance GPS receiver (called a reference station) at a known location. Since the receiver knows its exact location, it can determine the errors in the satellite signal and then send a correction message to the receivers making accuracy +/- 10m [note: 3-5m locally] with 95% confidence



“It is far better not to know where one is, and realize that one does not know, than to be certain one is in one place where one is not.”

- Lieutenant Barral, “Digressions On The Navigation Of Cape Horn,” 1857.

What is this? Who has one? What does it mean and or do for you? PND? Portable Navigation device, not Personal

Trust, but verify!

Electronic Navigation / E-Nav

- Definition:
- “the *harmonized collection, integration, exchange, presentation and analysis of maritime information onboard and ashore* by **e**lectronic means to **e**nhance berth-to-berth navigation and related services, for safety and security at sea and protection of the marine environment.

All while actively engaging the pilot in the process of navigation while eliminating human errors...



More than a simple computer display, the PPU is a real-time electronic charting and navigation system that integrates a variety of information on a display that is interpreted by the Pilots.

The system is capable of continuously determining a vessels position in relation to land masses (shoreline), aids to navigation, hazards and obstructions (seen and unseen) and USACOE Charted depth data

The four basic components are:

- 1.Computer Processor
- 2.Positioning system & sensor inputs (DGPS)
- 3.Electronic Chart Database (USACOE, NOAA) RASTER, S-57's, ENC's
- 4.Color Display
- 5.***Additional Shipboard sensor inputs include (Heading and AIS input) via WPI or BPI

The PPU represents an entirely new tool in the Maritime Pilotage arena



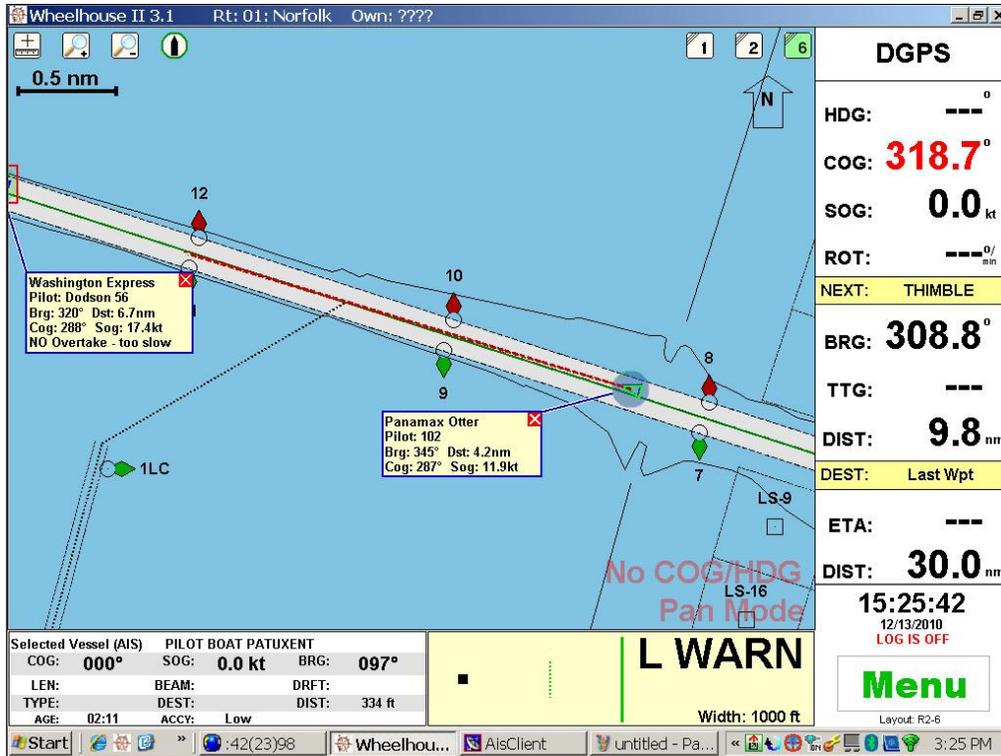
In terms of system components, features, and functional capability...this is the heart of the system:

Raven Invicta 210 wireless DGPS unit with Antenna – This is a Highly accurate “Survey-Grade” positioning device capable of:

