Summary of the Spring 2010 Parts Standardization & Management Committee Conference

April 20-22, 2010

Held at LMI Government Consulting, McLean, VA

Tuesday, April 20, 2010

The theme of the PSMC's Spring 2010 Conference was "Parts Management – A Systems Engineering Discipline."

Introductions: the government co-lead provided a brief introduction of the PSMC, including its charter, structure, leadership, participants, and internet resources related to parts management. Each attendee introduced himself/herself.

Overview of the PSMC: The Lockheed-Martin representative gave an in-depth overview of the PSMC, including: its role as an advisory body for DSPO regarding parts management policies and procedures; its responsibility for completing the reengineering of DoD Parts Management; its function as an open forum for government and industry; the key benefits of parts management (i.e., reduces costs, mitigates DMSMS and counterfeit issues, improves system readiness, availability and maintainability); current focus areas (Policy/Contracts/Systems Engineering/Education, Tools, Counterfeit Parts are the three most active subcommittees); and how to become a PSMC partner.

Review of 2009 Fall PSMC Conference: The chair of the policy, contracts, systems engineering, and education subcommittee reviewed the Fall 2009 PSMC Meeting Summary and action items.

The theme of the PSMC's Fall 2009 Conference was "Counterfeit Parts." The Defense Standardization Program Office announced that they are slated to move functionally from OSD Logistics to OSD Systems Engineering in the near future. (This realignment became effective in March 2010.) An informative briefing of the Weapon System Acquisition Reform Act of 2009 was presented. Upon completion of several briefings relating to counterfeit parts, a Counterfeit Parts Subcommittee was established to explore and offer a position within the parts management discipline. A Chair and Vice-Chair were selected to lead the Counterfeit Subcommittee. A Chair for the DMSMS Subcommittee was also selected to replace the previous chair (who retired).

In addition to briefings on various parts management related topics and tools, subcommittee breakout sessions were held for the Policy, Contracting, Systems Engineering, and Education Subcommittee, the Parts Management Tools Subcommittee, and the Counterfeit Parts Subcommittee. The Policy, Contracting, Systems Engineering, and Education Subcommittee had reviewed MIL-STD-3018 and determined it needed to be updated to address changes that had taken place since its issuance. Also this subcommittee has started to review systems engineering documentation to develop recommendations to address the parts management discipline. The newly formed Counterfeit Subcommittee has started an effort to incorporate counterfeit parts requirements/verbiage into MIL-STD-3018. The Parts Management Tools Subcommittee focused on developing and implementing recommendations to enhance participation in the Defense Parts Management Portal.

ACTION ITEMS:

1. Review MIL-STD-3018 for recommended changes and possibility of adding counterfeit parts element. (Policy, Contracting, Systems Engineering & Education Subcommittee)

2. Review System Engineering documents for incorporating appropriate parts management language, including: SE tech review checklists, SEP preparation guide, and SE contracting guide. (Policy, Contracting, Systems Engineering & Education Subcommittee)

3. Review ways to have the DPMP Portal return an early "hit" on a general "parts management" search. (Tools Subcommittee)

4. Counterfeit Subcommittee to start work on verification criteria. (Counterfeit Subcommittee)

5. Determine how to address mechanical counterfeit issues. (Counterfeit Subcommittee)

6. Draft Counterfeit Subcommittee Charter. (Counterfeit Subcommittee)

7. Draft words to update MIL-STD-3018. (Counterfeit Subcommittee)

8. Obtain POCs from Service Reps. (Counterfeit Subcommittee)

Conference Participants Survey Results from Fall PSMC Conference: The vice-chair of the marketing subcommittee reviewed survey results from the Fall 2009 PSMC Conference. The comments were positive regarding the facility and opportunities to "network" with other conferees, including continued contact and collaboration throughout the year. All said they'd recommend the PSMC to others.

Overview – DSPO Perspective: The PSMC Chair (who is also the DSPO Director) provided a DSPO perspective and introduced the keynote speaker. DSPO is very committed to continue to supporting the PSMC and its recommendations. He talked about the eight major recommendations from the Parts Management Reengineering Working Group, and reviewed the top 3:

- **Revitalize parts management within the systems engineering discipline.** We need to get involved in program reviews. If no one is there to check, program offices are less likely to seriously address parts management.

- **Provide modern tools and metrics to assist in parts management**. Now that the Defense Parts Management Portal (DPMP) has been implemented, we need to evaluate how helpful it is to government and industry. PinPoint is a powerful tool that grew out of the PSMC. Useful tools like this are absolutely critical. We have to make it easy for individuals and program offices to select preferred parts.

