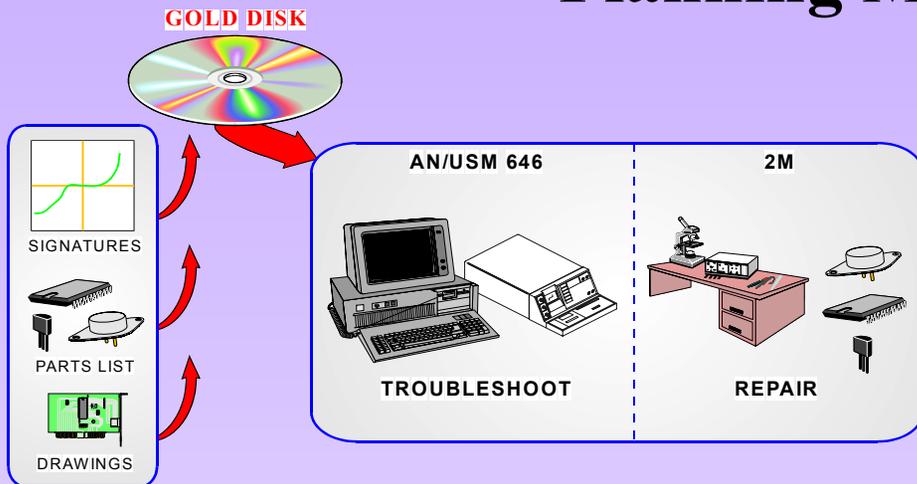




Miniature/Microminiature (2M) Module Test & Repair (MTR) Gold Disk Strategic Planning Meeting VII



2M MTR PROGRAM HOME PAGES

WWW.CRANE.NAVY.MIL/2M

[HTTPS://WWW.NOR.NUWC.NAVY.MIL/MTR](https://WWW.NOR.NUWC.NAVY.MIL/MTR)

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IngramTW@NAVSEA.NAVY.MIL

Building 197, 4E 2086



SEA 04M32 Responsibilities

2M MTR Equipment Outfitting

- 294 Ships and Shore Commands
- 20 Submarines (2002-03 planned)
- 7 CNET Training Commands
- 10 FTSCs 2M MTR Inspector Sites
- New Equipment Evaluation/Selection
- 2M MTR Equipment ILS
- 2M Piece Part APLs (41 Ship Class & 20 Shore)

New Ship/ System PM, SYSCOM, FMS and other Services/USCG Interface

2M MTR Program Processes

MTR Test Routine Development & Distribution

2M Certification/ Site Review Support



NAVSEA 2M MTR Program Infrastructure

CNO N43
2M MTR Resource Sponsor

NAVSEA 04M32
2M/MTR Program/ILS Manager

NSWC Crane
Code 6083

- 2M Equipment ISEA/TDA
- 2M Certifying Agent
- Piece Part Outfitting (SCN)

NAVICP-M
Mechanicsburg
Code 058

- 2M Piece Part Support
- 2M/MTR Equipment Support
- Gold Disk Candidate List Data
- CCA/EM Requisition Data
- BOSS Funds for Gold Disks

NUWC DET FEO
NORFOLK
Code 201V

- MTR Equipment ISEA/TDA
- Gold Disk Development Mgr
- GD Verification/Distribution
- 2M Piece Part Allowances

