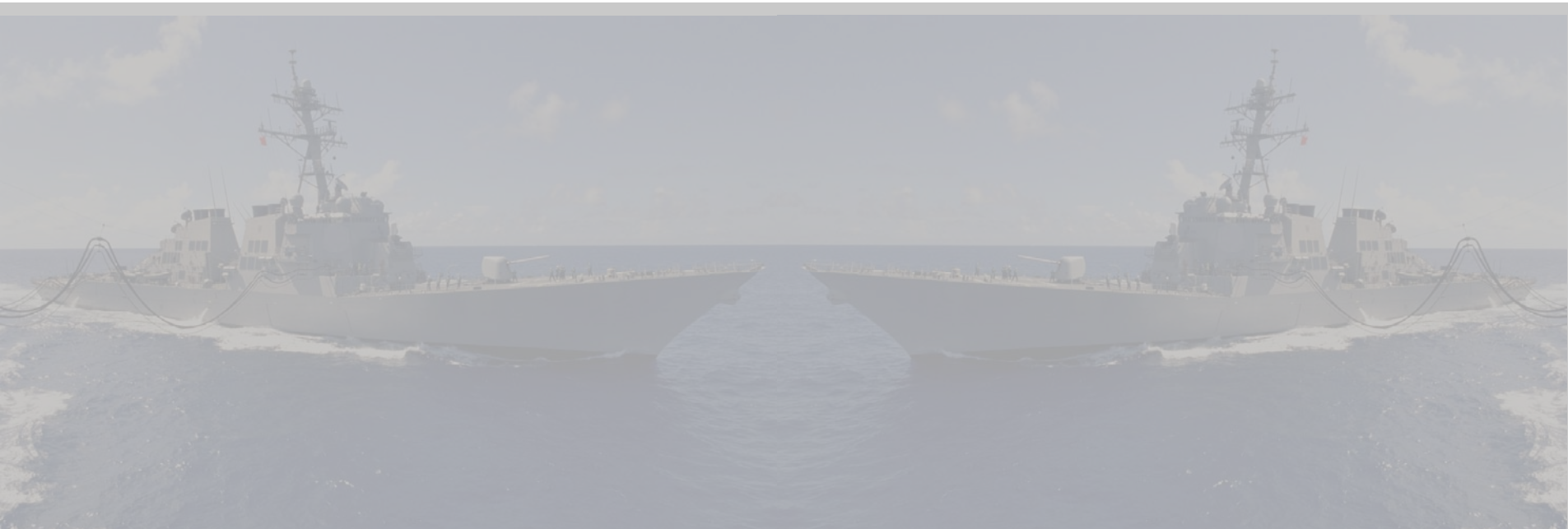


# Urgent v Critical

Tragedy When Terms Confused







**USS *Ammen* (DD-527) underway off Leyte, 20–24 October 1944  
see [http://en.wikipedia.org/wiki/USS\\_Ammen\\_\(DD-527\)](http://en.wikipedia.org/wiki/USS_Ammen_(DD-527))**



NAVY

VADM JAMES H. DOYLE JR.