Warm up:	40 sec
Re-Acquisition	1 sec
Position Accuracy	< 1m rms
Accuracy Rate	6 solutions per sec with option to have up to 10 solutions per sec
Operating Temperature	-40 degrees to + 70 degrees C

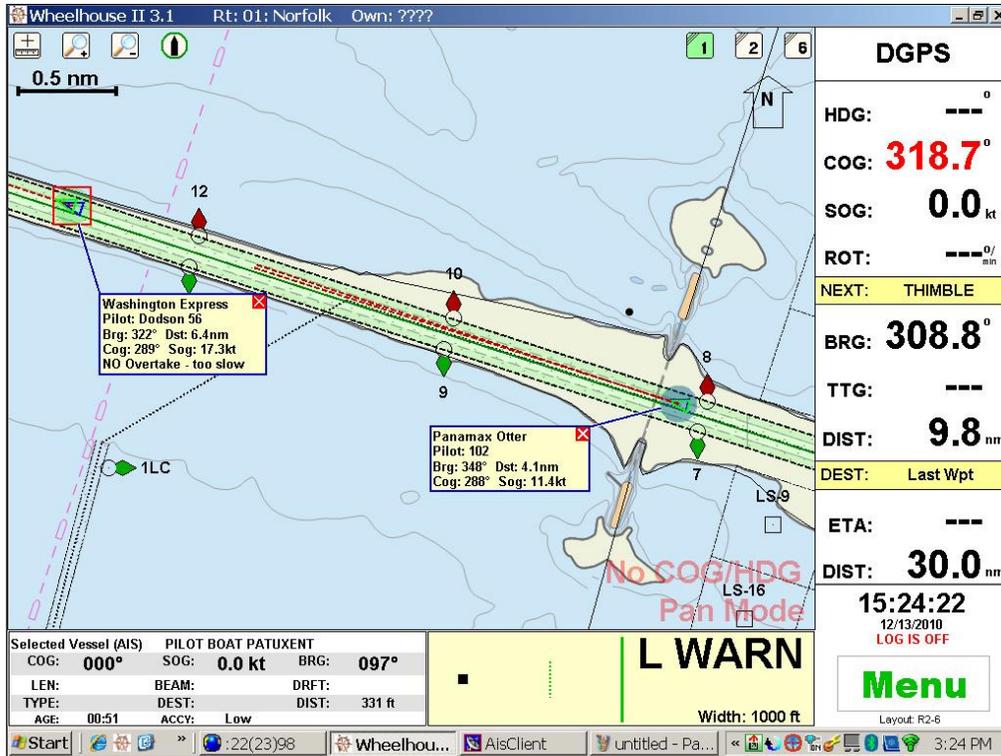
Additionally, the VPA has ---Back to GPS Theory

For a (3) dimensional fix, there are (4) unknowns: Lat. Long., Height or altitude, and time...So the receiver must track at least (4) Satellites to obtain a fix
 But, if the height of the shipboard GPS Antenna is known, that reduces the number of unknowns to (3). Now, the receiver only has to track (3) satellites to obtain a GPS Fix.
 However, in an effort to maintain the highest operational standards, the VPA technical committee instituted that the VPA software uses (5) Satellites to obtain a fix!

