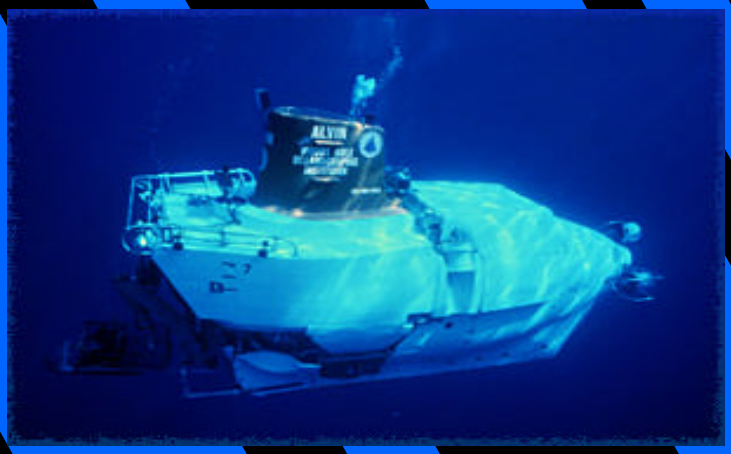
ALVIN Overhaul Plans and Upgrades



National Deep Submergence Facility

December 2000 DESSC Meeting

Overhaul timeline

Upgrades: community survey

Other improvements

Video duplication

Overhaul Timeline

- Offload ATLANTIS after December 16 arrival
- Begin overhaul work January 2, 2001
- Complete overhaul work June 12, 2001
- Sea trials and certification June 13-22, 2001
- Operational June 23, 2000
- http://www.marine.whoi.edu/ships/alvin/alvin.htm for progress updates

Community Input

- Hard Mount User Video Controls
  - Second pan/tilt
  - Observers control, flexibility
- Modify Bottom of Science Rack
  - Better cushions, more floor space in sphere
- Modify Equipment Interface for Basket
  - Interlocking component system
  - Other interface issues?
- Replace External Stills with Digital camera
  - Digital frame grabs will eventually replace external film cameras
  - Retain one Benthos 35mm until digital is available

Community Input Cont.

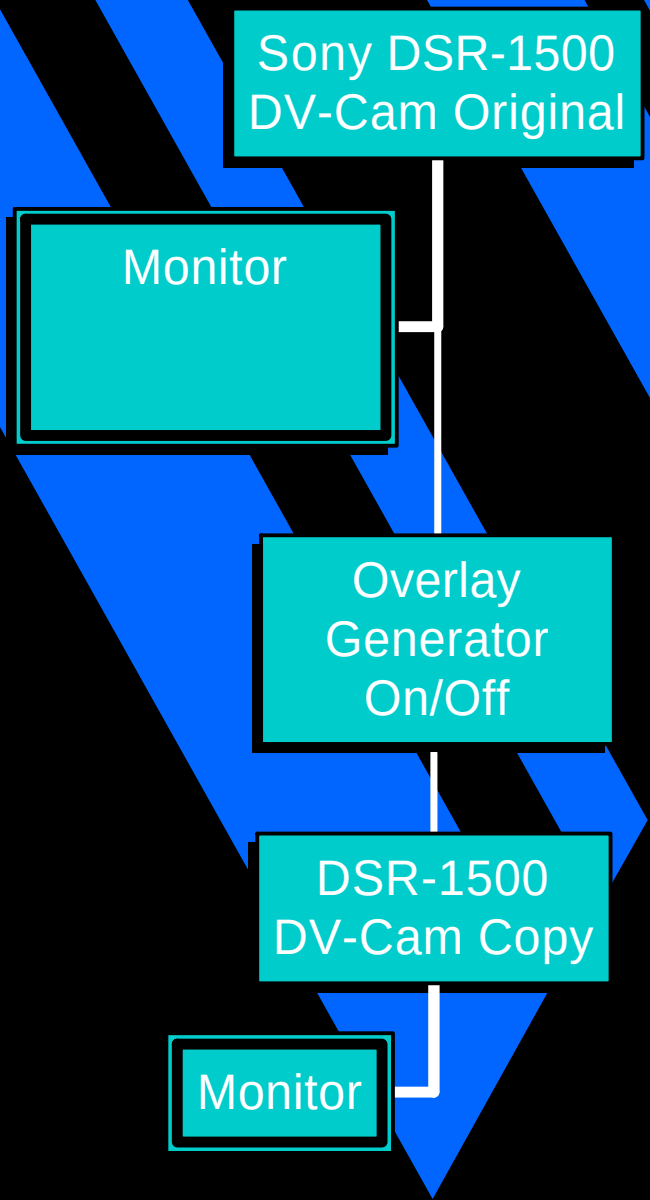
- Better single chips and smaller 3-chip cameras
- Install flat screen displays
  - Pilot and Observer monitors
- Develop Fiber Optic penetrator
  - Being investigated, not in overhaul
- Acoustic modem for depth/position telemetry
  - Increased navigation options

Other Improvements

- Digital video recorders
  - DV-Cam originals
- Doppler Navigation w/RLG
  - Continuous fixes with acoustic updates
- Lateral thruster (DP control?)
- Replace port manipulator (?)
- Install Sunwest SS300 CTFM
- Beta ALVIN power simulator temporarily at CRCG site, http://alvin.crcg.edu/

ALVIN Video Duplication

ALVIN Duplication Facility (x3)
(ALVIN provides this media)



