Managing Your Bits and Bytes

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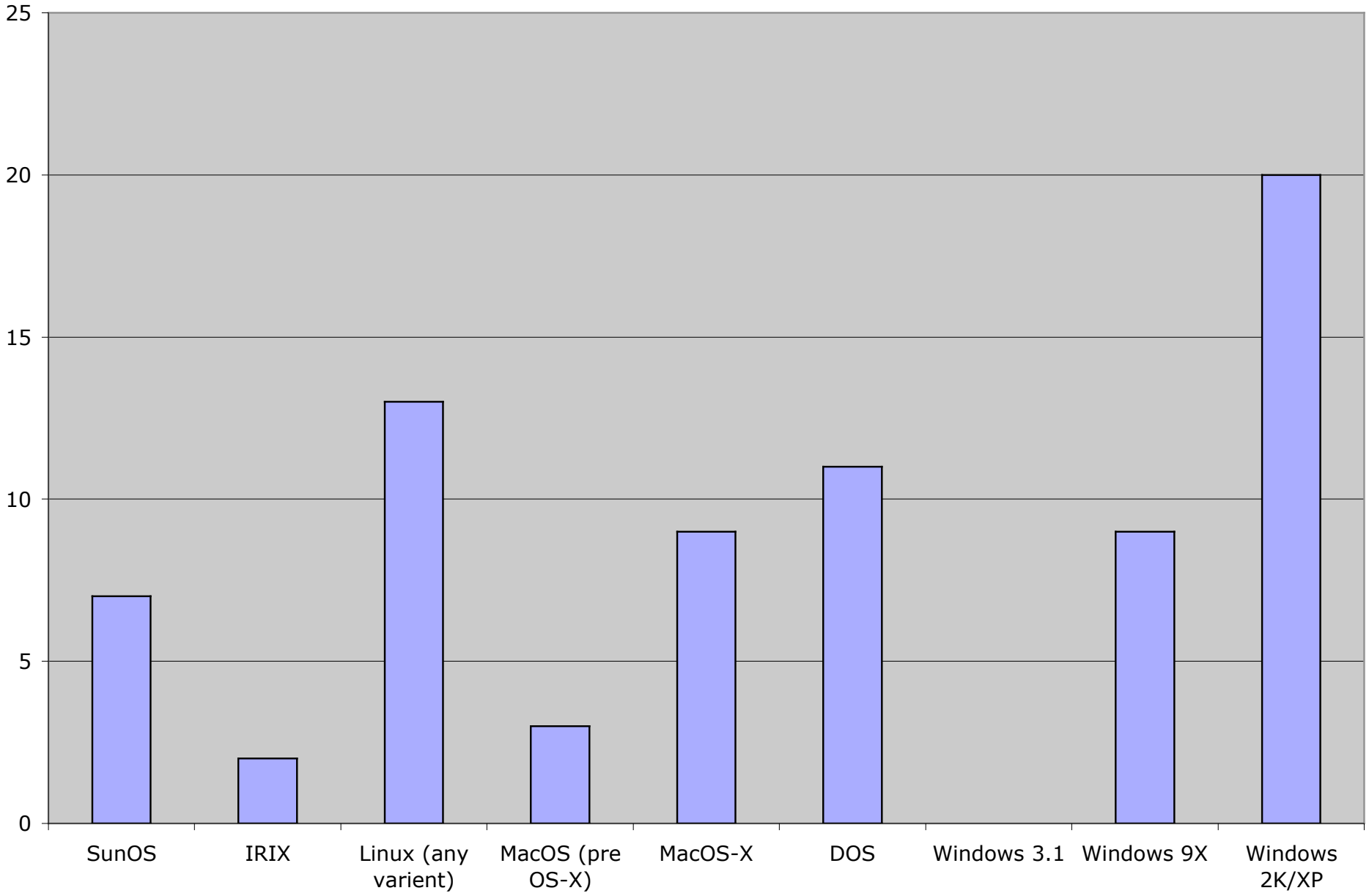
2004