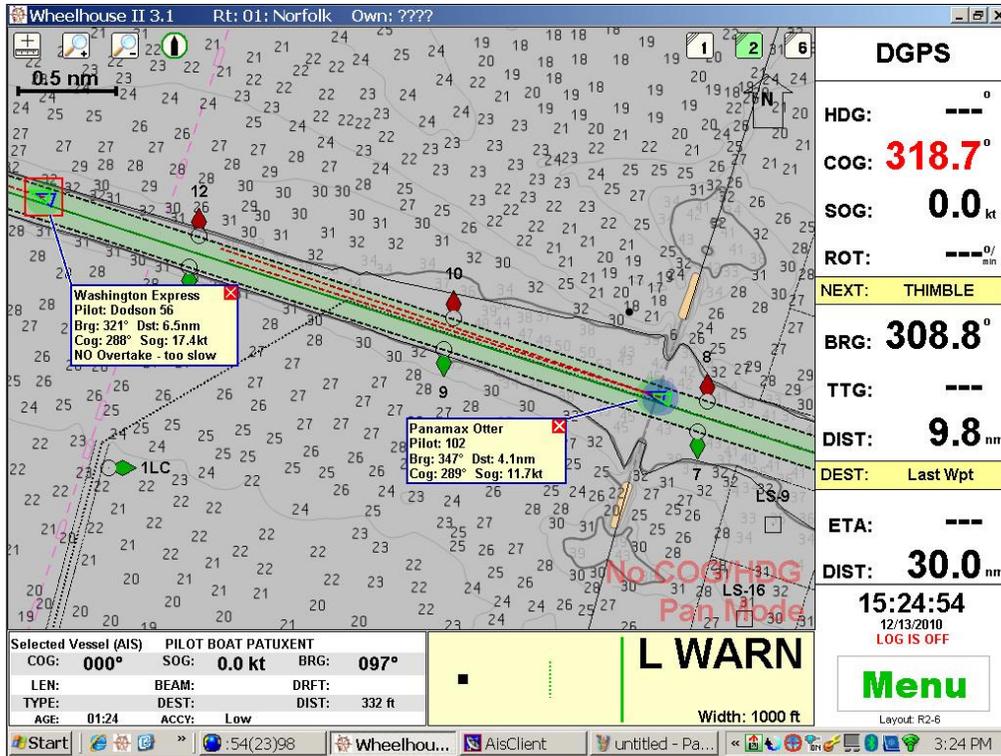


More than an individual piece of equipment, The Raven PPU is an integrated navigation system; combining electronic charting, real-time positioning, Navigation Data (SOG< COG< TIME), and Closet point of approach information into a highly useful operational tool!

This is our basic and rock solid USACOE Channel and CL data



This is the same shot with additional Electronic Charts overlaid on top of our base data



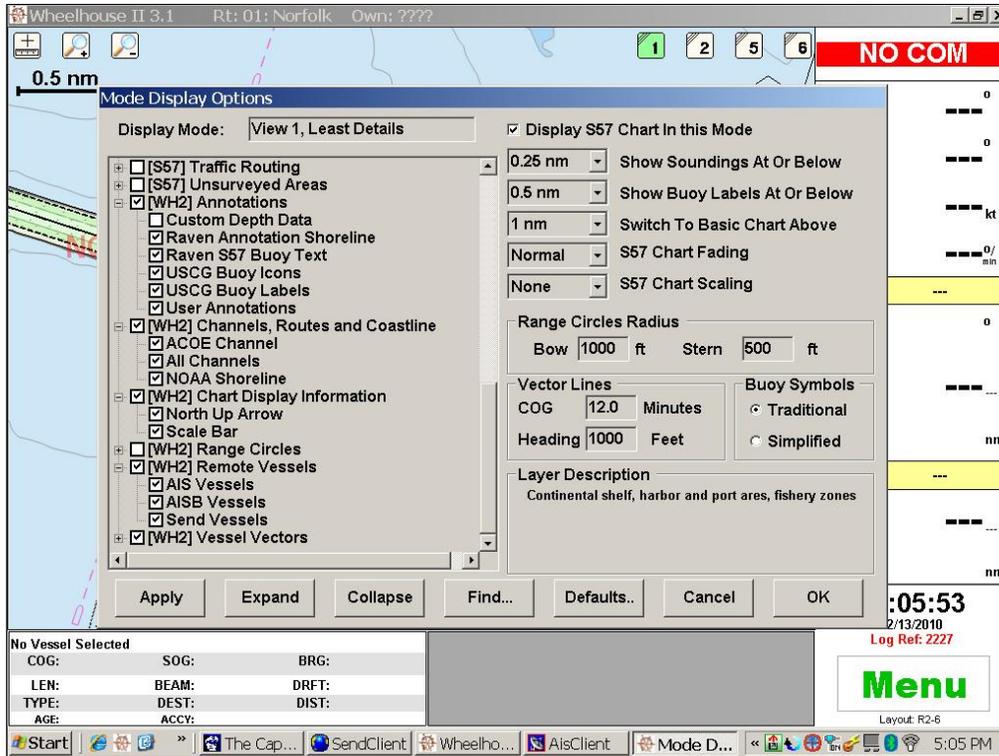
Again this is the same shot with even more Electronic data overlaid on top of our base data

As you can see, the screen can quickly become convoluted!



And finally, this is the same shot with all the available data layers turned on, overlaid on top of our base data.

Again, you can see, convoluted to the point that it is not practical or functional to operate this way...