FTSCLANT 4103
FTSCPAC 203
FTSCLANT/PAC DETs

2M Inspectors/FSE

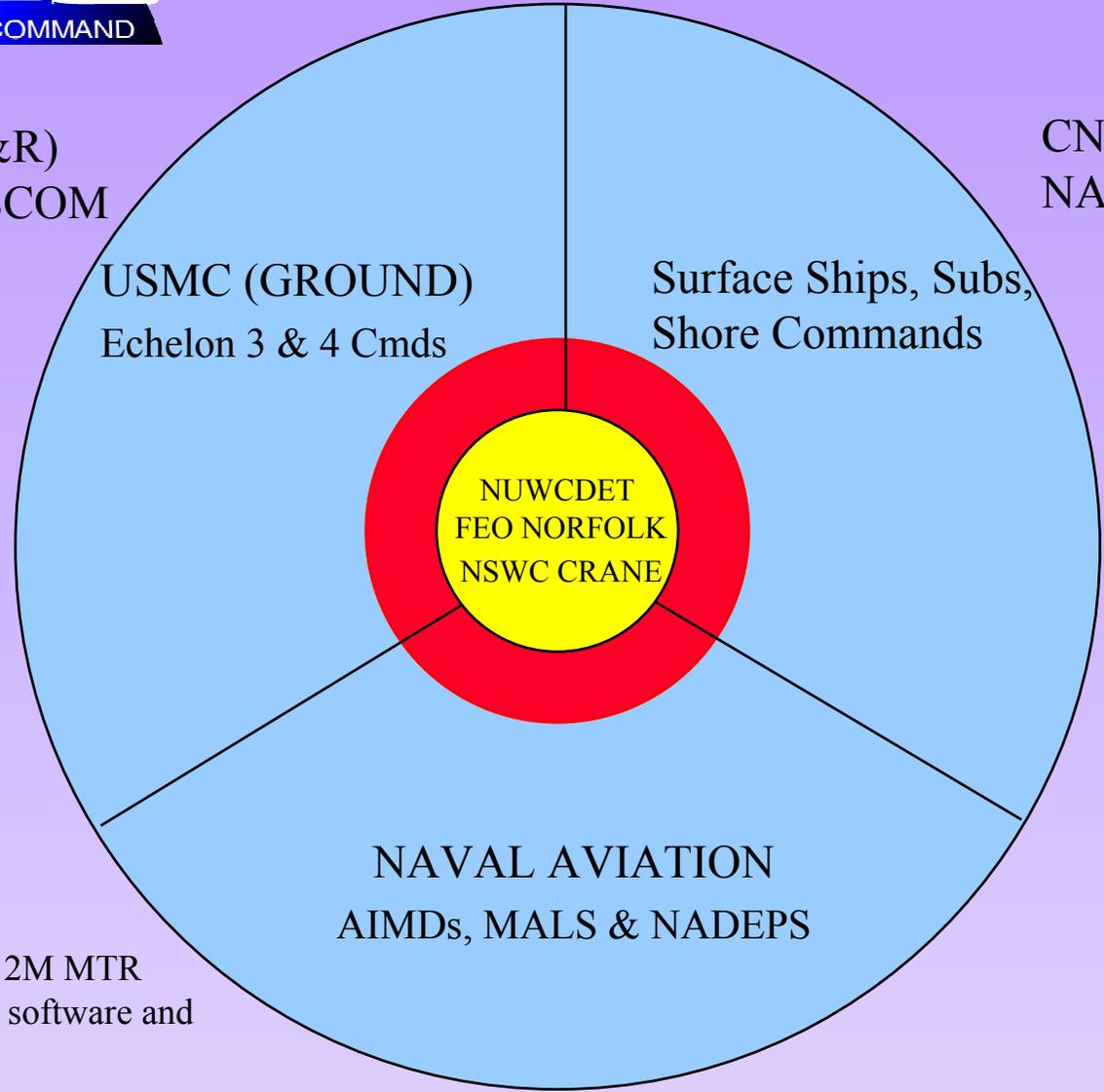
Seven 2M/MTR
Training Commands

GOLD DISK DEVELOPERS

- SPAWAR/SEA/AIR Field Act.
- Navy IMAs and Training Cmds
- Naval/USMC Aviation IMAs
- USCG (Surface/Aviation)
- USMC (Ground)
- USAF MAJCOMs
- USA



Navy 2M MTR Gold Disk Infrastructure



HQMC (I&L/P&R)
MARCORPSYSCOM
(TMDE)

CNO (N43)
NAVSEA 04M32

USMC (GROUND)
Echelon 3 & 4 Cnds

Surface Ships, Subs,
Shore Commands

NUWCDET
FEO NORFOLK
NSWC CRANE

NAVAL AVIATION
AIMDs, MALS & NADEPS

CNO (N78)
NAVAIR (AIR 3.6, PMA 260D)

1. Maintain standard 2M MTR Gold Disk hardware, software and ILS.
2. Obtain maximum synergy from shared and unique infrastructure.