- **Make parts management a requirement in contracts and policy.** MIL-STD-3018 is complete and in use. It's absolutely the right thing to address counterfeit parts in the standard.

The DoD lead for counterfeit is Logistics and Materiel Readiness (L&MR)/Supply Chain Integration. SAE developed a standard regarding counterfeit electronics (AS5553) that DoD has adopted and industry is widely adopting. It's appropriate for us to have a role in mitigating counterfeit parts. Recommend the Counterfeit Parts Subcommittee continue to keep tabs on all the other efforts going on, and to collaborate with the other groups working counterfeit.

DSPO is officially under Systems Engineering now. DSPO recently briefed our new SE leadership on DSPO, who we are and what we do. The head of SE decided he wants to be the Defense Standardization Executive. During the briefing, we introduced the concept of a draft policy memo we feel is needed to ensure parts management is contractually required on DoD systems. We hope to be successful in convincing SE to support it. We know that if we don't require parts management in contracts, it doesn't happen. A system is a conglomeration of parts. Systems

don't fail, parts do. We need to make sure we are getting the right parts into new systems and major modifications. The vast majority of life cycle cost (support cost, footprint, etc.) is determined during system design.

DSPO has to build a very strong case on why the directive memo needs to be signed by OSD (AT&L) to make it a contract requirement. DSPO will work on it as hard as possible. Now DSPO is "hooked" to the right place to get the memo signed. From the PSMC, DSPO needs examples, good and bad. Examples where parts management enabled real operational readiness and system availability, not just cost savings. (For example, reducing the lift you need to get into theater.) Direct support to the warfighter is the strongest case we can pitch. (DLA SE said parts management also simplifies asset visibility—which helps with getting equipment back out of theater.) Send the examples to use to document the case to PSMCDSPOContact@dla.mil. Government and industry examples are welcome, as well as non-Defense parts management practices.

Recommend you participate in the DMSMS/Standardization Conference to be held in Las Vegas in late October. A one-day PSMC Conference will be held on Monday, October 25th.

New Acquisition Initiatives and Implementation for Systems Engineering

Director, Mission Assurance, Systems Engineering, Office of the Secretary of Defense

The Director of Mission Assurance, Systems Engineering, Office of the Secretary of Defense, provided the keynote speech for the PSMC Conference. (He is also the PSMC Chair's new functional supervisor.) His presentation covered several topics, including the following:

(a) The importance of investing earlier for a more steady cost curve;
(b) The need to mentor younger people in the Systems Engineering discipline, to ensure that DoD will have the necessary resources in the future;
(c) The challenge of rapid fielding, and systems engineering's role in it;
(d) The criticality of supporting systems in theater;
(e) The importance of designing for reliability, availability, maintainability, and safety and how essential parts management is in the design;
(f) The challenge of risk management and the need to address issues early enough to mitigate consequences, and have adequate funding for mitigation plans; and
(g) The importance of providing good guidance at the right levels (i.e., the Defense Acquisition Guide), not just "policy".

PinPoint – Brief and Demonstration: Representatives of the company that developed PinPoint provided a briefing and demonstration of its functionality. The PSMC originally asked us for a "parametric part selection tool in light of MIL-STD-3018."

PinPoint accesses data from multiple government databases and manufacturers' web pages. PinPoint can perform searches by national stock number, part number, manufacturer's CAGE code, as well as by attributes or characteristics of the item, and provide a trail back to the source of the data. This is a rapidly evolving technology.

The Weapon System Impact Tool (WSIT) is very user friendly, stable tool. Recommended establishing a PSMC- driven users group for PinPoint like WSIT had – so that PinPoint becomes more user-friendly and remains so when additional functionality is added.

CCMS EU Council Initiative: The Director of Strategic Operations of Northrop Grumman Corporation provided a presentation/progress report on his company's major initiative to standardize parts across its five diverse operating sectors. Through the use of a corporate standard parts library, an individual can see not only what's used but also what's in stock. The Aerospace and Electronic Systems sectors are compliant with MIL-STD-3018; the other sectors are working toward it. An effort to achieve flow down through subcontractors is in process. This requires collaborating with the "the big dogs" first, then working through the parts providers.

NGC is working on a five year plan with all organizations on which parts management tools and methods they should develop and use. They'd like to have a higher level scale of integration with regard to design (like NAVSEA is implementing). Also, they have a company-wide alert system on the plate for next year. NGC will provide at least one example to DSPO to assist in bolstering the argument to sign the policy memo.

