



DEFENSE LOGISTICS AGENCY

AMERICA'S COMBAT LOGISTICS SUPPORT AGENCY



Combating Counterfeiting Program

Christine Metz
Chief, Technical & Quality Assurance
Logistics Operations (J3)

WARFIGHTER SUPPORT

STEWARDSHIP EXCELLENCE

WORKFORCE DEVELOPMENT



Defense Logistics Agency

- **America's Combat Logistics Support Agency**
 - 25,232 Civilians, 583 Active Duty Military, 752 Reservists
 - Located in 48 States/28 Countries
- **Global Support To Warfighters by:**
 - Processed an average of 102,327 orders per day in the past 12 months
 - Producing an average of 9,221 contract lines awarded per day
 - Staffing 26 Distribution Centers Worldwide
 - Processed 17.6M Receipts and Issues during the past 12 months
 - Managing nearly 5.2M items through Nine supply chains
 - Supporting more than 2,283 Weapon Systems
 - Providing over 87.73% of Services' repair parts
 - Providing nearly 100% of Services' subsistence, fuels, medical, clothing & textiles, construction & barrier material



Full Spectrum Global Support

Supply Chains

- Land Systems
- Maritime Systems
- Aviation Systems
- Fuel/Energy
- Industrial Hardware
- Subsistence
- Medical
- Clothing & Textile
- Construction & Equip

Theater Support

- DLA Europe & Africa
- DLA Pacific
- DLA Central



USNORTHCOM



USEUCOM



USCENTCOM



USPACOM



USSOUTHCOM



USAFRICOM

Distribution

- 26 Distribution Centers
- \$98B DoD Inventory
- 52M sq ft covered storage

Disposition Services

- Co-located with customers
- Over \$25B per year
- Reutilization & Marketing
- Reverse Logistics

Strategic Materials

- Critical items such as titanium, cobalt, and tungsten

Services

- DLA Document Services
- DLA Logistics Information Services
- DLA Transaction Services



Global Supply Chains

Troop Support - Philadelphia

- CLI: Subsistence
 - Food Service
 - Produce
 - Operational Rations
- CLII: Clothing & Textile
 - Recruit Clothing
 - Organizational Clothing & Individual Equipment
- CLIV/VII: Construction & Equipment
 - Facilities Maintenance
 - Equipment
 - Wood Products
 - Safety & Rescue Equipment
- CLVIII: Medical
 - Pharmaceutical
 - Medical/Surgical Equipment
- CLIX: Industrial Hardware
 - Major Weapon Systems Consumable Repair Parts

Aviation - Richmond

- CLIX:
 - Engine Components, Air Frames
 - Flight Safety Equipment, Maps
 - Environmental Products

Land and Maritime - Columbus

- CLIX: Maritime
 - Valves, Fluid Handling
 - **Electrical/Electronics**
 - Motors, Packing/Gaskets
- CLIX: Land
 - Wheeled, Tracked & Heavy Vehicle Parts
 - Vehicle Maintenance Kits
 - Power Transmission/Engine/Suspension Components
 - Tires, Batteries and Small Arms Parts

Energy – Fort Belvoir

- CLIII: Energy
 - DoD Executive Agent for all Bulk Petroleum
 - Natural Gas, Coal, Electricity
 - Aerospace Energy





Counterfeiting: A Growing Threat to DOD

- A growing risk to mission readiness, personnel safety and national security
- Globalization has created vulnerabilities in DOD's supply chain
- Counterfeits are in DOD's supply chain
- China is the main source of counterfeits
- High incidence rate with electronic parts
- Legislation requires contractors & DOD to reduce the risk of counterfeit electronic parts from entering into DOD's supply chain



Key Guidance for Combating Counterfeiting

- 2012 National Defense Authorization Act (NDAA) (Section 818)
 - Requires DoD to implement risk based approach that minimizes impact of counterfeit/suspected counterfeit electronic parts
 - Directs revision of DFARS to address detection & elimination of counterfeit parts by contractors
- 16 March 2012 AT&L Memorandum on DoD Counterfeit Prevention
 - Directed immediate action to decreased counterfeit parts in DoD's supply chain
- DoDI 5200.44 "Protection of Mission Critical Functions to Achieve Trusted Systems and Networks"
- DoDI 4140.hh "Counterfeit Prevention Policy" (Expected Release Jan 13)
- 2012 DLA Director's Guidance on Counterfeit Prevention