COMBAT SYSTEM ENGINEERING  
DEVELOPMENT SITE

100

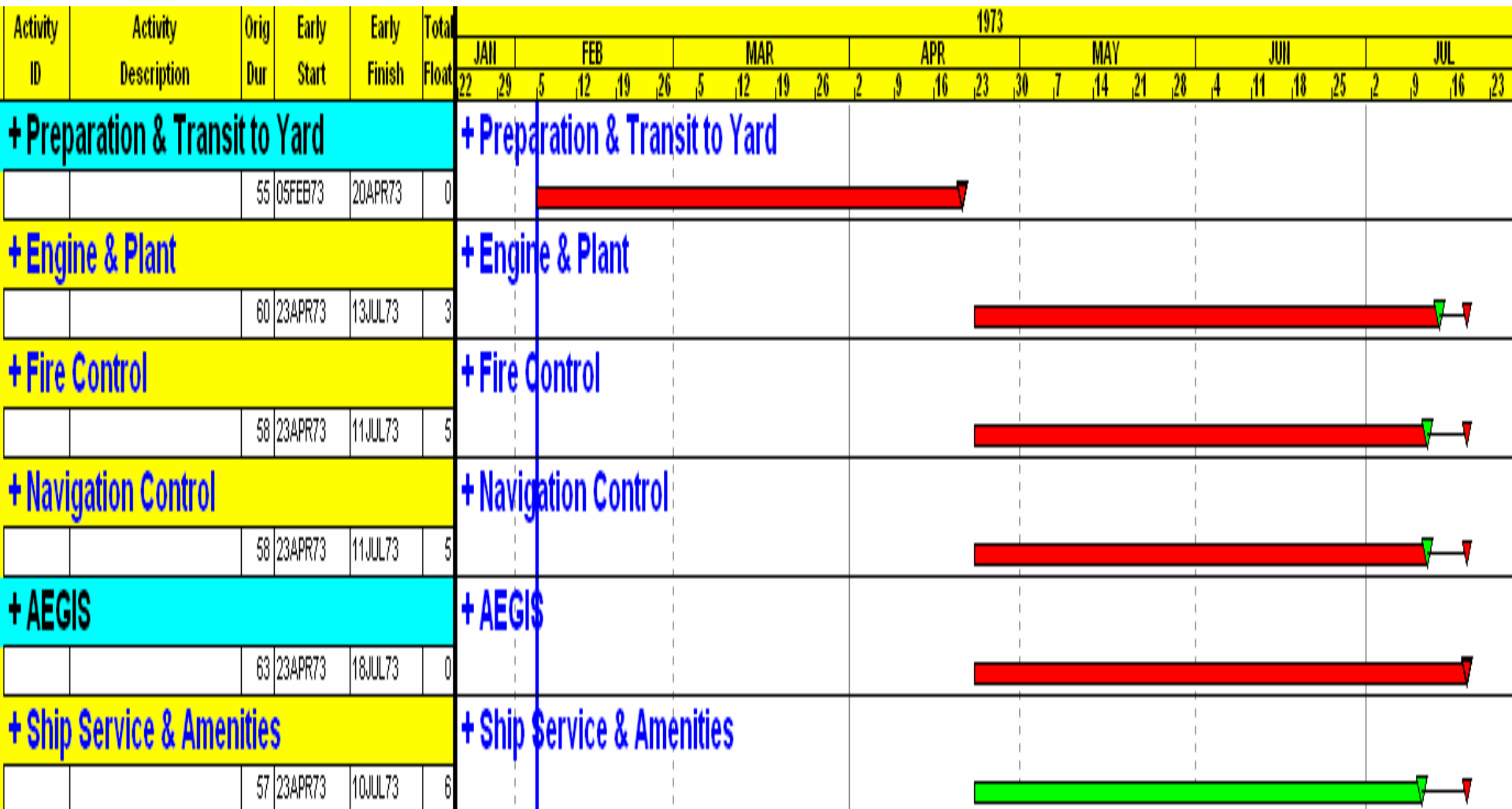
YEARS OF  
ACCELERATING  
TOMORROW



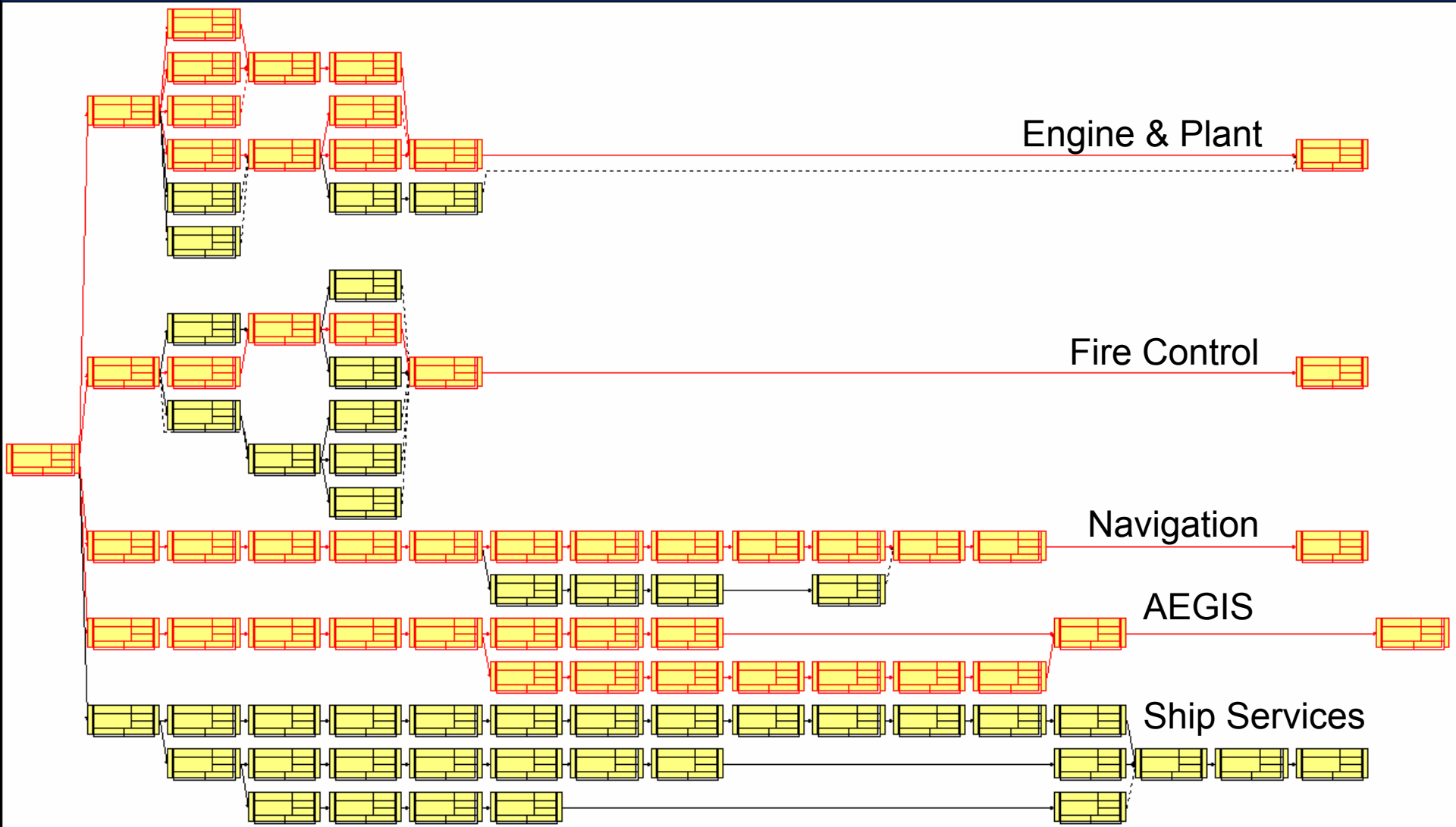
# Story Setup

- New Phased Array RADAR system to be field tested
- “develop a system which could identify an incoming high speed missile, lock on to it, and using an integrated computer electronically direct counter fire to destroy the interloper“
- “the cornfield unit had been tested using a surface based complex; now the Navy must take action to have a proto-type unit to test at sea and at high speed to ultimately serve as leader unit for new attack killer type jets”
- The CPM logic network:
  - Engineering shall perform standard shipyard upgrades and repair
  - Fire control and gunnery shall perform standard shipyard upgrades and repair
  - Navigation specialists shall perform standard shipyard upgrades and repair
  - Consultant to direct installation of pre-fabricated top secret system
  - Other ship’s services and amenities on a time and resource permitting basis