Counterfeit Materiel Program Update – OSD Logistics &Materiel Readiness (Supply Chain Integration)

The OSD focal point for counterfeit gave a progress report on addressing counterfeit issues. At the OSD level, they must focus on all areas impacted by counterfeiting, not just parts (i.e., food, fuel, and energy). Across the board, counterfeit items are increasingly infesting supply chains. The Department of Commerce published a report in January 2010. Then the GAO published a report in March 2010 on an audit it had performed of Counterfeit. Here are the findings:

- ⊡ Rise in counterfeit items entering DoD supply chains
- ⊡ Inconsistent DoD definition of counterfeit materiel
- ⊡ Need for more component testing
- ⊡ DoD should use current initiatives to develop / disseminate standard guidance

DoD concurred with all of the GAO report's recommendations. They will be tasked to provide a progress report, probably in October 2010. The Countering Counterfeits Tiger Team ("C2T2") is co-chaired by OSD and HQ DLA. There's a fraud side of counterfeiting and there's a malicious side, such as insertion of substances to cause system failure. OSD is working on an overarching strategy for all commodities to mitigate risks across the board. They plan to develop training using the Navy's training as a model.

They're developing requirements for data exchange and will set up reporting requirements for DoD. Government and industry must work together. OSD has been busy answering media inquiries, mostly due to findings from the Commerce report. They are focusing on policies to mitigate future risk. DoD has not put out its own guidance to date; they have gravitated toward the industry accepted standards.

Each military service and agency will set up its own counterfeit office. LMI has assisted in drafting wording for the policy. Next, they need to draft the guidance. More forums will be held on counterfeit. The speaker plans to attend the DMSMS / Standardization Conference in October and roll out more strategy to the attendees.

NAVAIR DMSMS Team Counterfeiting Update

NAVAIR's DMSMS focal point provided a briefing on mitigating counterfeit. At first, the NAVAIR depots didn't realize they had counterfeit issues. NAVAIR has had to convince the depots that there is indeed a problem and to teach them how to handle the situation. Materiel spelled with an 'e' opens this challenge up to everything, not just parts. NAVAIR plans to start its own counterfeit group.

Training is needed in many areas. There is a counterfeit awareness course at DAU as a CLL module; it should be available any day now. The same information was also inserted into DoD training for re-certification. The Defense Supply Center Columbus has investigated sources and compiled a list of qualified distributors on its website, including sources of supply for most components. The SAE standard for counterfeit in electronics, SAE AS 5553, includes contract guidance, language, a reporting chain for counterfeit parts, and materiel control.

Some NAVAIR folks aren't familiar with reporting through GIDEP, so they use the PQDR (product quality deficiency report) process primarily. There's a need to educate the prospective users on GIDEP reporting. Today's GIDEP is nothing like it will be in the future. Briefly described the future state envisioned for the counterfeit process and the reporting mechanisms and stated that NAVAIR is collaborating with all Navy Systems Commands and the other military services on this effort. Applauded industry for their efforts in production; however, sustainment remains a significant challenge.

NAVSEA – Complexity Reduction

NAVSEA's Director of Commonality presented a briefing on how NAVSEA is applying commonality at the component level and deriving significant savings in total ownership cost (TOC). NAVSEA is looking at variation at the system level and also in other areas. Mechanicsburg did a study regarding the cost to deploy a system right now. Increasing commonality will reduce TOC.

However, NAVSEA is not going to implement commonality for commonality's sake. There are benefits to commonality, but also some logical exceptions, such as the requirement not to use magnetic parts on a certain type of ship. NAVSEA also doesn't want to prevent innovation while implementing commonality – the process is specifically created to ensure this doesn't happen. Integrating the TOC into the up-front design is necessary.

NAVSEA's commonality instruction was signed 6 April 2009. In deriving TOC savings, "Deep Dives" identified both acquisition and lifecycle cost savings through commonality. They do not use a "shelf" program for rapidly developing technologies.

NAVSEA has developed processes and policies that impact acquisition and modernization programs, working across the Navy, from both the top down and the bottom up. Example: Apply commonality "shelf" to parts of submarines that are not unique. NAVSEA will provide a presentation on this topic at the DMSMS/Standardization Conference in October.

Lead-Free Challenges – Honeywell

The representative from Honeywell presented an in-depth briefing on current challenges regarding lead-free solder, which tends to produce "tin whiskers" among other technical issues, and causes a significant configuration control problem. He provided an update on efforts being done by the ELF IPT (Executive Lead Free Integrated Process Team), the LEAP WG (Lead-free Electronics in Aerospace Project Working Group) and PERM (Pb-free Electronics Risk Management) Consortium, including the "Manhattan Project." He showed specific examples of many types of issues caused by lead-free solder, and provided information on several recent industry standards. He also presented a recommended roadmap for lead- free electronics risk reductions. (See the presentation for details.)