Combating Counterfeiting

- **Component cost is not correlated to its criticality**
- **Criticality analysis of component is essential to a counterfeit mitigation strategy**

NSN: 5962-XX-XXX-XXXX

Nomenclature:
Microcircuit, Linear

Cost: ~\$100

This one NSN supports 158 Weapon Systems with a Weapons System Essentiality Code of one, which if fails, renders system inoperable

Weapon System

MISSILE, MINUTEMAN III, LGM-30	X
STRATEGIC WEAPON SYSTEMS (POSEIDON AND TRIDENT)	X
AIRCRAFT, STRATOFORTRESS B-52	X
AIRCRAFT, HERCULES C-130	X
ASSAULT BREACHER VE	X
NUCLEAR REACTORS PROGRAM	X
AN/SQQ-32 MINE HUNTING SONAR SET	X
OHIO CLASS SSBN (TRIDENT)	X
MISSILE, AIR LAUNCH CRUISE (ALCM) AGM-86B	X
RADAR SYSTEMS, PHASE ARRAY FPS-85	X
HELICOPTER, SEA KNIGHT H-46	X
LIGHT ARMORED VEHIC (TAMCN: E09507B)	X
SEAWOLF CLASS SSN	X
AH-64-D LONGBOW	X
TANK, COMBAT, FT, 120MM GUN (M1A1)	X
BALLISTIC MISSILE DEFENSE (BMD)	X



Operational Evaluation

- Review of DLA's existing processes for adequacy to address the threat of counterfeits
- Multi-faceted approach
 - Training for awareness
 - Testing high risk commodities
 - Traceability to establish pedigree
 - Technology to take advantage of advances in anti-counterfeiting

Evolving from detection to prevention



R&D Phase 1: Demonstration & Results

- Created custom SigNature® DNA mark for one manufacturer
- Marked for 2+ months at manufacturer's prototype facility (CONUS)
 - Marked parts with plant-based DNA-inoculated ink
 - No change to production process
 - Read quick-detect marks without difficulty
 - DNA forensic testing proved authenticity
 - 100% true positives
 - 100% true negatives (swabs from unmarked parts)
 - Included test at distributor's facility

Validation of technical feasibility



R&D Phase 2: DNA Marking Expanded Testing

- Expanded test of technology
 - Marking at offshore large scale fabrication facility
 - Marking at emulation manufacturer
 - Adding downstream users: distributors, OEMs, DoD
- Independent vulnerability assessment, “Red Team”
 - Assess maturity of SigNature® DNA technology
 - Attempt to defeat the technology
 - Review alternative marking technologies



Independent Assessment of DNA Technology

- Battelle Labs performed assessment
 - Attempted to “defeat” the technology
 - Transfer of marking technology onto previously unmarked items
 - Perform DNA sequencing of extracted marking to uncover & replicate hidden “keys”
 - Zero successes in over 400 attempts
 - Assess maturity of SigNature® DNA technology
 - Literature search and data review are positive



Original Implementation Plan

- Contact academic, commercial, and government activities and industry associations to facilitate parallel implementation paths
 - Promote voluntary industry adoption
 - OCMs, OEMs, distributors
 - Encourage industry association best practice
 - Develop voluntary industry standard for marking to assure authenticity – SigNature® DNA as one alternative
 - Working on industry “authentication” standard with SAE (G19)



DLA Implementation of DNA Marking

- Applies to 5962 class items - microcircuits
- July 2012, 18-month R&D effort completed
- August 2012, DNA mark requirement for all “emulated” microcircuits
- November 2012, DNA marking requirement for all new microcircuit solicitations
- December 2012, decision to reimburse the cost of DNA marking material
- January 2013, procurements limited to trusted sources with DNA marking



Future Procurements of FSC 5962

Trusted Sources

- Original Equipment Manufacturers (OEM)
- Original Component Manufacturers (OCM)
- Qualified Manufacturers under QML
- Authorized Distributors
- Qualified Suppliers of QPL Products
- Qualified Suppliers List for Distributors (QSLD) with trace
- Qualified Testing Suppliers List (QTSL)
- SRI Generalized Emulation of Microcircuits (GEM)



