



National Defense Center for Environmental Excellence

“Addressing Defense Requirements with Tomorrow’s Technology”



Military Electronics Demanufacturing

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Disposition of Excess Electronic Equipment (FY01)

- 50 million pounds received
- 15 million pounds reutilized (R/T/D)
- 22 million pounds demanufacturing contractor
- 3 million pounds FPI/UNICOR



Flow for Electronic Property

- DRMS Receipt of Excess Property
- Reutilization or Redistribution within (DoD)
- Transfer to Federal Agencies
- Donations to State & Local
- Sale by DRMS Commercial Venture Agent
- Demanufacturing



Property Receiving Activities

- Turn-in Data
- DAISY Validation
- DEMIL Code
- Disposal Condition Code



Big Picture

- 6.5 million Active inventory NSNs
 - Several million Inactive Items
 - Part Numbers without NSNs
 - Sub-components to Parts
 - Micro-components without Limits
- Controlled DEMIL Processes for the NSNs are a National Security Issue



Demanufacturing Concerns

- Environmental Protection
 - Electronics scrap sales to general public eliminated
 - Controlled disposal of:
 - Batteries of all types in electronics
 - Mercury switches
 - Lead, Chromium and Cadmium prevalent
 - Renewed Focus on leaded glass, keeping from landfill
 - Increased Recycling & solid waste diversion



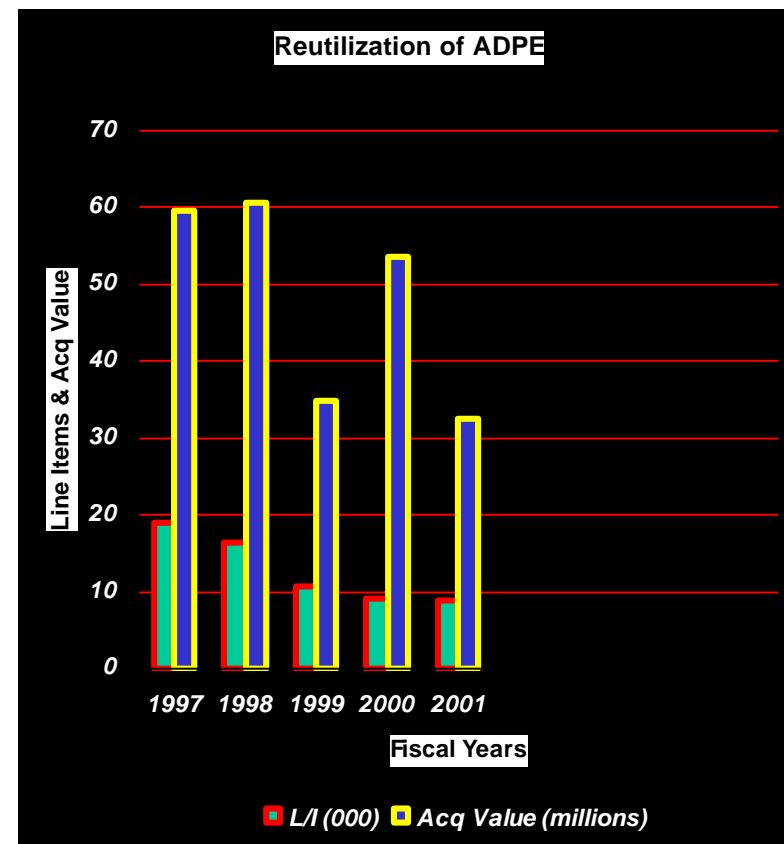
Demanufacturing Concerns

- DEMIL & Trade Security Controls
 - Ensure that Munitions List Items (MLI) requiring destruction are destroyed
 - Ensure that MLI/CCLI not requiring destruction are registered to prevent unauthorized disposition
 - Ensure that sensitive data is destroyed



R/T/D

- Reutilization of ADPE postpones disposal & stretches budgets
- Transfer & Donation Programs also contribute
- As technology advances at increasing rates, reuse is less likely

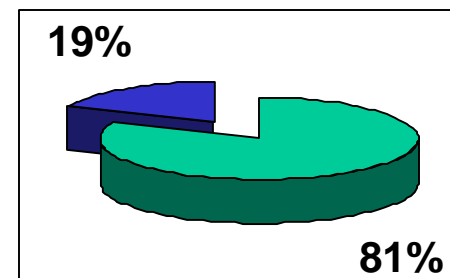




Demanufacturing FY 01

- 22.7 million lbs referred FY01
- 4.2 Million lbs DEMIL
- Additional 3 million lbs to UNICOR FY01