Training

for MTR Test Equipment & 2M Repair

Completion of all courses results in NEC 1591

Course

AN/USM-646
A-100-0076
5 days

Miniature
Electronic Repair
A-100-0072
26 days
NEC 9527

Microminiature
Electronic
Repair
A-100-0073
12 days
NEC 9526

Course Location

Instructor (9509) & Inspector (9503)

FTC Norfolk *

FTC Norfolk

FTC Norfolk

FTC Mayport

FTC Mayport

FTC Mayport

FTC San Diego

FTC San Diego *

FTC San Diego *

NAMTRAGRUDET Whidbey Is.

NAMTRAGRUDET Whidbey Is.

NAMTRAGRUDET Whidbey Is.

ATG MIDPAC

ATG MIDPAC (Pearl Harbor)

ATG MIDPAC Pearl Harbor

ATG WESTPAC)

NAMTRAGRUDET Atsugi, Japan

NAMTRAGRUDET Atsugi, Japan

ATG WESTPAC

ATG WESTPAC

*Course Curriculum Model Manager

Standard 2M Micro Configuration (PRC 2000-SMT)

Microscope, tools, ESD material and consumables not shown.



Portable 2M REPAIR Kit

- Pace MBT-250
- Subset 2M AEL
- < 2 ft³ storage case
- No microscope *

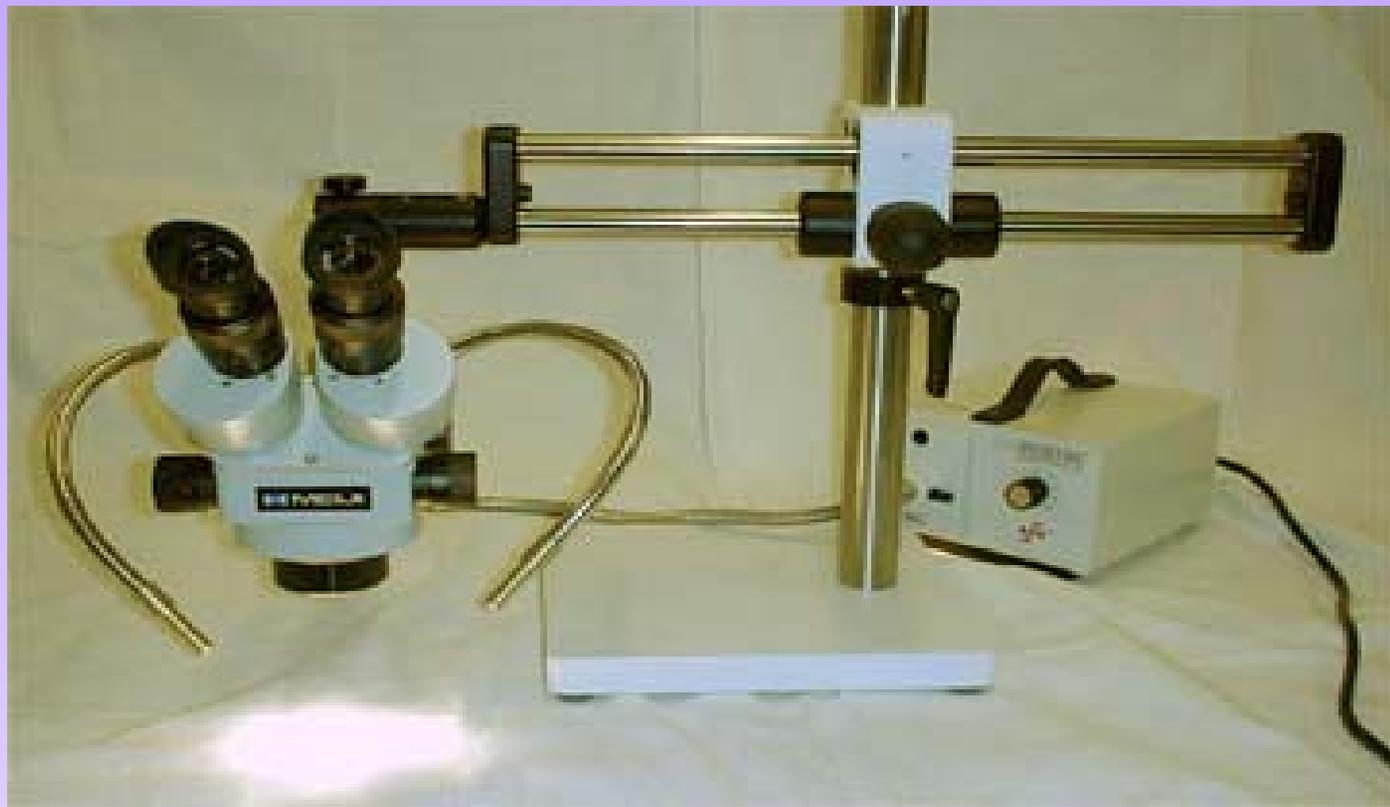


Pace TF 500 (New Shore IMA 2M BGA/Fine Pitch Rework Station)