So, we have developed a way to turn on and off certain layers.

NOAA and the USCG has implemented electronic charting standards by which they think/feel are appropriate groupings of electronic charting data, However; We have come to find that these pairing/groupings are not so intuitive and or functional.

PPU Configurations

- *GPS/Charting Program: This basic configuration provides a representation of Own Ship position on a chart display of varying detail. Position accuracy may be enhanced by the use of corrections coming primarily from the U.S. Coast Guard Differential Service.*
- *GPS/Charting Program/Self-Contained Transponder or AIS: A proprietary transponder system added to the basic GPS/Charting configuration provides some other vessel positions in addition to Own Ship position. These systems were used under 825 and 1371.1 AIS protocols. Another variation utilizes an internet based server operating as a virtual Private Network. Vessels that are displayed must have similar transponder units on board.*
- *GPS/Charting Program/AIS Input via Pilot Plug: Other vessel positions are added to the display of Own Ship Position on a chart. Target Vessel location and data is received from the Own Ship's AIS through a connection to the Pilot Plug. Own Ship Gyro Heading may also be obtained through the Pilot Plug*
- *Charting Program/AIS Input via Pilot Plug: The display of Own Ship Position on the chart is totally dependent on the ship's GPS and AIS equipment.*

The PPU technology adds more detailed and timely information to piloting.

A communications infrastructure – we use a combination of the 1st 2 common configurations

...designed to enable authorized seamless information transfer

...onboard ship, between pilots, and between ship and shore

Note: We all see the same thing! Everyone has same unit

[Next slide – what it looks like]

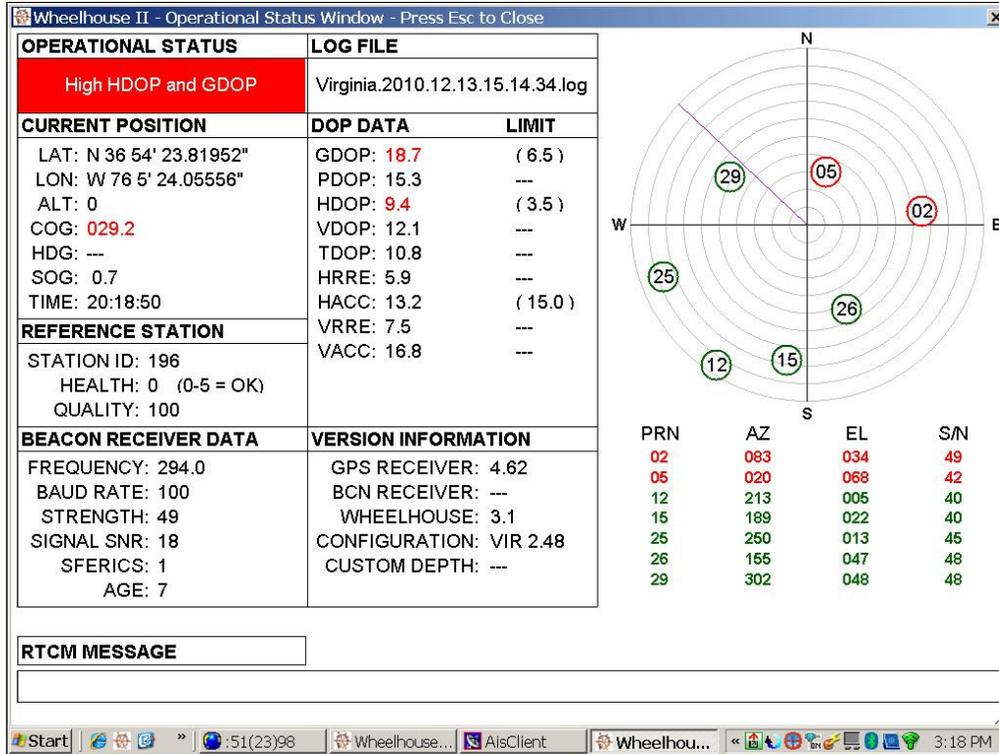


When using PPU's in everyday situations, reduced visibility, PPU's seamlessly "share" information among the network of vessels broadcast via a sophisticated shore based facility over a VPN

The units are stand alone (all units are formatted the exact same, thus we all see the same things, talk in the same terms, this leads to clear communications and a better understanding of the graphical representation)

We feel that we have the best system that compliments the work that we do here in Hampton Roads:

1. These are not ECDIS Units but close to an ECS
2. No set regulatory standards (USA or INT)
3. Chart Updates are the responsibility of the individual pilot (Raster, ENC, or S-57)
4. Software, Base data, and track lines on all PPU's are standard
5. All Systems are recertified annually by Raven
6. Each Pilot has a system
7. We maintain 2 complete Spare systems, and an inventory of spare parts
8. New equipment always on the forefront of: WPI 2004, BPI in 2009 (40hrs)



What makes our system better is that it will let us know when the GPS signal or position data has been compromised!