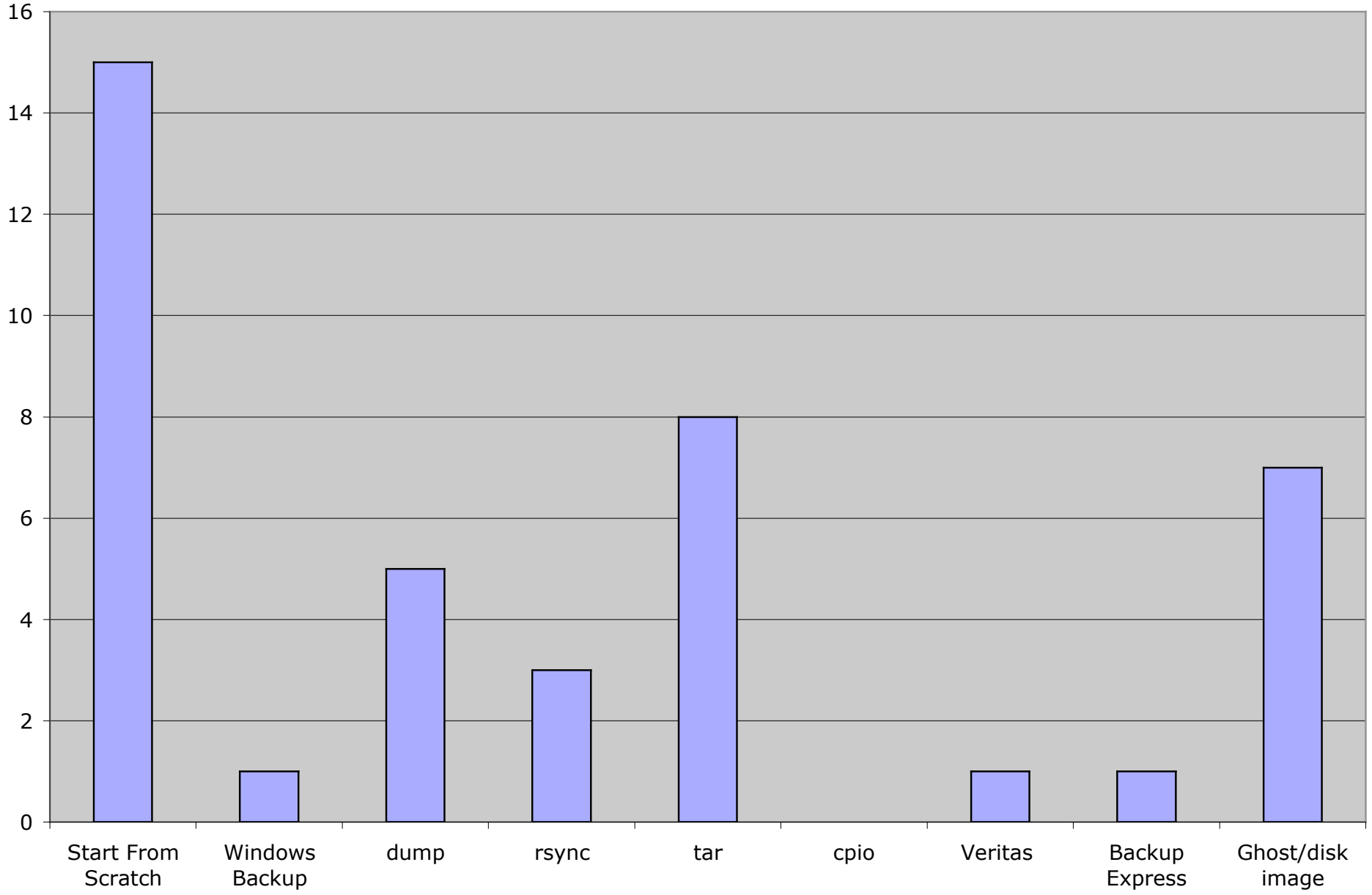
Survey Participants

Alpha_Helix
Atlantis
Cape_Hatteras
Cape_Henlopen
Corwith Cramer and Robert C. Seamans
Endeavor
Healy
Maurice_Ewing
Melville
New_Horizon
Robert_Gordon_Sproul
Roger_Revelle
Seward_Johnson
Thomas_G._Thompson
Walton_Smith
Weatherbird II
Wecoma
knorr
oceanus
tioga