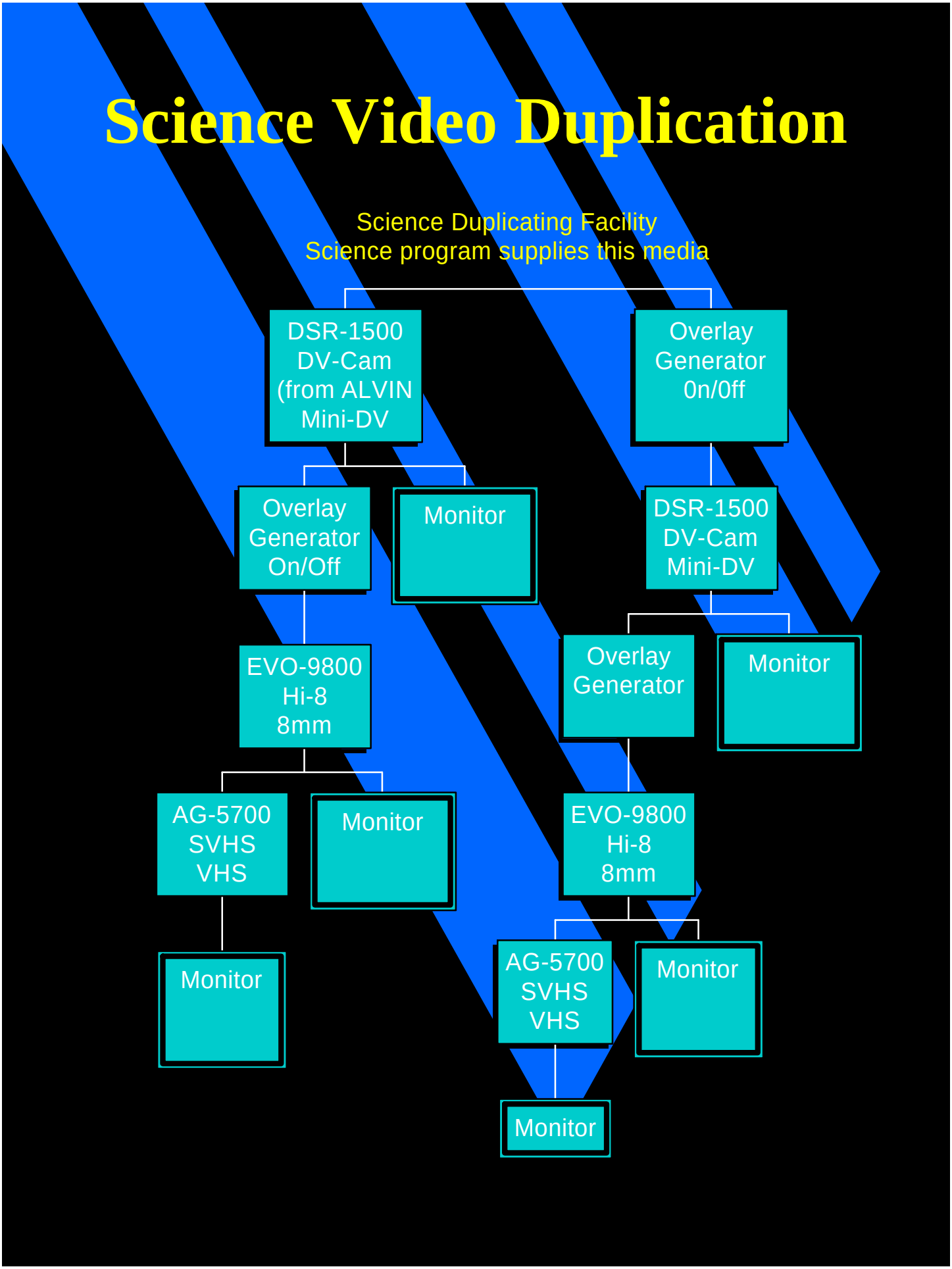
ALVIN duplication

- Previous facility provides for:
  - 3 channels of simultaneous duplication of Hi-8 tapes, with 3 source decks (EVO-9800) and 3 duplication decks (CVD-1000)
  - Analog duplication
  - 12 hours of video can be duplicated in 4 hours
  - B/W monitoring of all decks, color monitoring of any selected deck
  - Master genlock and time-base-correction for all equipment

ALVIN Duplication Cont

- New facility provides:
  - 3 channels of simultaneous cloning or w/overlay of DV-Cam tapes, with 6 identical decks (DSR-1500)
  - 12 hours of video can be cloned in 4 hours
  - B/W monitoring of all decks, color monitoring of any selected deck
  - New system is smaller and simpler than the previous one

Science Video Duplication



Science Duplication

- Previous facility provides for:
  - Duplication from any source analog medium (Hi-8, 8mm, S-VHS, VHS) to any other analog medium.
  - More than one duplicate can be made at once, as long as they are of the right type (that is, they fit into the decks that are provided).
  - B/W monitoring of all decks, color monitoring of any selected deck.
  - Editing capability of Hi-8 tapes

Science Duplication cont

- New facility provides:
  - Designed for two main classes of users: those who want to make additional copies of the DV-Cam distributions, and those who want an analog format other than DV-Cam
  - Perform DV-Cam cloning
  - Perform analog duplication from DV-Cam to any analog format (Hi-8, 8mm, S-VHS, VHS)
  - Text overlay possible during analog or digital duplication
  - During analog duplication, up to 4 copies of one DV-Cam source tape can be made at once, as long as they are of the right type, or up to 2 copies can be made of 2 different DV-Cam source tapes