# AEGIS is Critical – But Other Work is Not Far Behind



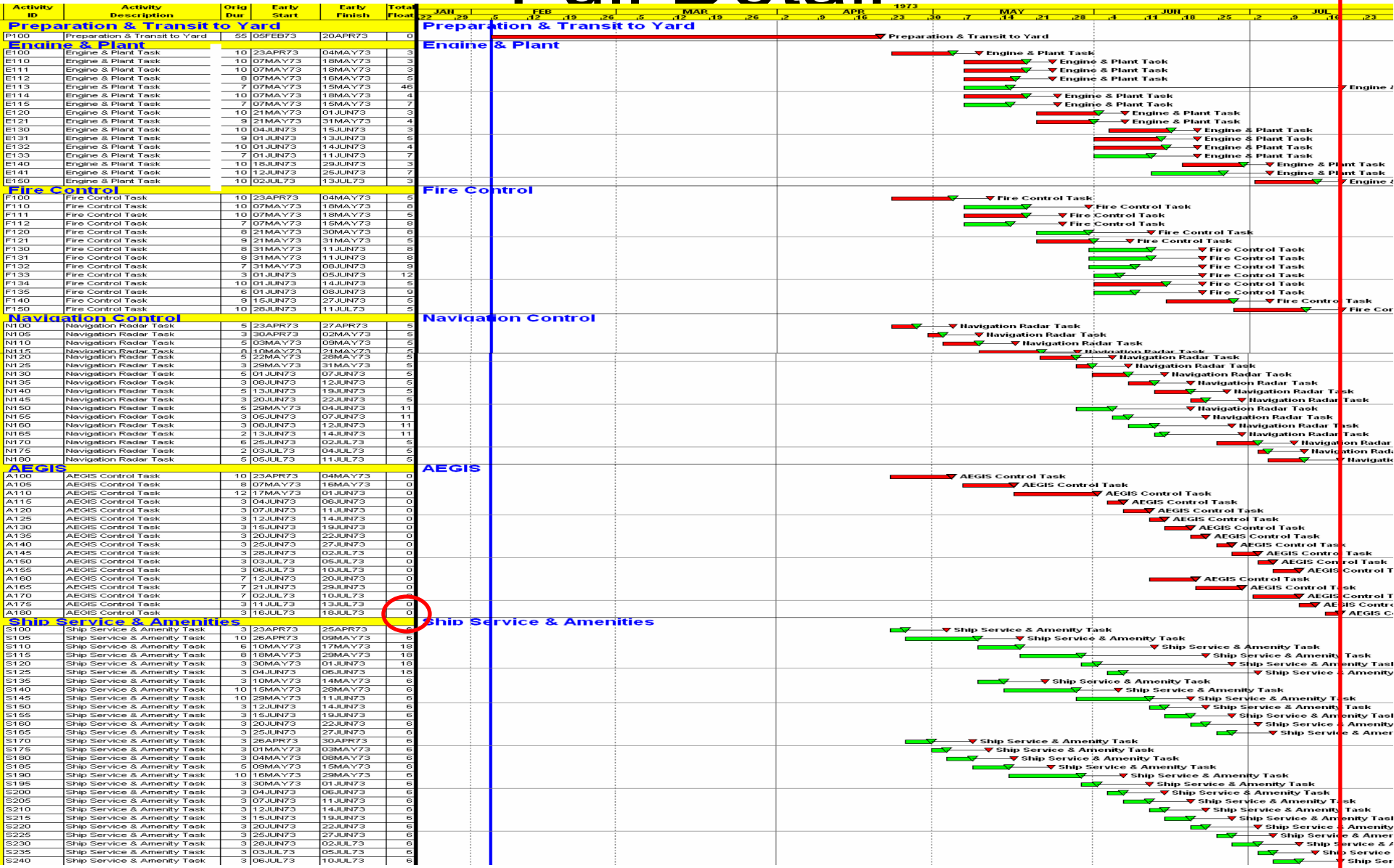
# Pure Logic





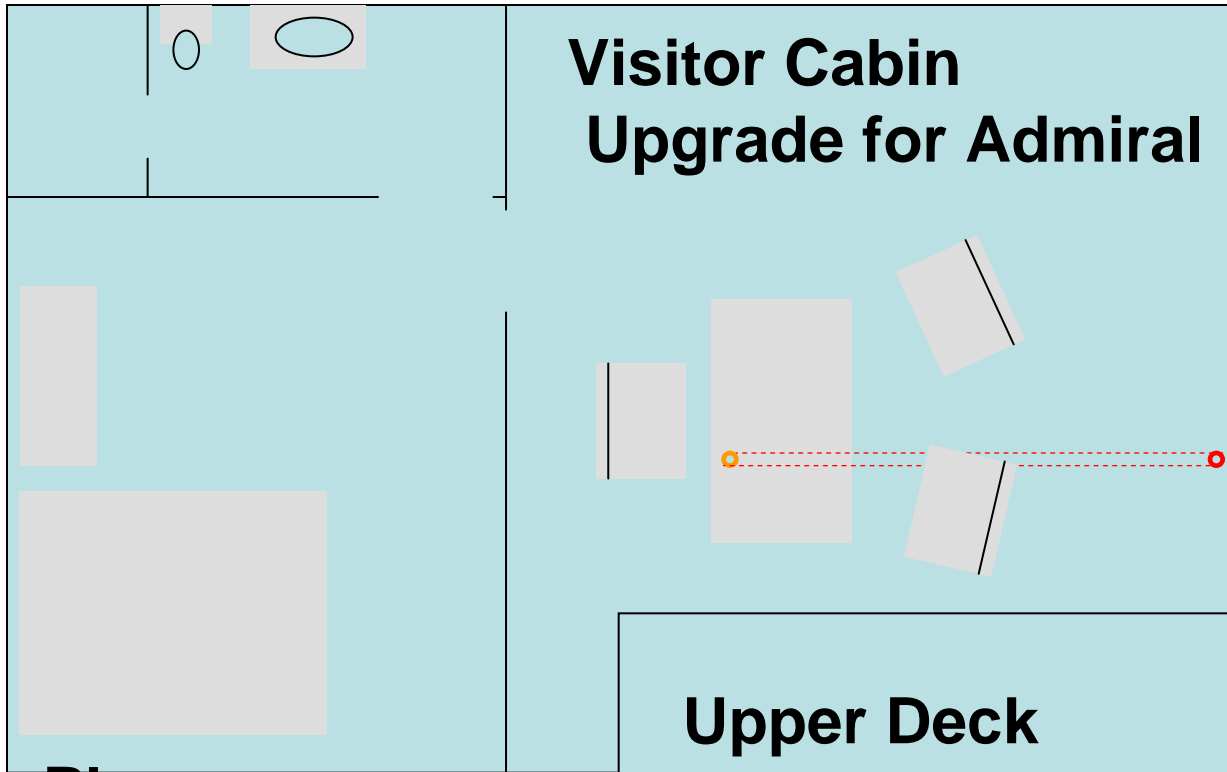
# Full Detail

18JUL60

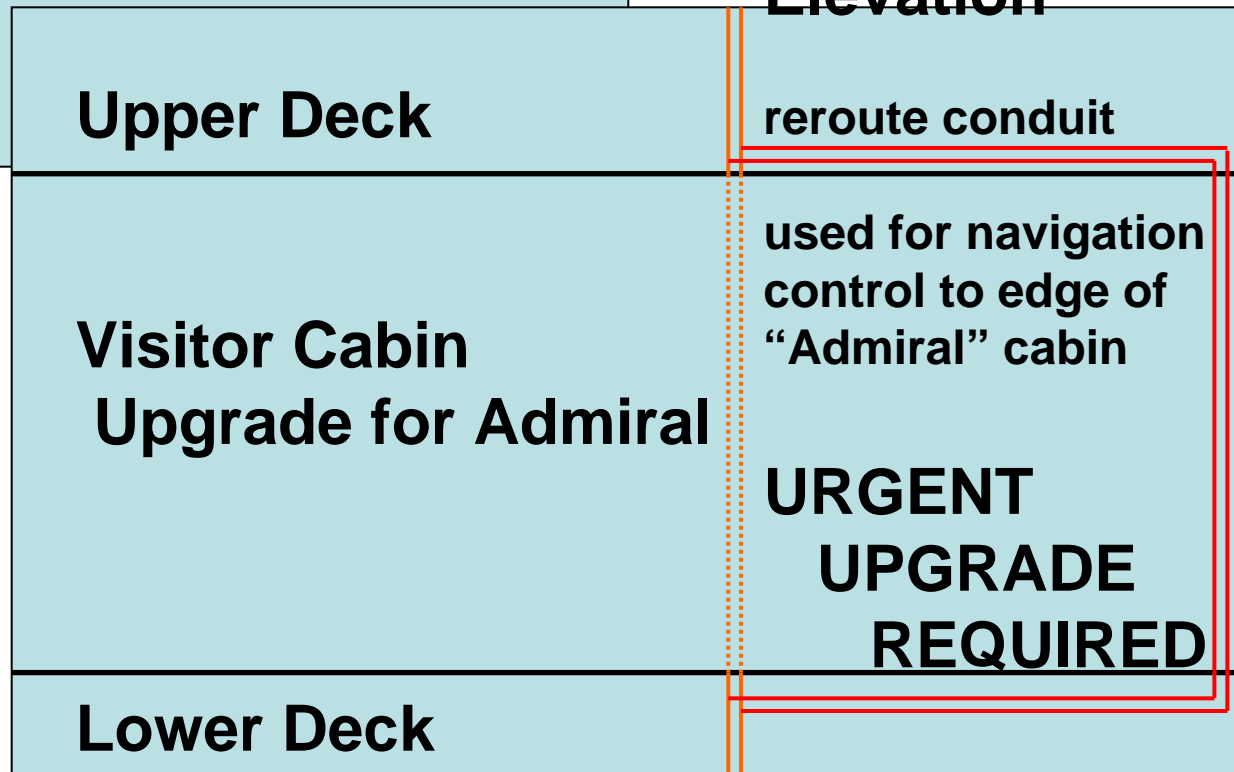


# A twist to make a CPM issue

- Rumors fly that the Admiral will board for test
