



# SCSI Harbor

What problems need to be solved?

Who has supported Harbor?

What are the advantages?

Conclusion





# What problems are solved with Harbor?

- Faster Time to market with new versions of the disk drives.
  - One mechanical design by the disk drive manufacturers that damp out the new head actuation and rotational velocity.
- Reduced engineering cost both at the system house and the disk manufacturers support.
  - Common Dock requirements
  - Fixed requirements for the wrapper disk interface
- Reduced cost to the end customer.
- Correct SCSI overall design, standardized with the SCA-2 connector.
  - STA White paper on Backplane design



# What problems are solved with Harbor?

- Specific power and air flow requirements for the system.
- Reduced inventory
  - One common wrapper with a clip on handle, not 5 to 15 wrappers for each system house.
  - Lower cost and faster to ship products
    - Manufacturer assembles drives with common wrapper, adds the clip on handle, packages and ships.
      - Versus select the correct wrapper, mount the drive in the wrapper, alignment special for each wrapper, package and ship.
- Improved System reliability
  - Widely tested design based on multiple company effort.





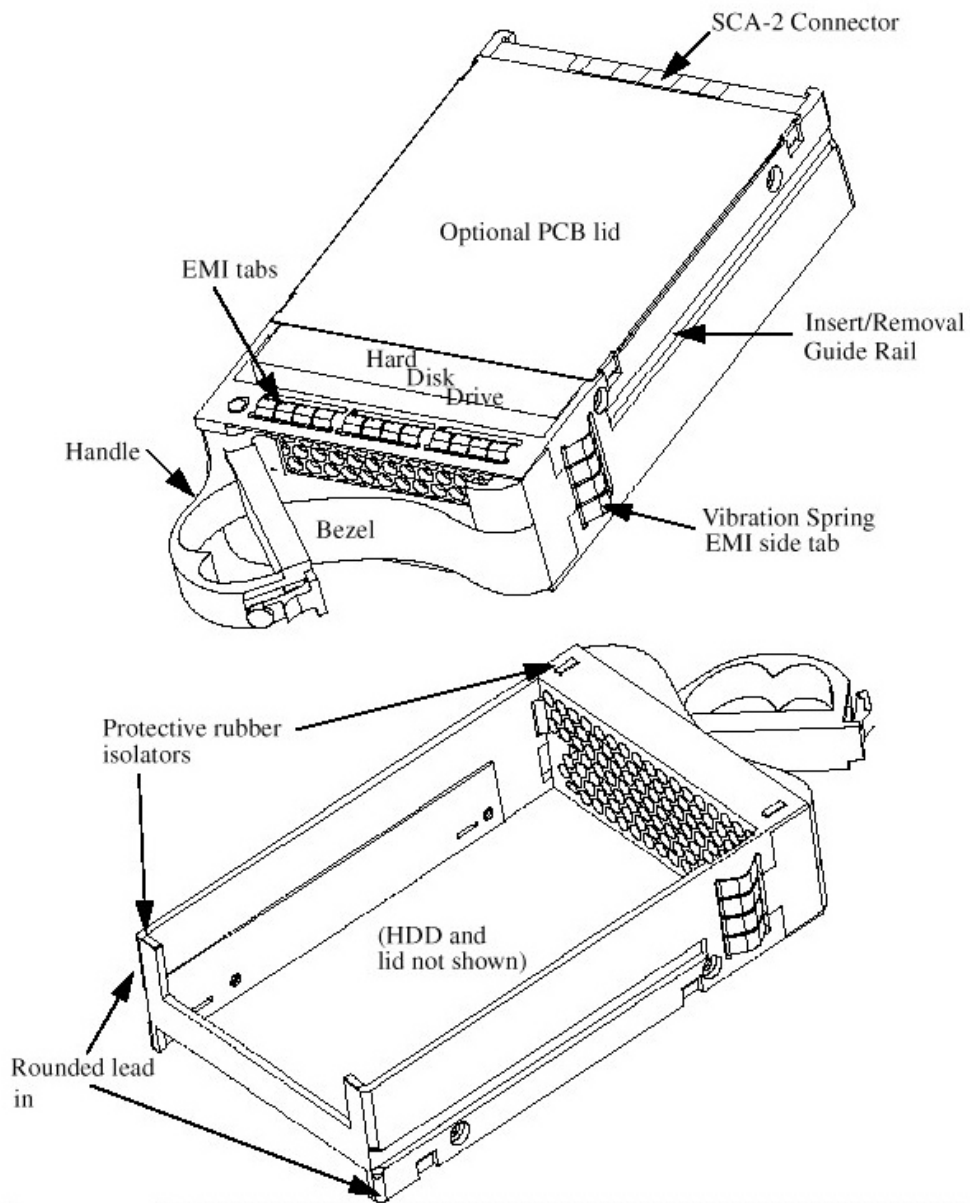
# Schedule

- Testing (round 1)
  - Preliminary 1.6" results 2/ 9/ 00
  - Complete 1.6" results 3/ 9/ 00
  - Review 1" results 4/18/ 00
- Design
  - Design review 3/ 9/ 00
  - Finalize design June 2000
- Implementations
  - Intel Q3 -2000 start
  - SGI Q3 - 2001
  - Clariion