Audible alarms will accompany visual alarms

Stop/// next slide – no alarms

High HDOP or GDOP – position accuracy is not reliable due to poor satellite geometry

High HACC and DOP – Position Accuracy is not reliable...

Signal Strength – should be 20 or more

SNR- Signal to Noise ratio- Needs to be 10 or more to have good reception

Sferics - <500, but typically does not cause data errors

Wheelhouse II - Operational Status Window - Press Esc to Close

OPERATIONAL STATUS		LOG FILE			
DGPS using 7 satellites		Virginia.2010.12.13.15.14.34.log			
CURRENT POSITION		DOP DATA		LIMIT	
LAT: N 36 54' 24.80106"		GDOP: 4.1		(6.5)	
LON: W 76 5' 22.61886"		PDOP: 3.5		---	
ALT: 0		HDOP: 1.8		(3.5)	
COG: 318.7		VDOP: 3.0		---	
HDG: ---		TDOP: 2.1		---	
SOG: 0.0		HRRE: 1.1		---	
TIME: 20:19:35		HACC: 1.7		(15.0)	
REFERENCE STATION		VRRE: 1.8		---	
STATION ID: 196		VACC: 2.7		---	
HEALTH: 0 (0-5 = OK)					
QUALITY: 100					
BEACON RECEIVER DATA		VERSION INFORMATION			
FREQUENCY: 294.0		GPS RECEIVER: 4.62			
BAUD RATE: 100		BCN RECEIVER: ---			
STRENGTH: 49		WHEELHOUSE: 3.1			
SIGNAL SNR: 19		CONFIGURATION: VIR 2.48			
SFERICS: 0		CUSTOM DEPTH: ---			
AGE: 9					

PRN	AZ	EL	S/N
02	092	044	48
04	103	013	41
05	017	069	44
12	213	005	38
15	189	023	41
21	295	007	39
26	249	013	42
26	155	047	50
29	302	048	48

RTCM MESSAGE

Start | :36(23)98 | Wheelh... | AisClient | Wheel... | DGPS E... | 3:19 PM



Remember, The PPU's only show other vessels on or within the system...including AIS targets (Class A & B) but does not show other non-Solas or non-compliant vessel traffic –

This gives a true incomplete picture and clearly demonstrates why the pilot is so valuable

Thus: the Pilot's visual lookout, situational awareness, and the Radar are as critical as ever in knowing the position of his vessel, other vessels, and the rules and agreements that dictate their interaction