2M Repair Microscope

Microscope for Mini upgrade



MTR Test Equipment Suite



**AN/USM-646
TEST STATION
(Huntron 5100DS
& Controller)**

SHORTTRACK 90
SWITCHER 410
HUNTRON 2000

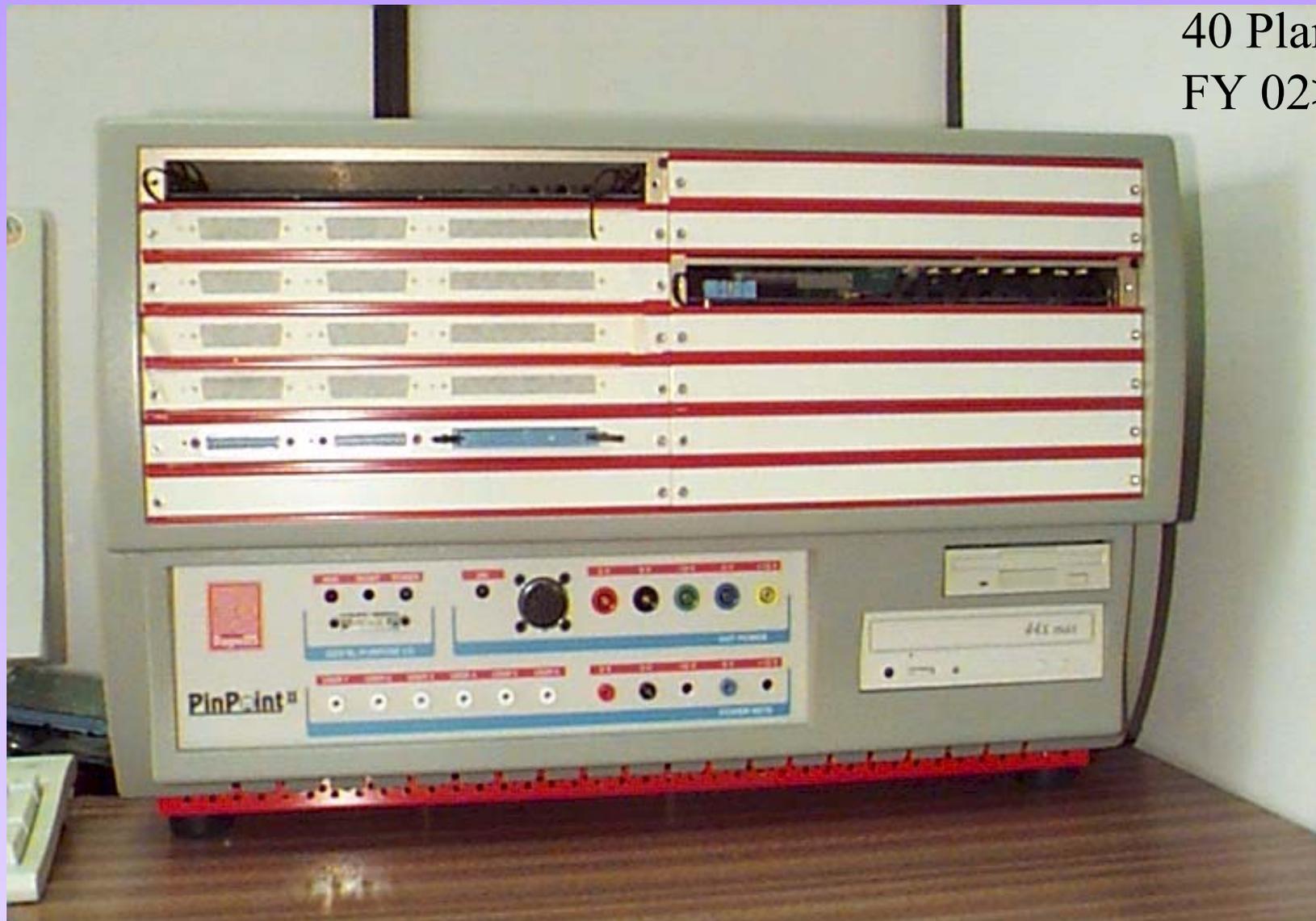


PROTRACK Configuration AN/USM-674(V)2

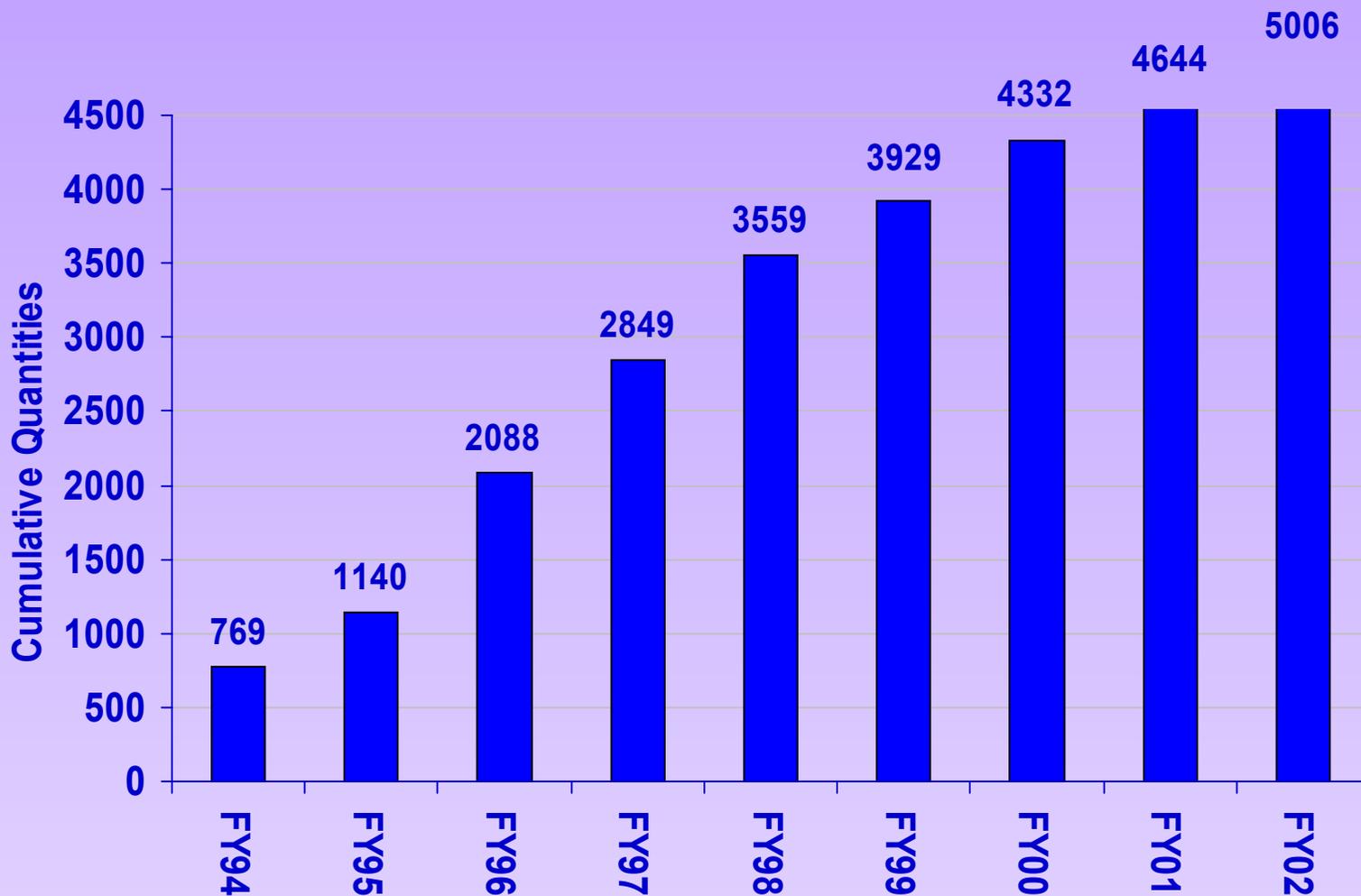


COSSI PINPOINT Re-Design AN/USM-676

40 Planned
FY 02>



Gold Disk Production





Benefits of 2M MTR Utilization

From 1 Oct. 1997 to 30 Sept. 2001 Navy commands outfitted by NAVSEA 04M32 reported **35,929 2M repairs** completed which resulted in **3,062 CASREPS averted/corrected** and **\$113.5M in OPTAR cost avoidance**. **Annual program investment was less than \$6M.**

Results in reduced requirements for shipboard and shore spares.
Reduces ship tech assists from off ship tech reps.

