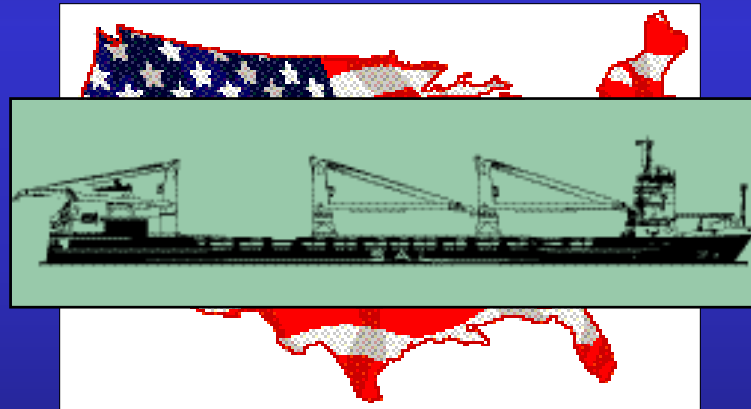


Short-Sea Shipping....

- Paul F. Richardson Associates, Inc. (PFRA) believes that Short-Sea Shipping or Domestic Coastwise Shipping (or coastwise), will be revitalized and become a commercially viable alternative for moving containerized freight in the U.S.



- *In fact, while there may exist challenges both operationally and economically, that it is feasible in the near-term to commence with coastwise services.*



Timing for a Coastwise Service....

- Over the course of the next five to ten years, PFRA believes that significant technological advances could take place with the type of ship which may be employed in a coastwise service.
 - This includes and is not limited to such advance feature ships as:
 - Hydro crafts, or
 - High-speed all weather vessels.

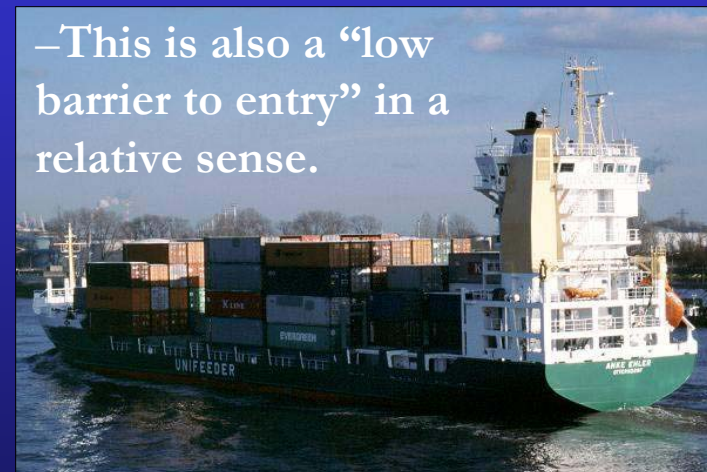
• *For example: The recently announced "X-Craft" (265' x 73' catamaran) being built by*

Nichols Brothers which will be capable of at least 50 knots.



A Near Term Solution....

- PFRA is convinced that a near-term use of “today’s vessel” is a reality....
 - *After all, coastal services were successfully operated once before....*
- While barges offer an “low barrier to entry” they are restricted by service capabilities, namely speed.
- Utilizing a container vessel, even a 15-knot vessel, is an economically and service capable alternative.



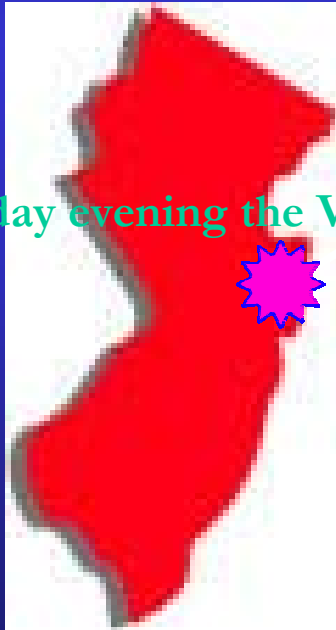
–This is also a “low barrier to entry” in a relative sense.