Demanufacturing FY 01



■ Demanufacturing
■ DEMIL Required



MOU with FPI

- An MOU, was developed and signed by DRMS and FPI
- Agreement limited to the commercial property segment
- FPI could provide the same level of responsible demanufacturing service that our contractors could, but without fees
- FPI sites and procedures withstood scrutiny



FPI Outcomes

- First shipments to Elkton, Ohio and Marianna, Florida in July and August 2001
- Government reps witness the destruction of untreated hard drives on-site
- Over 23 million pounds shipped to FPI
- Significant contractual cost savings
- FPI electronics demanufacturing sites expanding from 2 to 7+



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Critical FSCs

- Some Federal Stock Classes had significant DEMIL Code Error rates
- These “Critical FSCs” destroyed when downgrade decisions are made
- Currently processed through DRMS DEMIL Centers



FSCAP

- Flight Safety Critical Aircraft Parts are typically repairable/reusable parts
- Must be destroyed at end-of-life or when separated from maintenance records



DEMIL Code Assignment

- ✓ Multi-disciplinary area
 - Equipment knowledge
 - Export statutes
- ✓ Chronic problems
 - DEMIL code a low priority
 - Lack of statutory knowledge
 - No personal accountability
 - DoD receives negative publicity





DCMO Mission

- Ensure the accuracy of DEMIL coding so our *warfighters don't face their own technology in a combat situation* and to ensure that *Defense \$ are not wasted* destroying items, when DEMIL is not required





DCMO Functions

- ✓ Review all *new* and *active* inventory Items in FLIS for DEMIL coding accuracy
 - Make and recommend changes as needed
- ✓ Operate the DEMIL *Challenge* Program
- ✓ Assist
 - Dept. of State, Compliance & Enforcement
 - Trade Security Control
 - Defense Criminal Investigative Service
 - Plant Clearance Officers
 - U.S. Customs Service, etc.



Eye Openers

- Items coded as “No DEMIL required”
 - AWACS Radome
 - Depth Bomb, Anti-sub
 - 155mm Artillery Shells
 - Periscopes
 - Assault Vehicle



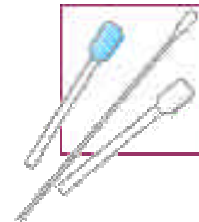
**DEMIL
Coded for
Sale to the
Public**





Eye Openers

- Items coded as "DEMIL required"
 - Small arms swabs
 - Lighting fixtures
 - Cotter pins
 - Webbing strap





DEMIL Code Assignment

- DEMIL Code determined & assigned by Item Manager – Inventory Control Point
 - Technical Expertise not always at forefront
 - Lack of Statutory Knowledge
- Joint DoD DEMIL Coding Review Projects (1994–1998) identified high rate of error in code assignment

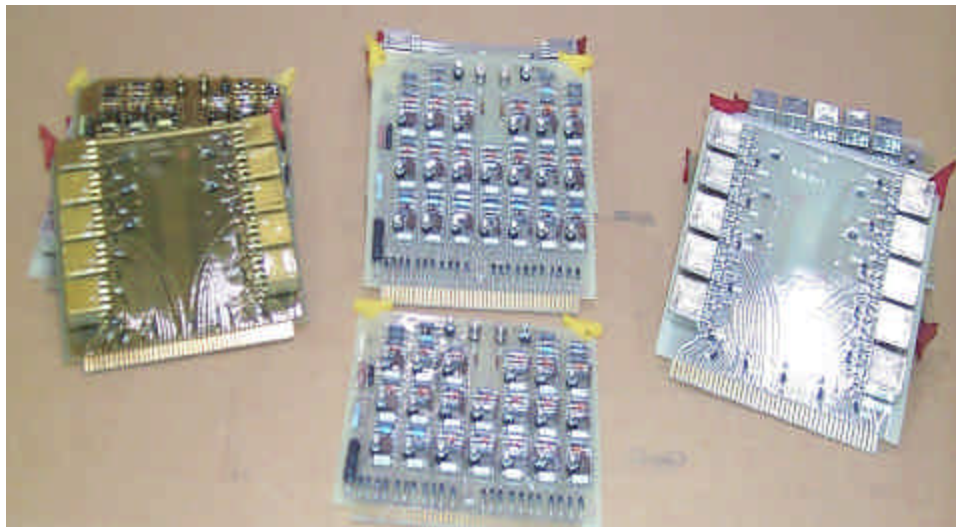
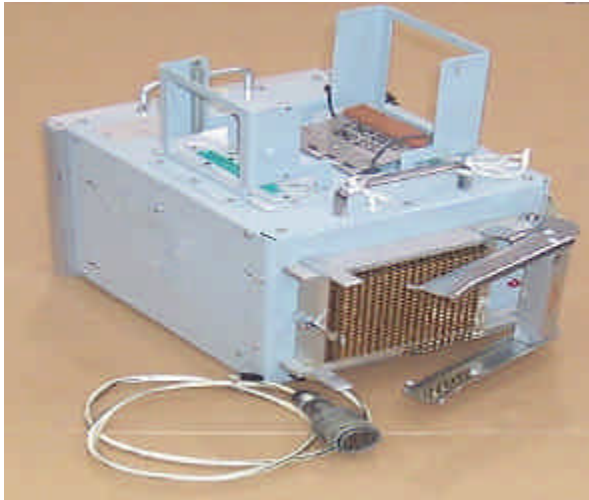