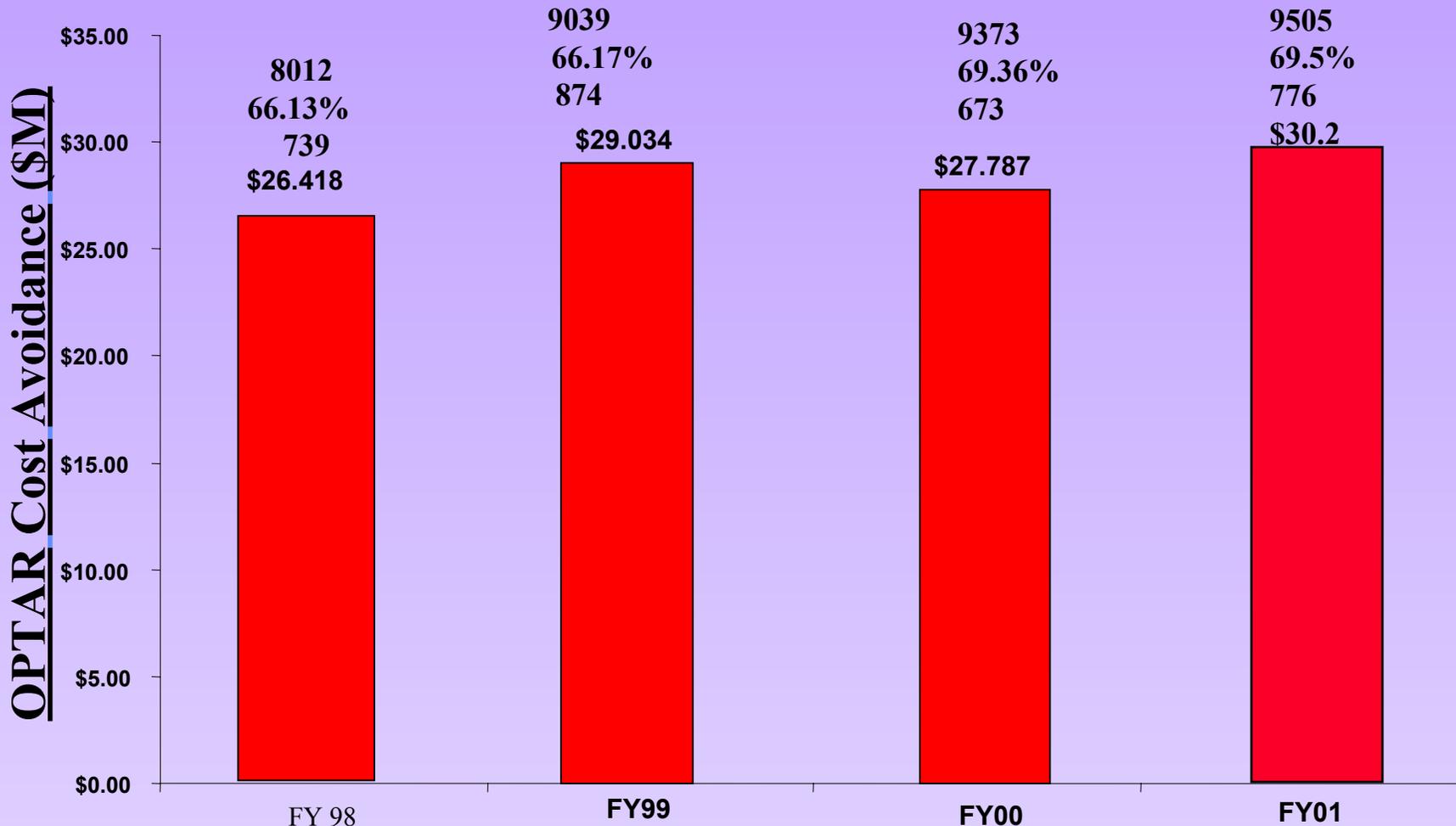
Promotes sailor “Quality of Life” by allowing them to be self sufficient.
2M MTR Training used as reenlistment incentive.
Sailors eligible for Monthly CNO Gold Disk Award.

Module Test and Repair Quarterly reporting can provide system PM/ILSM with repair and failure data.



Module Test & Repair Tracking System Data

REPAIRS
AVERAGE REPORTING (%)
CASREPS AVERTED/CORRECTED



DATA DOES NOT INCLUDE ANY REPAIRS UTILIZING 2M/MTR EQUIPMENT COMPLETED AT NAVAL AND MARINE AVIATION OR MARINE GROUND MAINTENANCE ACTIVITIES.



Requirements for Successful Utilization of 2M MTR Capabilities

Command Attention and compliance with JFMM (CLF/CPF INST 4790.3), Volume IV, Part I, Chapter 11 including Quarterly MTRTS Reports.

Trained Personnel with NEC 1591 and Current Certification

Work center properly outfitted with 2M MTR HW/SW ,tools, accessories and 2M piece parts

Effective coordination between Supply and Maintenance personnel to promote screening and repair attempts when feasible for all failed circuit cards and electronic modules.



CONCERNS & ISSUES

FUNDING TO EFFECTIVELY SUSTAIN PROGRAM

CCA/EM Screening at O/I Level and Repair Attempts when Feasible

Establishing an effective sea/shore rotation process for 2M MTR
Trained and certified technicians.

Continuation of a shared DOD and USCG 2M MTR Infrastructure

Ability to test and repair new CCA/EMs and piece parts issues (DMS and proprietary parts)

JITS, PBL contracts and OEM LCS for new systems.