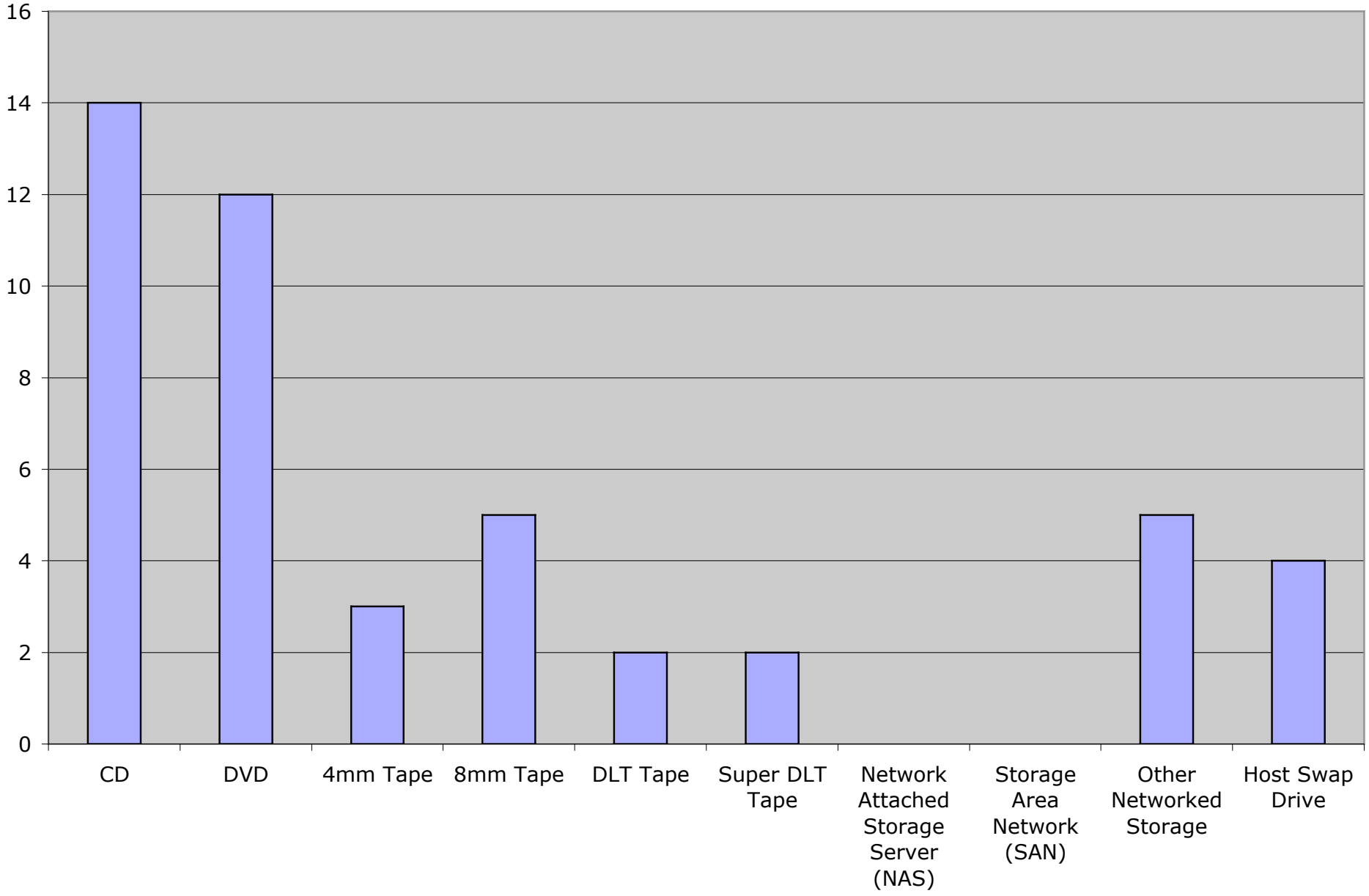
Operating Systems Supported



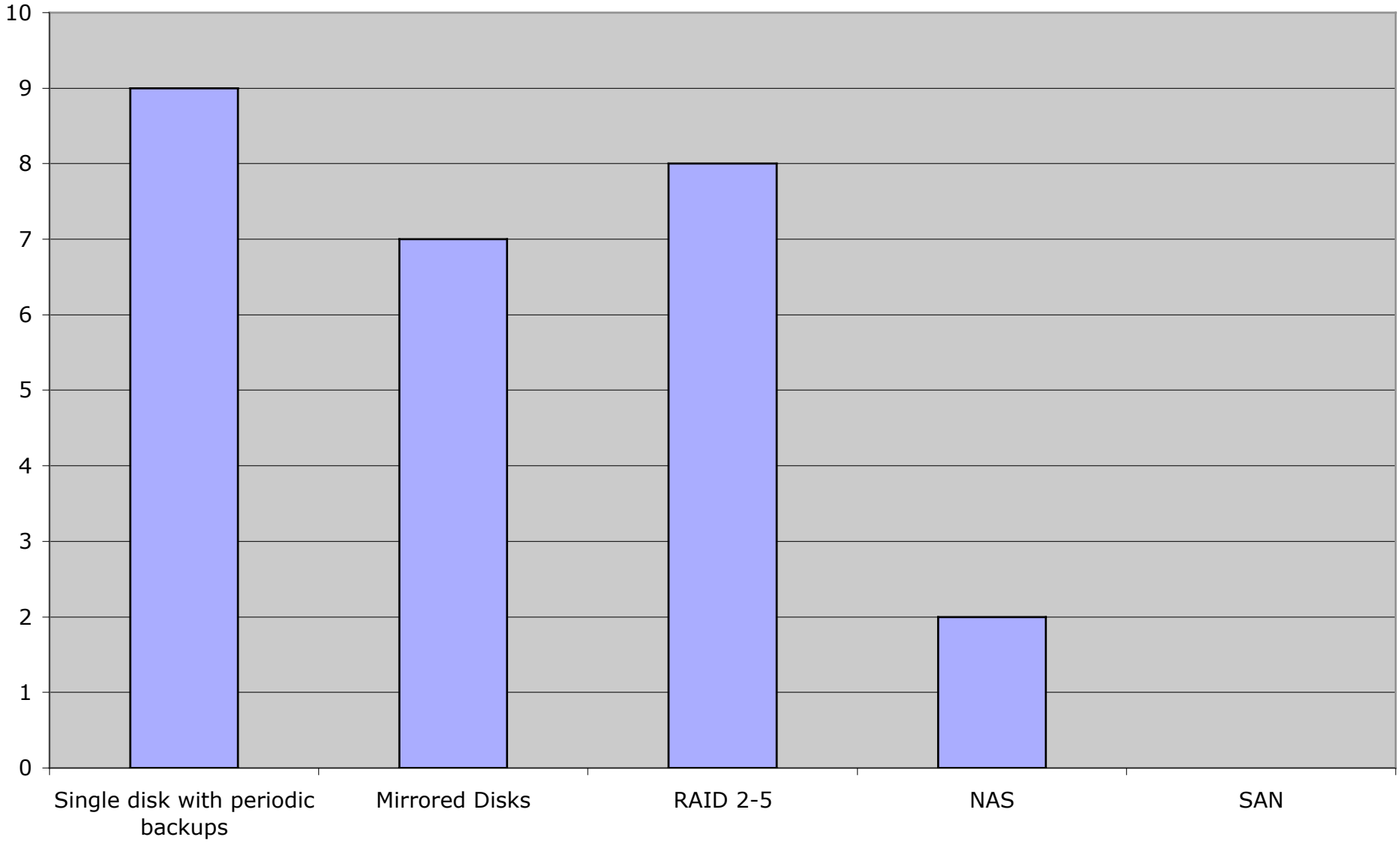