Re-Coding Results

- Many DEMIL Codes in error
 - SME releasable to public
 - Uncontrolled Disposition
 - Technology loss to enemies
 - Unnecessary destruction of property
 - DEMIL Cost
 - Revenue Loss



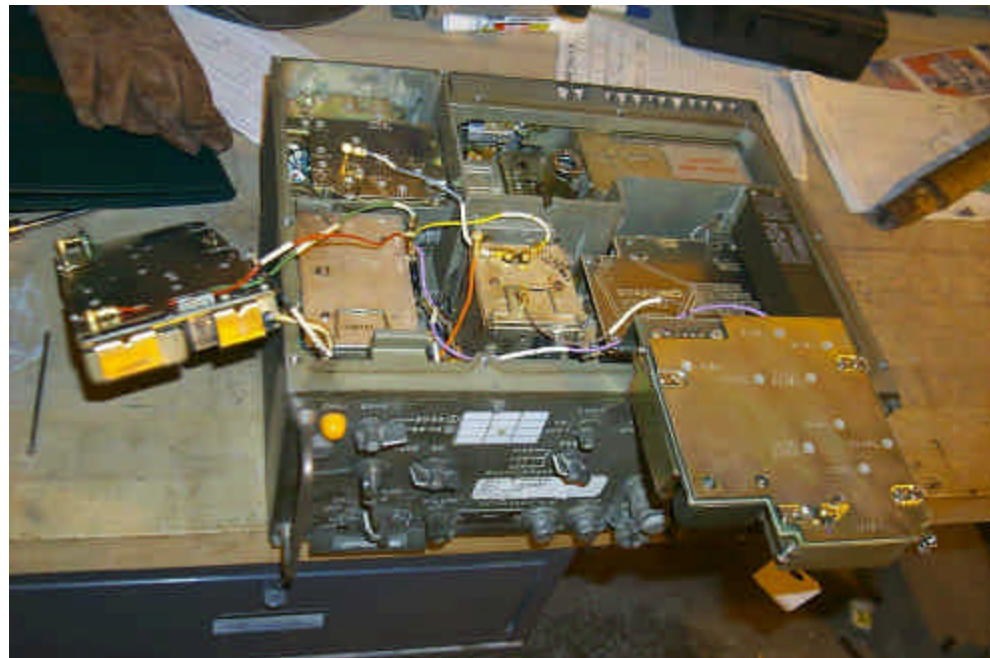
How Far to DEMIL Security





Electronics Characteristics

- Weight
- EMI Shielding
- Ruggedized
- Packaging





DEER2 – Objectives

To enhance the reuse, recycling, and disposal of electronic material by:

- Demonstration and validation of electronic equipment demanufacturing techniques
- Results dissemination, technology transfer
- Increasing recovery of DoD funds
- Recovery of equipment/parts needed to maintain DoD systems
- Sharing DfE information to design and purchase DoD electronics that are easy to demanufacture, totally and economically recyclable, and contain no hazardous materials (hazmat)



DEER2 Technology Transfer





DEER2 Technology Transfer

- NDCEE will inventory, uninstall, dismantle, package, transport and transfer all Government-owned equipment that has been used by and for the DEER2 Program in Largo to Lone Star Army Ammunition Plant. This equipment distribution will be done pursuant to FAR 45.6 and 52.245-5.



Summary

- Demanufacturing effective method to recycle/dispose of Electronic scrap
- DEMIL recoding critical to compliance with TSC, DEMIL and Environmental Protection requirements
- DRMS continues to look for options to reduce cost, including increased competition in new procurements
- FPI/UNICOR utilization will expand
- Technology Transfer and Stand-up of LSAAP will reduce costs of demilitarization by increasing recycling revenues.



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