Back to the Future....

- In the 1950's/60's Sea-Land Service, Inc. (or Sea-Land) operated a number of competitive and service capable intercoastal and coastwise services.
 - An example of this was the Newark to Miami Service:
 - *A 15-knot vessel left Newark, NJ and 52 hours later in was in Jacksonville, FL.*

On Thursday evening the Vessel Sailed....



On Monday morning the freight was in Miami.

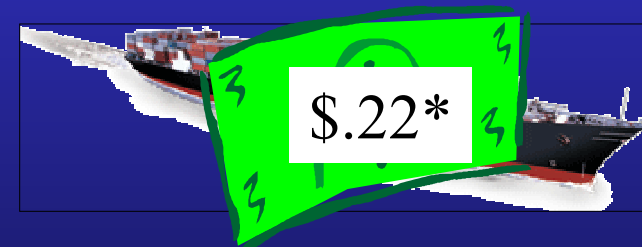


It Can Happen Again....

- Challenges do exist:
 - Vessel Technologies
 - Vessel Operating Costs
 - Crew Costs
 - Infrastructure Capabilities
 - Development Costs

The Competitive Economics need to be identified and developed....

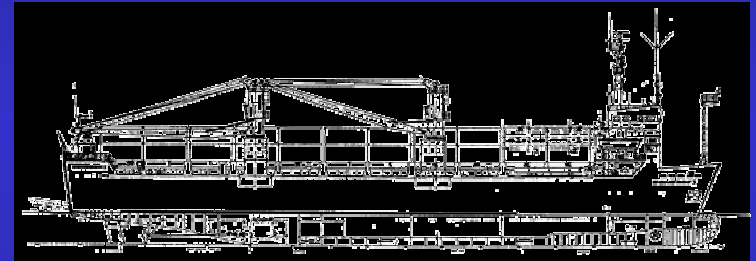
- However, we believe the Cargo side is already capable of handling this modal switch from trucks/rails:
 - *The economics favor it....*



Cargo Flows Determine All....

- Most of the freight in today's distribution is already coordinated between the various stakeholders in the "transportation chain" to include:

- Trucks,
- Rails,
- Terminals,
- Warehouses,
- Ships and
- Final Customer Delivery.



Door to Store Service! therefore, a change in the "pipeline" is totally executable....



Operational Issues which Require Attention....Ships



- Economically built trailerships will be eventually required to handle the freight....especially ro/ro capable for “shorter runs”.

- However, a “near term” solution is converting proven shipbuilding technology such as the latest generation of anchor-handling, towing and supply vessels (AHTS) to “container vessels”.



Ship & Terminal Manning Need to be Competitive....

- In order not only to be able to compete or even for that matter “participate with” the railroads and trucks in the domestic market, the shipboard crewing component recognizes that it must address their competitive operating economics....
- Stevedoring remains the most critical item as it relates to operating/handling expenses.
 - The International Longshoremen’s Association has expressed a desire to participate in this new mode of domestic freight.



Infrastructure Improvements are Required....

- Given the state of “international cargo” at marine terminals, new, smaller “turn-key local” port systems may be required in order to properly handle the coastwise market.



Summary....

- The service capability can be easily converted from truck/rail to ship.
 - The various stakeholders already have in place the required “dialogue” in the transportation chain.
- A coastwise service using “current generation” container vessels could commence in the very near term given the right competitive economics.
 - Cost per mile economics are already there.
- While advance feature vessels will be introduced in coastwise services of the future, a near term answer is to “convert” current shipbuilding technologies to container and/or trailer ships.
- Both vessel and terminal labor acknowledge that they have to address their respective competitive economics to participate in this mode of distribution.
- While local port infrastructure will have to be improved upon, there is an immediate capability.