Backup and Restoration Methods



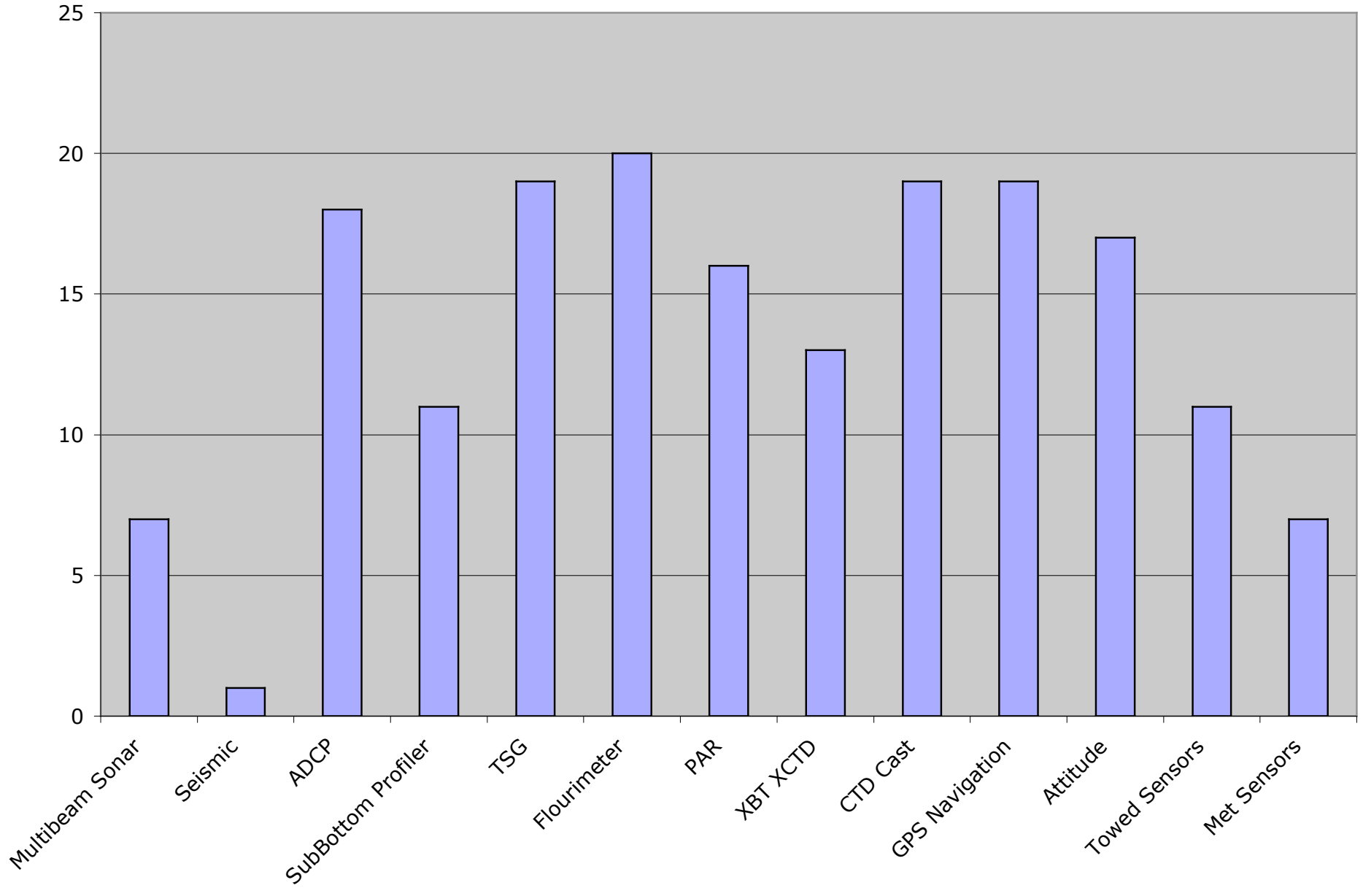
System Backup