- Staff decides to divert crews from “critical” upgrade of navigation to “urgent” upgrade of visitor’s cabin
- Estimated duration for navigation upgrades less than for new computer assisted fire control
- Computer fire control goes faster than expected
- Basic navigation upgrades slower than expected due to need to re-route control wiring around cabin
- Admiral has directed to go to sea as soon as possible
- **MISSION: Test unit as soon as possible**



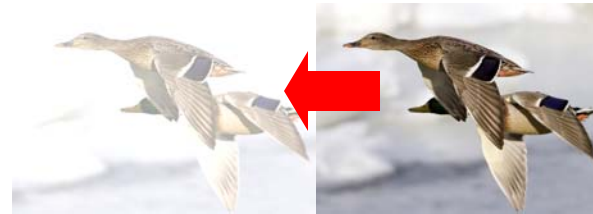
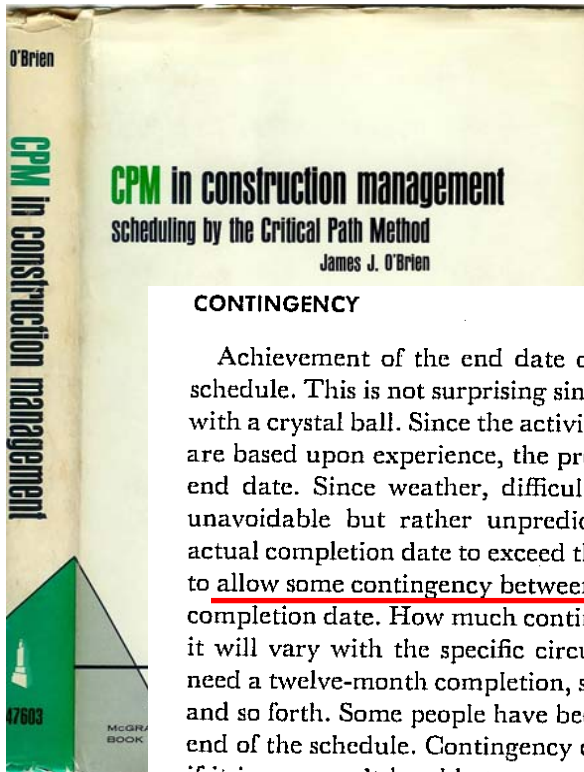
**Plan**





# Jim will Opine

- Why the portion of network to upgrade basic navigation did not have float to squander ... there is a definite tendency for the actual completion date to exceed the CPM date