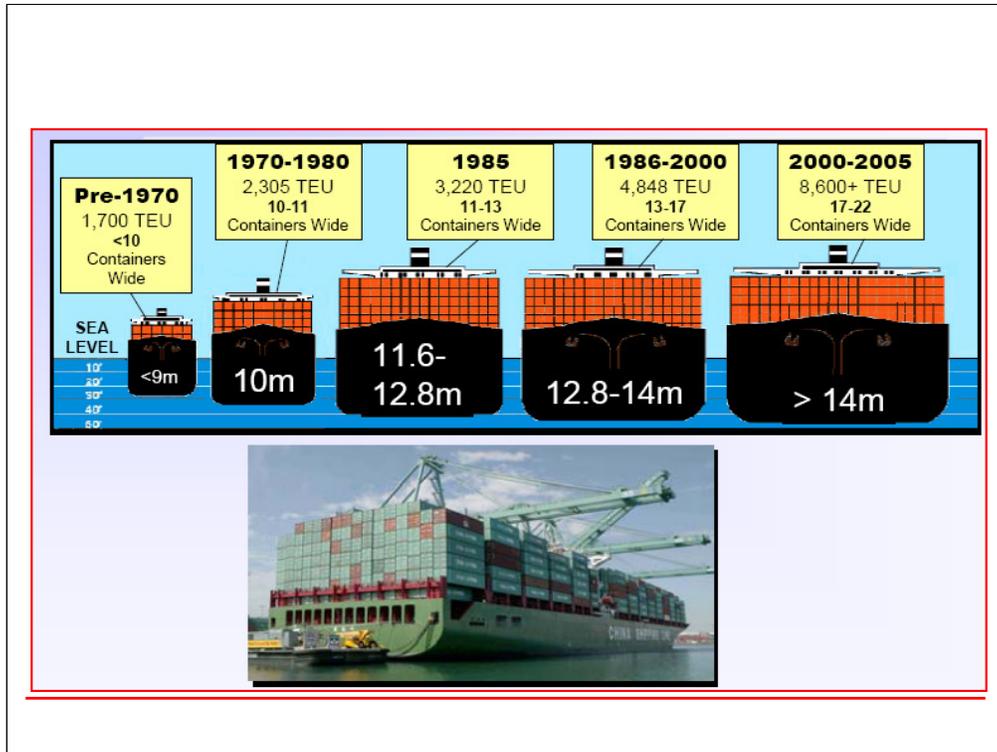




The point of this slide is to simply state and show...THESE SHIPS ARE HERE, AND THEY ARE BIG.

Size comparison of some of the longest ships. From top to bottom:

Knock Nevis 2004-2009 (just to big), Emma Mærsk 2006- (E-Class working right now 12 in total, RMS Queen Mary 2 2004-, MS Berge Stahl 1986 (Bulk Carrier – Hauling ore), and USS Enterprise 1961 Kitty Hawk Class.



Remember this?

The Emma Mærsk is a container ship owned by the A. P. Moller-Maersk Group. When she was launched, Emma Mærsk was the largest container ship ever built, and as of 2007 the longest containership in use.[1] Officially, Emma Mærsk is able to carry around 11,000 TEU according to the Maersk company's way of calculating capacity,[2] which is about 1,400 more containers than any other ship is capable of carrying.[3]