Media Type Usage



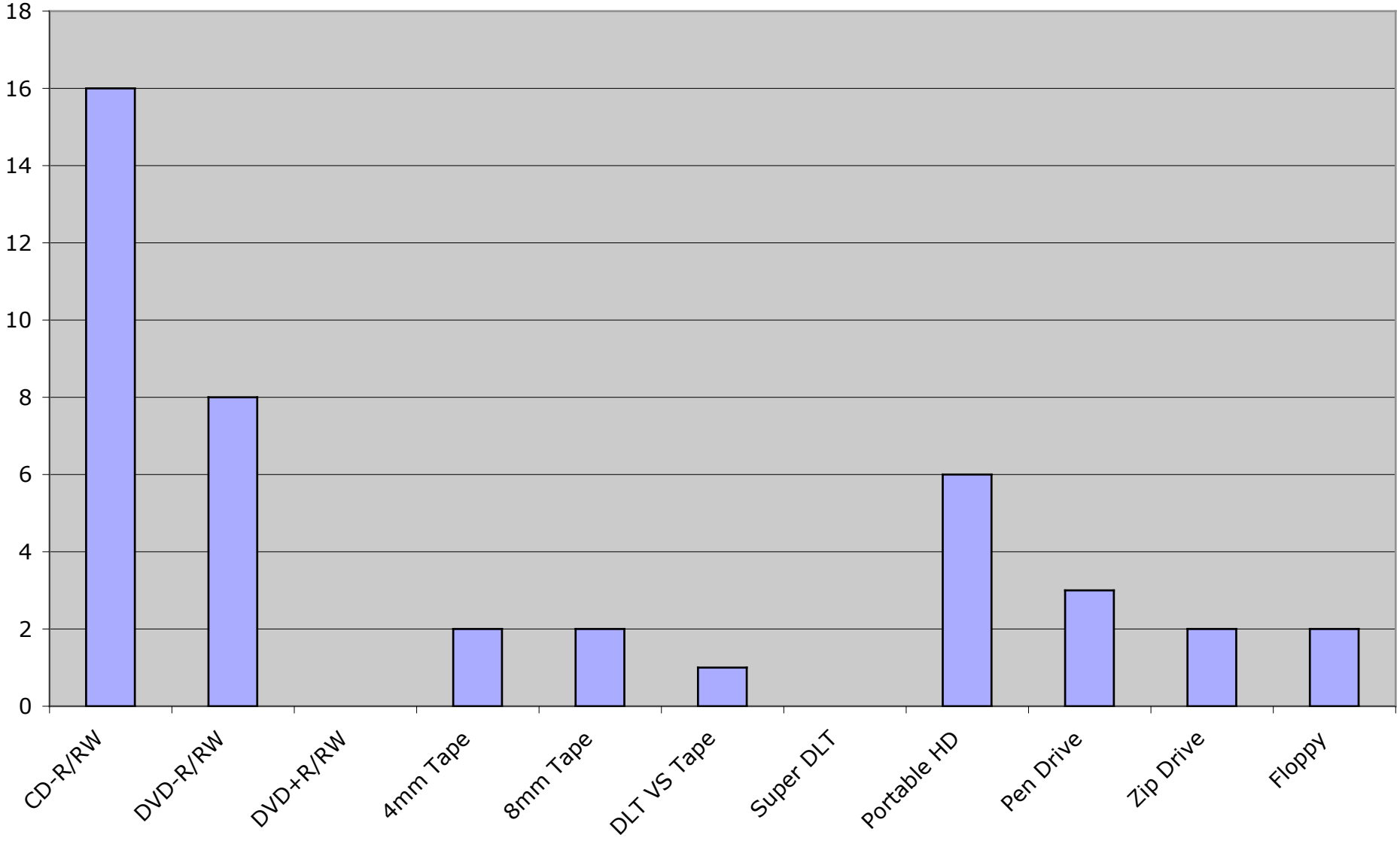
Mission Critical Data Storage Techniques