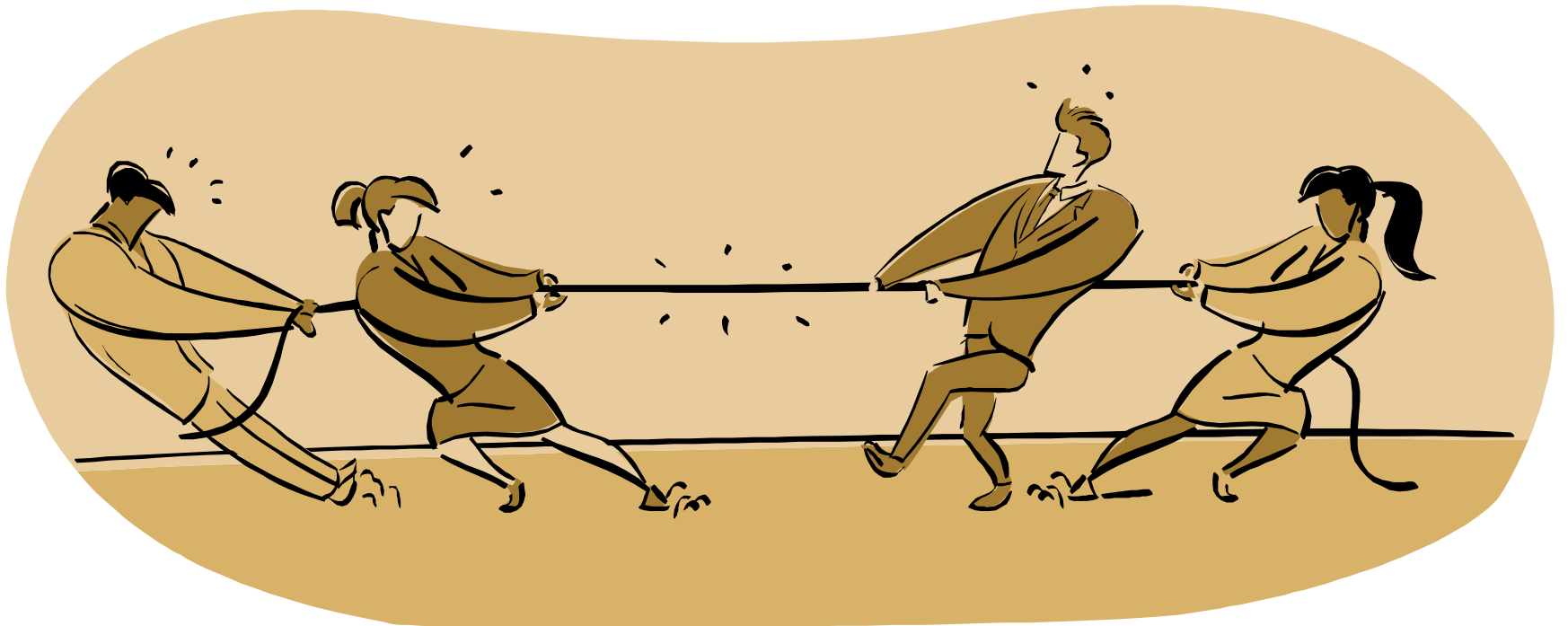
## CONTINGENCY

Achievement of the end date desired is unfortunately not an acceptable schedule. This is not surprising since we know that CPM has not furnished us with a crystal ball. Since the activities and times estimates used in the network are based upon experience, the project rarely finishes ahead of the computed end date. Since weather, difficult site conditions, labor disputes, etc., are unavoidable but rather unpredictable, there is a definite tendency for the actual completion date to exceed the first CPM end date. It is then reasonable to allow some contingency between the CPM end date and the actual desired completion date. How much contingency? There is no definite answer to this; it will vary with the specific circumstances of the project. However, if you need a twelve-month completion, set your CPM goal at about eleven months, and so forth. Some people have been reluctant to set a flat contingency at the end of the schedule. Contingency can be buried in the activity estimates, but if it is you won't be able to separate true estimates from contingency.



# Jim will Opine

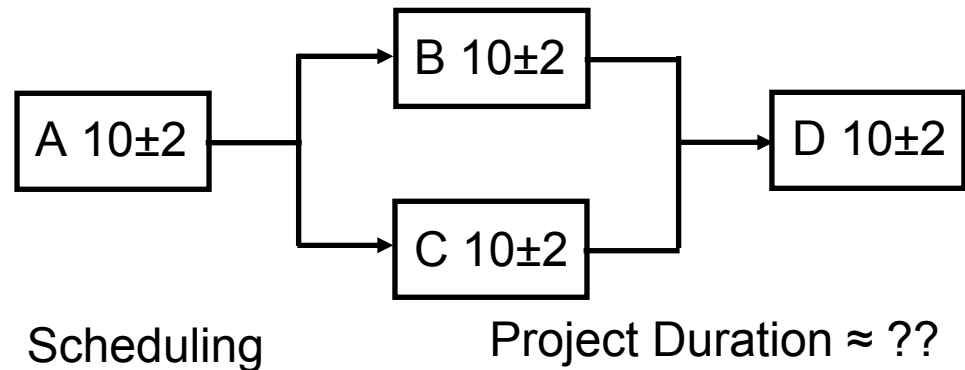
- How additional “urgent” work has a disruptive impact upon base contract duration ...  
there is a definite tendency for the actual completion date to exceed the CPM date



# Jim will Opine

- How concurrent near-critical paths tend to delay timely completion ...