Discussion and wrap-up:

ACTION ITEM: The group is asked to provide examples of Parts Management success stories in terms of both saving money and benefiting the warfighter.

Wednesday, April 21, 2010

DLA Parts Management Data Sharing Project

The HQ DLA Standardization Executive presented a briefing on a Parts Management Data Sharing Project involving several organizations in government and industry. They are applying new technologies to solve logistics problems. One consistent challenge is transitioning from research and development into production, mainly due to the funding stream and process.

The team that is involved makes this effort unique. The speaker is the project sponsor, alongside the R&D project, DLIS, DSCC, LMI, XSB, and Northrop Grumman Corporation (which is willing to share data), and hope to include a Service in the near future. The R&D requirement is to show that it is scalable.

For now the team is focused on the connector commodity, however, they plan to add another commodity in the next phase, and to develop a common parts database and business case. First they have to define connectors. The item name code seems to be more accurate in this case instead of the federal supply class. It's important to focus only on the items that DLA really buys (12.5%), instead of all the connectors in the catalog. Some initial data from this phase was presented. An update on this project will be presented at the DMSMS/Standardization Conference in October.

DMSMS Strategic Plan

The DMSMS program manager provided a briefing on the draft DMSMS Strategic Plan developed by the DMSMS Working Group earlier this year. He presented additional insights from their meeting on areas they should be involved in or should be influencing, including the way forward. He asked participants to provide him any information or feedback. (See presentation for details.)

PMRWG Recommendations

LMI participant provided an update on the PMRWG's eight major recommendations, ranked in a stop-light fashion.

1. Issued MIL-STD, revised SD-19, and Inserted PM language into DAG chapters 4/5, SD-22: DMSMS, MIL-HDBK-217.
    a. Prepared non-signed policy letter – hope to get this signed soon
2. DSPO transferred to OSD/SE, inserted language into SE policy (DAG)
    a. Need to identify specific SE tools to add to the DPMP, little emphasis on milestone reviews
3. Created the DPMP, integrate PM data resources into the DPMP and integrate PM tools into the DPMP (needs work, connectivity from DPMP to all relevant parts information ** please pass along information to LMI/DSPO)

Progress was reviewed on the other five recommendations. Reducing the logistics footprint and the relation to PBL has not been explored to date. The PSMC may want to revisit this recommendation – assessment only, not a critical analysis. The spirit of it was to quantify the benefits of parts management.

The new relationship with Systems Engineering is a very big step in the right direction in support of all the recommendations. JSBs need to be integrated so that there is a relationship among JSBs. Logistics footprint has been an area that is not substantiated with quantitative analysis – DSPO mentioned that DoD has struggled to achieve what they set out to do in defining and minimizing the logistics footprint. Interoperability is supported by the DPMP, however, other opportunities for interoperability have not been realized. Policies, procedures, and guidance are an area

where this group has done a lot of good work. It still needs to raise the visibility of parts management above a single program level – to affect programs overall.

Parts selection is an area that has seen a lot of action and success. The DMSMS and parts management relationship and partnerships have been initiated. Partnering with industry is on the rise, specifically the parts management study. MPCAG and MPCASS functions have not been integrated into the DPMP.

Data management, databases and tools is an area where a lot of work has been accomplished – PinPoint, DPMP, etc. – need to focus on the marketing effort for DPMP/PinPoint.

Summary:

Major recommendations: 12 green, 13 yellow, 7 red

Detailed recommendations: 13 green, 37 yellow, 40 red

Next steps – Tools subcommittee discussion

What has been overtaken by events? We should reassess each item to ascertain if it is still relevant. Do we keep track of where we are on each item over time? We have not to date, as we've been focused on the top three. That might be something to consider doing as we move forward.

Subcommittee Plans: Subcommittee chairs briefed their plans for the upcoming breakout sessions.

Subcommittee Breakout Sessions

Thursday, April 22, 2010

Integrated Circuit Lifetime Prediction Technical Brief and Demonstration

The head of Design for Reliability Solutions presented a briefing on a tool the company developed for predicting integrated circuit failure. Failure rate changes as a function of time. It is no longer necessary to assume that failure rate is constant. Tradeoffs can be made in design to ensure optimum reliability. Lifetime prediction uses operating conditions and test conditions. The validation study shows calculated failure rate vs. field returns to be very accurate. (See presentation for details.)