Current Status

- Developed contractual language for use in all solicitations & contracts for FSC 5962
- Issued instructions to DLA workforce
 - Procurement
 - Reimbursement of marking costs
 - Inspection & acceptance
 - Inventory & returns
- Making awards to trusted sources with DNA mark
- Following up on logistical & legal issues



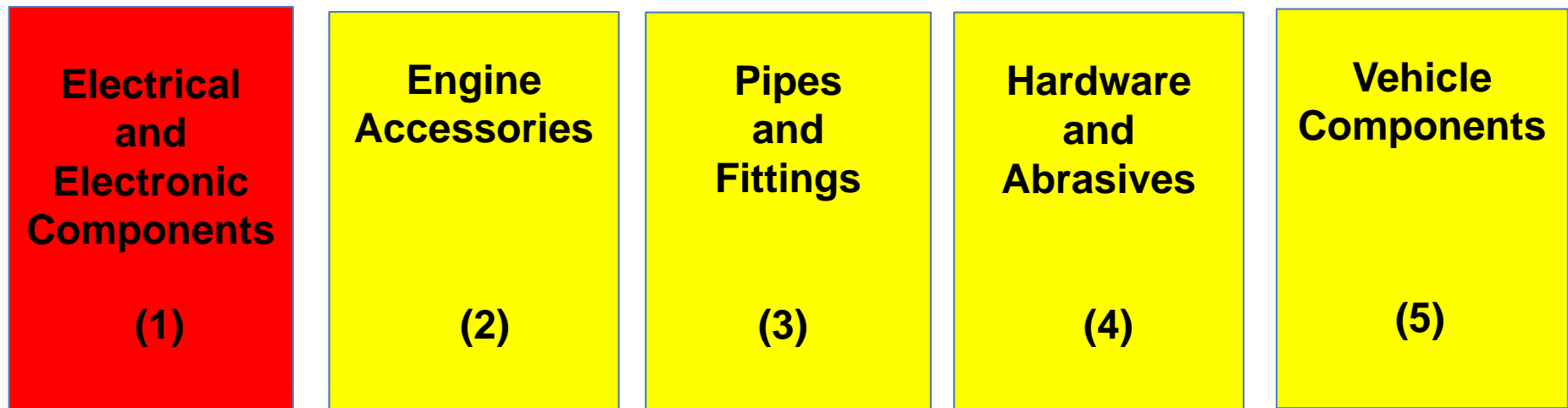
Back-Up Slides

Christine.metz@dla.mil



Assessment of Supply Class Risk

- DLA manages 4.3 million items, assigned to 548 supply classes
- Supply classes evaluated for counterfeit vulnerabilities
- Electrical & Electronic Components ranked 1 of top 5 five commodities most vulnerable to counterfeits





2012 NDAA, Section 818

“Detection and Avoidance of Counterfeit Electronic Parts”

- Prohibits contractors from charging DOD cost of counterfeit parts
- Requires contractors that supply electrical parts to establish policies & procedures to eliminate counterfeits from entering DOD’s supply chains
- Requires DOD to adopt policies & procedures for detecting & avoiding counterfeit parts
- Authorizes suspension & debarment of contractors who repeatedly fail to detect & avoid counterfeit parts, or otherwise fail to exercise due diligence in detection & avoidance of counterfeit parts



Combating Counterfeiting Strategy “Defense in Depth”

- **Training**--implemented DLA counterfeit awareness training
- **Testing**--increased testing for items at risk for counterfeiting
- **Traceability**--requiring item traceability back to original manufacturer
- **Trusted Sources**--buying from trusted sources
- **Technology**--using anti-counterfeiting technology, such as DNA marking
- **Threat Assessments**--utilizing all-source supply chain threat assessments to inform risk management strategies
- **Information Systems**--developing decision support capability IT system to identify high risk suppliers--prior to contract award



Cost Reimbursement

- Paid on award of delivery order or purchase order
- Marking costs covered include:
 - Unique DNA mark
 - DNA ink
 - Authentication program
 - Monthly reports
 - Training
 - Detector set