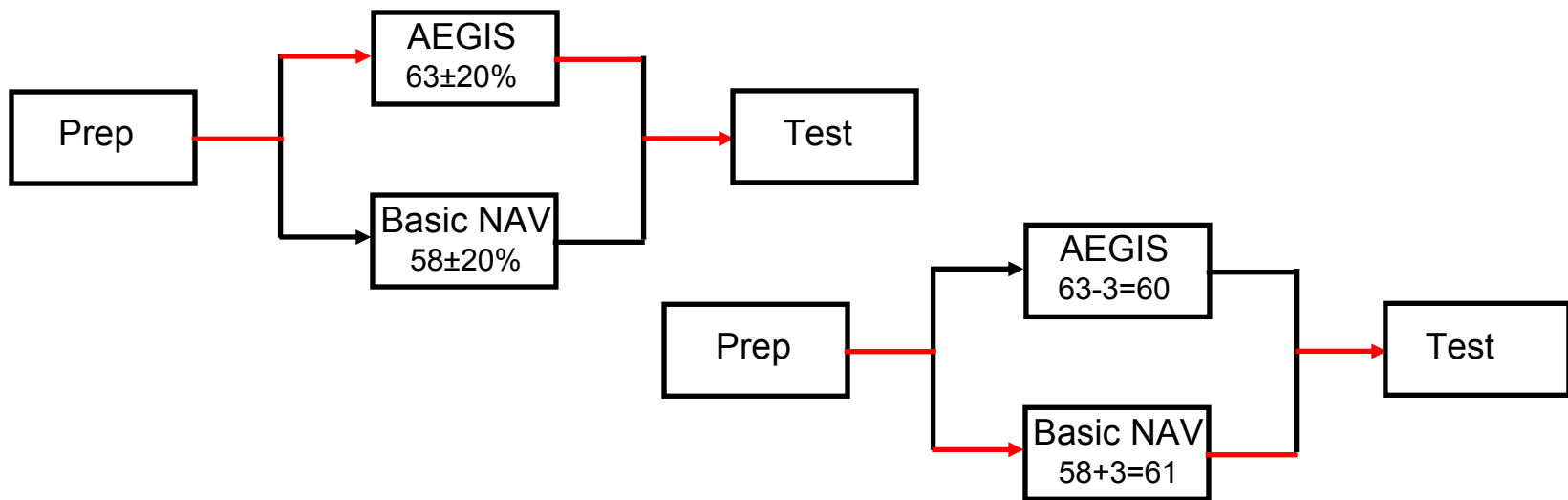
there is a definite tendency for the actual completion date to exceed the CPM date



# Jim will Opine

- Why staff should not have diverted resources from the near-critical navigation upgrades to the “urgent” desire for a nicer cabin ...

they should have understood diversion from basic navigation may flip critical path



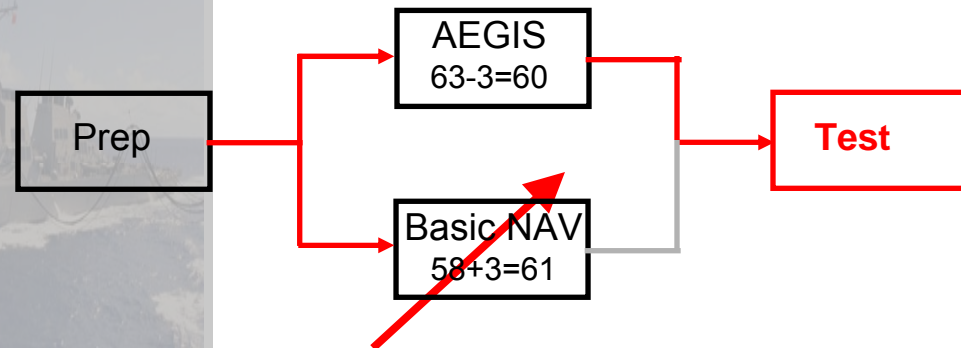


# Jim will Opine

- Why staff should not have diverted resources from the near-critical navigation upgrades to the “urgent” desire for a nicer cabin ...

they should have understood diversion from basic navigation may flip critical path  
they should have understood the near critical path must also support the true

**“Urgent” mission - to test the system**



**RIP**



**On 19 July 1960, while making the transit between Seal Beach and San Diego for decommissioning, Ammen was struck by Collett. The collision killed 11 Ammen sailors and injured 20 others. She was initially towed into Long Beach and, later, from there to San Diego where she was decommissioned on 15 September 1960. Ammens name was struck from the Navy List on 1 October 1960, and she was sold to the National Metal and Steel Corporation on 20 April 1961 for scrapping.  
see [http://en.wikipedia.org/wiki/USS\\_Ammen\\_\(DD-527\)](http://en.wikipedia.org/wiki/USS_Ammen_(DD-527))**