NUWC Division, Keyport

Obsolescence Management

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Obsolescence Management Information System (OMIS™)
What is Obsolescence/DMSMS?

“A Diminishing Manufacturing Sources and Material Shortages (DMSMS) issue is the loss, or impending loss, of manufacturers or suppliers of items, or raw materials, or software...This can be caused by many factors—such as low-volume market demand, new or evolving science or technology, detection limits, toxicity values, and regulations related to chemicals and materials—that significantly affect the DoD supply chain and industrial base.”

Path To Obsolescence Management (How Did We Get Here?)

- GAO Audit: “DoD lacks DMSMS planning.”
- NAVSUPINST 4800.6
- KPT forms DMSMS Branch
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- KPT forms DMSMS Branch
- OMIS™ COTS Upgrade
  (Originally “KCIM”)
- OSD DMSMS ACAT Requirement
  (“Neutral 3rd Party “ to Manage DMSMS)
- DASN(L) Endorsement
  (Endorsed OMIS™ in 2005 after independent validation by DMEA)
- OMIS™ Upgrades

SECDEF Defines “New Way of Doing Business” (Perry Memo)
(Design with COTS, using Industry Stds meeting “intent” of MILSPECs, Reduce Oversight on Inspection/Testing/QA)

Charter Member DoD DMSMS Teaming Group
(DMEA & NSWC-PHD, Created Teaming Database)

Virginia Class Tech Refresh/OM Team Established

OMIS™ NMCI Appv’d

OMIS™ NMCI Appv’d


- Single-shot Workload (Job Shop)
- Program Team Workload (Durable)

- DMSMS Policy Environment
- 2004: DASN(L) holds DMSMS EXCOM. ASN-RD&A issues DMSMS draft update to ILA process
- 2005 ASN-RD&A provides DMSMS Guidance, Calls for DMSMS plans. DASN(L) #DID to obtain BOM’s. OSD Identifies DMSMS as separate DoD ILA Evaluation Criteria. DoD DMSMS Guidebook issued
- 2006: DASN-L issues DMSMS Strategic Plan. ASN-RD&A issues DMSMS Guidance for contracts
DMSMS Services Span All Acquisition Phases

- **DEVELOP** DMSMS Charters, DMSMS Plans, and Budgets
- Develop Systems Obsolescence Cost-Over-Time Projections to Minimize Tech Refresh Redesign Costs
- Initial Technology Review of Prototype/Engineering Design Model (EDM) System Bills of Materials

- **DEVELOP** DMSMS Management Teams (DMTs) / Support DMSMS Related Issues / Meetings
- Follow-On Technology Review of Prototype/Engineering Design Model (EDM) System Bills of Materials
- Perform Technology Trending / Technology Road Mapping
- Work with Program Office/Prime Contractors ( Integrators) to Insert DMSMS Requirements into ALL Production & Follow-On / PBL Contracts

- **FACILITATE** DMSMS Management Teams (DMTs) / Support DMSMS Related Issues/Meetings
- Research Technical Data to develop Bills of Materials
- Load Bills of Materials into Predictive System / Define System Obsolescence
- Recommend Solutions for Obsolescence Issues Based on a Best Value Analysis
- Track Obsolescence Cases to Completion

- **PROACTIVELY MONITOR** Electronic Parts and COTS Assemblies for Obsolescence
- Periodic Component / COTS Obsolescence ALERT Reports / Supportability Analysis Reports
- Provide Out-Year Budgetary Estimates to Mitigate Obsolescence Issues
- Update DMSMS Charters / DMSMS Plans

DMSMS Services CAN and SHOULD be utilized in All Phases of the Acquisition Life Cycle.
Reactive and Proactive Strategies

**Reactive**
- Wait until you can’t buy it, then deal with the problem
- **ROI: None** (no investment, but also no savings)
- Higher potential for impact on Operational Availability

**Proactive**
- Ranges from monitoring parts in order to determine obsolescence early to strategic tech refreshes to eliminate or minimize obsolescence
- **ROI: Medium to High** (Reduces TOC)
- Potentially eliminates or minimizes impacts on Operational Availability
Introduction to OMIS™

- What is OMIS™?
  - OMIS™ is a web-based application designed to store and relate information important to the management of Diminishing Manufacturing Sources and Material Shortages (DMSMS) in DoD systems
  - OMIS™ is hosted on a secure, clustered server farm with failover redundancy
  - Supports the “common” processes, policies, and infrastructure of an effective DMSMS Program!
  - It is one of two “organic” obsolescence management systems
    - Data is owned and stored on secure government systems
What Does OMIS™ Store and Display?

- Bills of Materials (BOMs) for Platforms and Systems Down to the Level Necessary for Effective DMSMS Management
- Systems are typically loaded in an indentured format using their Configuration Part Number (CPN) – sometimes known as the Provisioned Part Number
- Systems are also loaded with their Manufacturer (Vendor) Part Numbers to determine obsolescence status
- Where applicable, other data is also loaded
  - NSN and related supply data
  - Images of the part
  - Related documents such as data sheets
Overview of OMIS™ Processes

• Monitor selected parts for DMSMS issues
  • Automated Monitoring (currently IHS and Q-Star)
    • Approximately weekly
    • Component level
  • Manual Monitoring (COTS Vendor Surveys)
    • Approximately every 6 months
    • Electrical, Mechanical, Assemblies, Software, etc.