Data Types Typically Collected

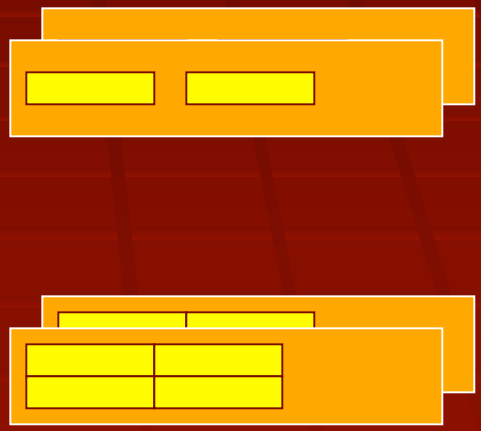


Types of Media Provided to Scientists

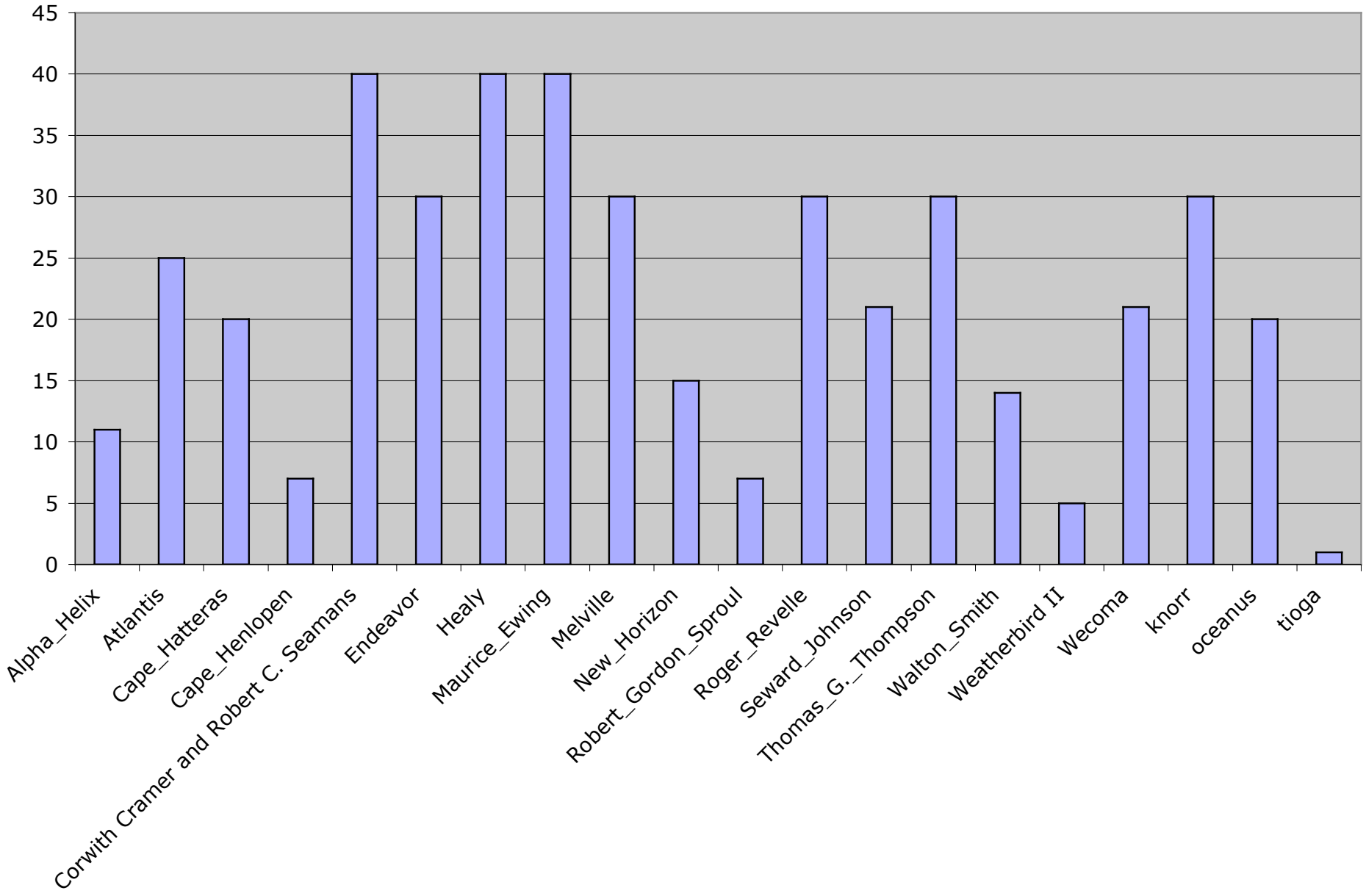


Hardware

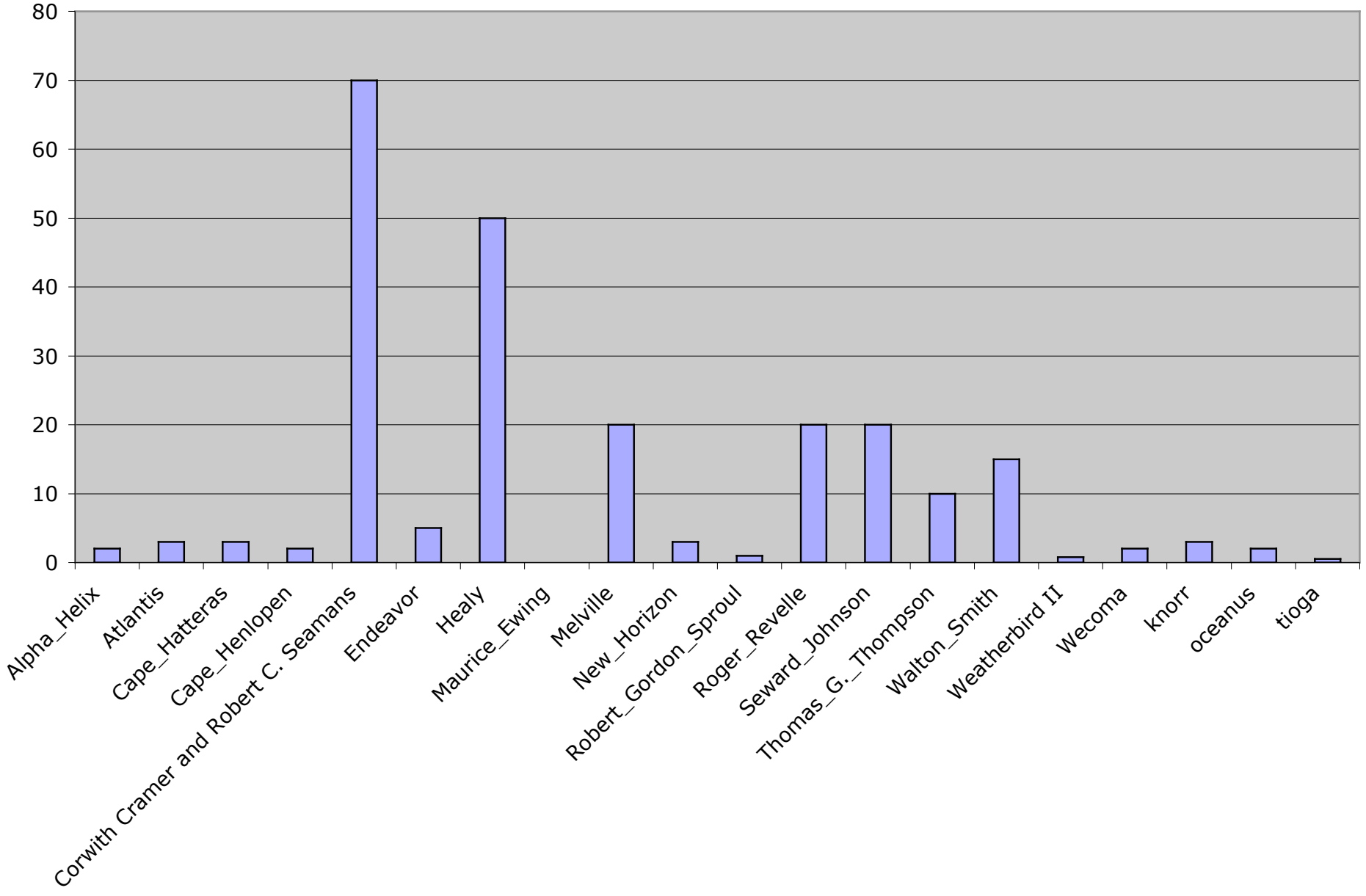
- When possible, purchase systems in pairs for hardware redundancy.
- Single Instrument systems:
  - Dual mirrored disks.
  - Moderate processor speed, moderate memory.
- Primary Systems
  - Dual processor systems
  - Minimum 1Gb memory
  - HW RAID-5 system with a minimum of 3 disks.