Parts Management Plans for DMSMS & Standardization 2010 Conference

The PSMC's DMSMS Subcommittee Chair provided information on the fall conference, to be held the last week of October. The lodging rate will be the same for government and industry participants - $99 a night for suite hotel (Rio, Las Vegas). You can reserve the room now, and register for the conference beginning in June. You can arrive as early as the 17th and stay as late as the Monday after the conference and still get the same room rate.

PSMC Fall Conference – Monday, October 25th – for anyone who attends only the one-day PSMC, there will be no DMSMS conference fee charged. The conference fee will be charged to those attending the DMSMS / Standardization sessions.

Parts Management Training – Monday

Plenary Session – Tuesday

Separate DMSMS and Standardization Sessions – Wednesday

Technical Panels – Thursday (suggested parts management topics on the website) – Technical panel sessions usually consist of three 20-minute presentations with a moderator – a 2 hour block of time.

DMSMS & Standardization 2010 Conference Information: http://www.DMSMS2010.com

Dates: October 25-28, 2010

Location: Rio All Suite Hotel, 3700 W. Flamingo Road, Las Vegas, NV 89103

Subcommittee Breakout Sessions

Subcommittees met and worked on current tasks, then provided out-briefs in plenary session.

Subcommittee Out-Briefs:

- ***Tools Subcommittee Out-brief***

PinPoint

Twelve members formed a new PinPoint Focus Group, to address vision, strategy, creation of user and provider groups, etc. The group will work virtually. Need to develop marketing/training (engage Training Subcommittee to develop). It's important to recognize the relationships of the various user groups.

Defense Parts Management Portal

Collaboration space will be created in the Portal for the PinPoint focus group.

Develop strategies to increase usage: collaboration spaces for groups, integrating DMSMS website and PSMC website, move all DSP Journals and Case Studies to the DPMP.

Homework for DMSMS community (per Alex Melnikow) is to go through the existing DMSMS content and update, etc. Also, we will explore the SharePoint capabilities that the DMSMS community could benefit from.

LMI participant will put together the draft PinPoint strategy and post it to the DPMP for discussion.

Need to put the DPMP in the critical path of how you dialogue and communicate with one another for work on Parts Management.

Need early adopters and champions. Make everybody "All In."

The more we converge in this space the more up-to-date this and other communities will be with what is going on within and among them. Make it "The Place!"

It's the feedback from everyone that will help shape the DPMP.

Suggestion to send a weekly email with the https://dpmp.lmi.org to the group, just to send them a teaser to get them conditioned to visiting the DPMP site regularly. Also, give them the option to subscribe to various groups/threads.

Create an instruction for how users can make their own launch page in the DPMP (LMI).

- ***Counterfeit Subcommittee***

The subcommittee worked on verification criteria.

The subcommittee decided to try to find a committee in the near future to take on the Counterfeit standard work.

The I.H.S. representative developed a draft charter and the group modified it and sent it to the PSMC chair.

They plan to submit some data for the DLA parts management data sharing project briefed on Wednesday.

They plan to work with the Policy Subcommittee to insert Counterfeit language into the next SD-19 revision.

The subcommittee worked with the Policy team to reword MIL-STD-3018 with updated language.

DMSMS centric folks can get involved by using the DPMP to work with the Counterfeit Subcommittee.

Training coordinator (NAVAIR) will be in touch with industry representatives from Honeywell and Boeing to discuss training.

- ***Policy Subcommittee***

Develop talking points for DSPO to use with the memo discussion up the DoD chain. Boeing representative has great information to provide a supportive example.

Honeywell and SE representatives have information regarding MIL-STD-3018 language – working along the reliability mindset the Director of SE may have. Also, bringing contractor viewpoint (If you don't require me to do it, I won't!) and other arguments to back up key points and data supporting a parts management memo.

Phone conference in the next couple of weeks with the team to get more accomplished on the talking points for Greg. Group will use the DPMP to conduct the meeting and organize the materials.

Conference Wrap Up

Lockheed-Martin participant offered the wrap-up. There was an overall turnout of 58, the most attendees of any PSMC meeting. Good mix of people and presentations - reflected this diversity. Our chairman is pushing to bring a directive parts management memo up the chain. His new boss from Systems Engineering provided insight into the next years and his view on what needs to happen in order to be successful. Presentations included PinPoint, Northrop Grumman process, counterfeiting, complexity and item reduction, reliability testing/projection, lead-free and related challenges, DMSMS, conference planning, and DPMP. It was a productive meeting!

ACTION ITEMS

1. The entire PSMC is asked to provide examples of Parts Management success stories in terms of both saving money and benefiting the warfighter.
2. Additional action items were assigned at the subcommittee level.