• Notify customers of obsolescence issues (cases)
  • Each case explains the problem and recommends the most viable resolution identified

• Case Management
  • Maintain cases to track case progress towards resolution
  • Capture respective cost avoidance and metrics
Who Can Access OMIS™?

- Access to the OMIS™ can be granted to programs and users who have systems loaded in the application
- Access only allowed from within DOD networks
- DoD Common Access Card (CAC) are required
- External users are allowed “read only” access to only their systems
OMIS™ System Inputs / Outputs

OMIS™ Designed to Solve Obsolescence Issues As they Arise / Share Solutions Across All Platforms
Platform View

Parts are displayed in a hierarchical tree format if the data loaded support that view.

Part obsolescence status rolls up the tree with the worst status rolling up.

Green text indicates a manually monitored part.

Blue text indicates a electronically monitored part.
Building An Obsolescence Management Program

• STEP #1 – Stand-Up a DMSMS Management Team (DMT) / DMSMS Plan / Define Roles & Responsibilities (R & R)
  • Assign government and contractor members (Program Offices, OEM, key sub-vendors), draft obsolescence management plan, assign DMT roles & responsibilities

• STEP #2 – Profile/Prioritize System Components/Commercial Off The Shelf (COTS)
  • Prioritize COTS, HM&E assets / (Load all – track only high priority / unique assets)

• STEP #3 – Collect/Collate Platform/System Life Cycle and Technical Data
  • Define system’s quantities, configurations, COTS, Non-COTS/MilSpec – perform COTS vendor surveys

• STEP #4 – Define Technology Roadmap / Trends for Production / Modernization
  • Define associated industry & technology design and manufacturing trends investigate optimum design refresh plan, consider periodic integration of new technology

• STEP #5 – Define Current Obsolescence / Out-year Sustainability
  • Define procurability (SOURCE), supportability (STOCK), and failure (RELIABILITY) data, develop out-year supportability summary bar charts on impacted assemblies
DMSMS Management Team (DMT) Structure

ISEA Prime Integrator / Contractor

DMSMS Mgmt. Team (DMT)
Lead: Program Office
Facilitator: NUWC Keyport

Recommended Solutions

DMSMS Review Board (DMSRB) or CCB
- Immediate Action
- ECP Required
- Out-Year POM

NUWC Keyport
DMSMS Support

As Required:
- NAVSUP
- DLA
- Sub Prime
An Obsolescence Case is created for every obsolete or End of Life (EOL) part that negatively impacts a system.

- The OMIS™ Obsolescence Case Log (OCL) is used to track and monitor all cases from initiation to closure, including resolution type, cost and cost avoidance
  - The OCL is the main focus of DMTs
  - Actions and status of cases are assigned and updated at each DMT
Case Management Benefits

• “PROACTIVE” We are working to establish a proactive process to take advantage of windows of opportunity when they occur.

• “ACTIONS / DUE DATES” Encourage ownership of individual actions by assigning action POCs and due dates to all open cases.

• “LOT/BRIDGE BUYS” Quick turn around (recommended within 30 days) to take advantage of commercial “End Of Life” alerts.

• “FEEDBACK LOOPS” Working with ILS Managers, ISEAs, and DLA to compare and contrast alerts and cases with provisioning data and Engineering Changes.

• “CASE CLOSURE” Will be based on program requirements.

• “VISABILITY” Drives and provides insight into other logistics processes such as systems documentation, training, tech manual updates, configuration management, provisioning, and supportability requirements.
Cases Opened/Closed & Cost Avoidance Metrics

- The OCL also allows for capture of metrics associated with resolving the obsolescence cases
  - Cost avoidance metrics are captured and recorded for each case closed
  - Open and closed dates for each case are captured

- Metrics can then be reported easily within a table and/or graph
Scope of Systems Loaded in OMIS™

Systems & Equipment from all current Navy submarine classes, multiple aircraft series, several surface ship and SPAWAR systems, and various ground vehicles

Tracking over 2.5 Million Parts within 50+ DoD Platforms
NUWC Keyport Obsolescence Management Services

- Assist in the development of obsolescence management infrastructure including **DMSMS Plans/Charters** and organizing/leading **DMSMS Management Teams (DMTs)**
- Provide **Cross-System/Platform/Service Visibility** and resolution of obsolescence issues
- Provide **System Obsolescence Health Assessments**
- Provide **Technical Expertise** in developing DMSMS resolutions
- Case Management - Track and capture **System/Program Metrics**
- **Analysis of Options** for proposed DMSMS mitigation choices (cost, supportability profile, life-cycle requirements)
- **Analysis of New Designs** – early in the design phase!
- Minimize cost to customer via implementation of **Custom Engineered Solutions (CES)** mitigation options
- System Supportability Assessments

**Over 50 Obsolescence Management Subject Matter Experts!**
Summary

• Keyport provides a comprehensive set of obsolescence management services
• Data and products are government owned, maintained, and safeguarded
• Keyport’s Obsolescence Management Division supports programs across DoD and private industry
• To contact Keyport’s Obsolescence Staff:

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