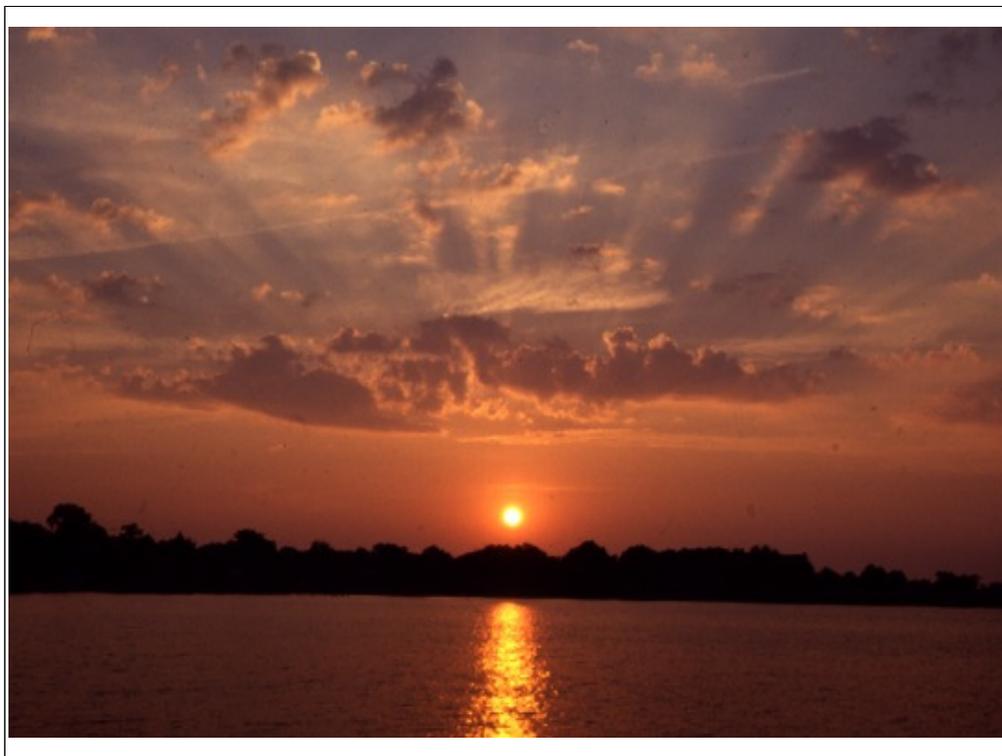




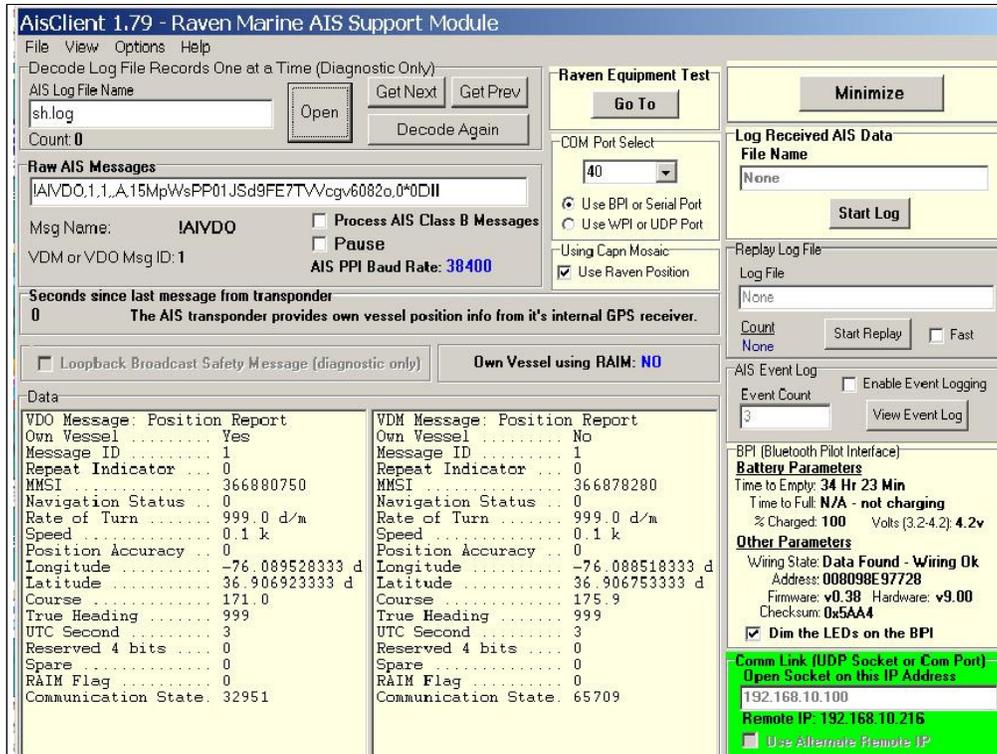
Keys to Continued Success

- Commitment to Safe and Efficient piloting practices?
- Utilizing Existing Science/Technology/PPU
- Training –Simulation w/PPU intergration
- Developing New Tools

PPNS/PPU's are and have revolutionized Maritime Pilotage....It is said to be, the greatest advancement in navigation safety since the development of the Radar!



```
Data to and from GPS Receiver via UDP
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$PSLIQ,RID*24
$GPZDA,202756.13,12,2010,*,4E
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$PASHR,POS,1.08,202756,3654.414532,N,07605.377437,W,-36.2,,0.0,0.0,+01,2.2,1.3,1.9,1.2,4.62.0009*28
$PSLIR,WRN,16*18
$PASHQ,RTC*32
$GPRRE,08,29,0000.3,02,0000.1,05,-0000.2,30,0000.0,15,0000.1,21,0000.0,25,-0000.1,26,0000.0,0000.2,0000.3*7C
SYNC: STID:0012 STHE:3 QA:100% AGE:+014
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,26,152,51,49,U*11
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SYNC: STID:0012 STHE:0 QA:100% AGE:+017
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```



AIS Role out in Second half of 2003. WPI in 2004, BPI in 2009

AIS is Caller ID. Was not designed as a navigation system....Over reliance on data

Accuracy of AIS FPS (Fixed Positioning System) versus using own DGPS inputs like COG and SOG, are not always GPS data

Not all non-Solas vessels have AIS (ie Tugs, fishing vessels, dredges, pleasure craft etc...) Which are most vessels that we come in contact with

This needs to be addressed...When? Maybe in new regs will mandate Pilot Plugs on all vessels that employ tugs