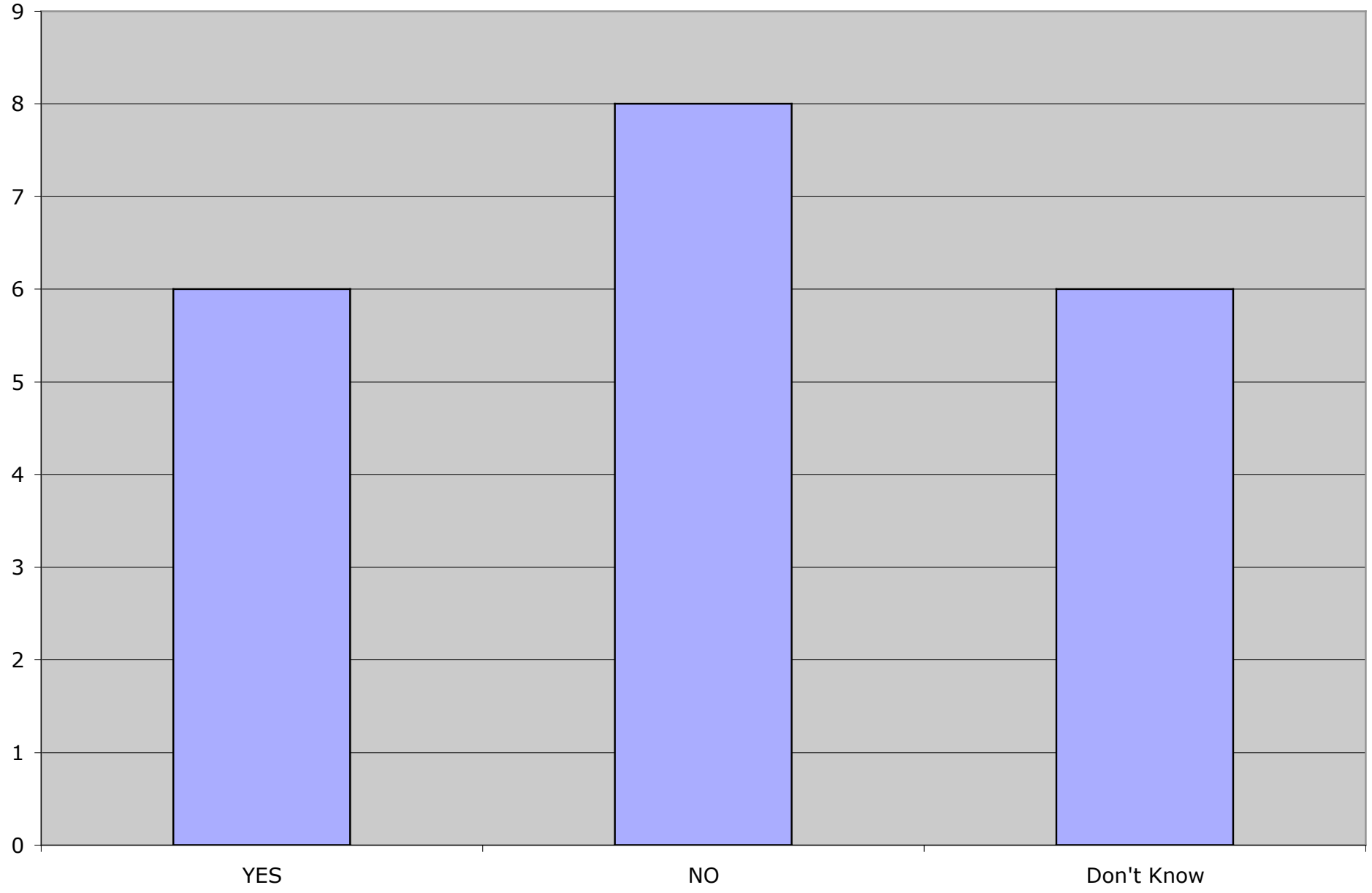
Nominal Cruise Length

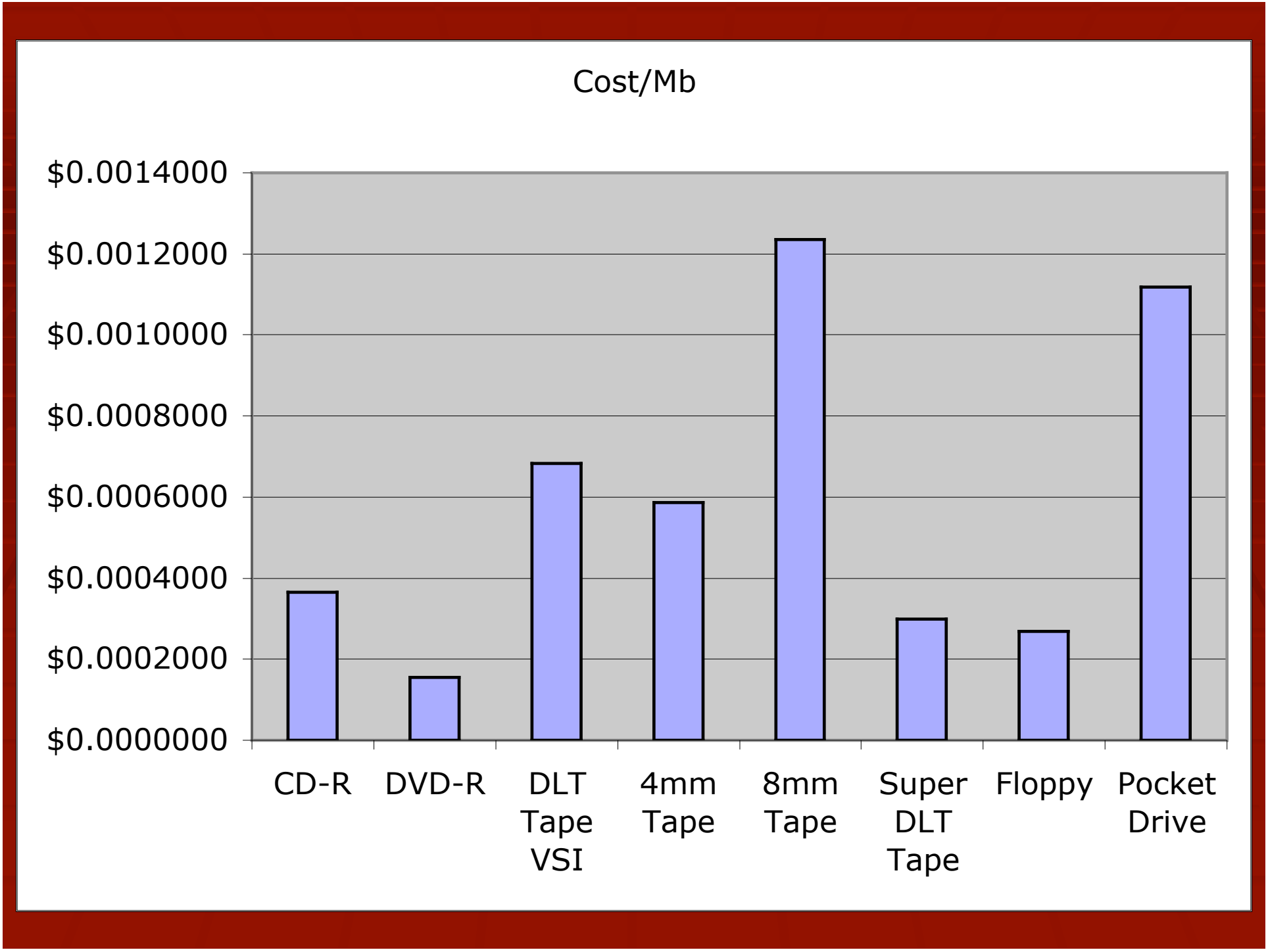


Cruise Data Size



Do You Submit Data Directly to a National Archive




Cost/Mb
$0.0014000
$0.0012000
$0.0010000
$0.0008000
$0.0006000
$0.0004000
$0.0002000
$0.0000000
CD-R
DVD-R
DLT Tape VSI
4mm Tape
8mm Tape
Super DLT Tape
Floppy
Pocket Drive

NIST Digital Data Preservation Program

Our goal is to work with the industry and user community to develop a standard methodology for determining archival quality grade discs. Part of our user community effort is working through the Government Information Preservation Working Group.

http://www.itl.nist.gov/div895/preservation/

Care and Handling of CDs and DVDs — A Guide for Librarians and Archivists

www.itl.nist.gov/div895/carefordisc/CDandDVDCareandHandlingGuide.pdf

DVDA Article: NIST Study on Error Rates of Optical Discs in Harsh Conditions

(Sent via rvtec list.)

Thanks.

Questions and Ideas

- What are the drivers for the operating systems supported?
  - Instrument requires it.
  - Ease of management.
  - Stability
  - “Customers” ask for it.
  - Software requires it.
  - Low cost of ownership.
- What is the maximum number of OS’s supported?
- What is the fewest number of OS’s supported?
- Are there advantages to supporting a diverse array of operating systems?
  - Flexibility.
  - Ability to support many instruments
- Are there disadvantages to supporting a diverse array of operating systems?
  - Lack of ability to maintain and to maintain expertise.
- Is there a conclusion to be drawn from all this?
- Support the fewest you can, that offer the most flexibility, and support the most science gear while have the least overhead

Questions and Ideas

- What are the most common methods of doing backups?
- Why are these methods most popular?
- How many ship's don't do regular backups?
- Who's lost data before?

Questions and Ideas

- What are the most common media types used for backup?
- Why?
- Does anyone use a tool that facilitates backups from multiple types of OS's via a network?
- Has anyone investigated these?
- What do people like and dislike about the most common method for storing mission critical data?

Questions and Ideas