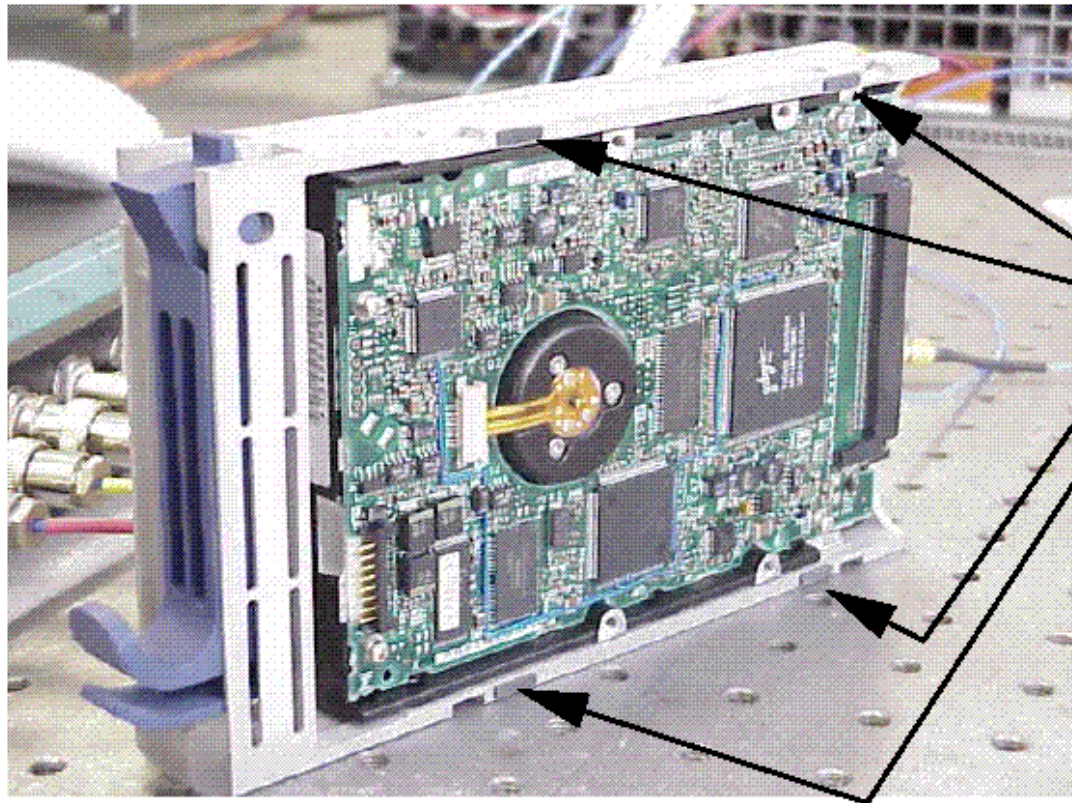
# Implementation Schedule

- Universal across all the Intel Platforms
  - Q3 Hudson II
  - Q4 Barbera II
  - Q1 2001 D'ibeirville II and Cabrillo III
  - Q2 P-Tiger
  - Q3 Foster
  - Q4 Tiger
- SGI 3/2001
- Clariion



The dock can be mounted in a 19 inch rack, 10 drives across the rack, 3u 5.25 inches high.

# 1 inch wrapper



## BUMPER Attach Location

\* 1" HD & Wrapper

Bmp2 cut & attached  
to wrapper as shown

Note: No EMI clips  
attached during tests

# Who has supported Harbor?

- System houses Intel, SGI, Clariion
  - IBM, SGI, Xyatrix, Unisys, LSI Logic - Symbios and Digital equipment showed designs and helped define the requirements.
- Disk drive manufacturers providing hardware; IBM, Quantum, Seagate, Western Digital (before enterprise division discontinued), Fujitsu, Hitachi
- Molex Provide Backplanes and connectors.



# What are the advantages?

- Reduced cost of engineering
- Reduced time to market
- Reduced inventory
  - Disk drive manufacturers, System houses, Repair centers
- Reduced customer cost
- One design that will work across several generations of disk drives.
- System requirements; power, Airflow and Mechanical.
- Allowance for pin keying for manufacturers to restrict drives that can be installed.
- Improved System reliability and more stable solution.
- Vendor unique handles.



# Conclusion

- Promotes the general use of SCSI
  - It makes SCSI easier to use
  - It reduces the cost of implementing SCSI
- Speeds up the introduction of new disk drives
- It reduces Drive Manufacturers and System house inventory of wrappers
- It is already being designed into platforms
- STA is right place to document and market the SCSI Harbor

**SCSI Harbor is good for promoting SCSI!**

