

The Advantages of Maintaining an Effective Preferred Parts Lists

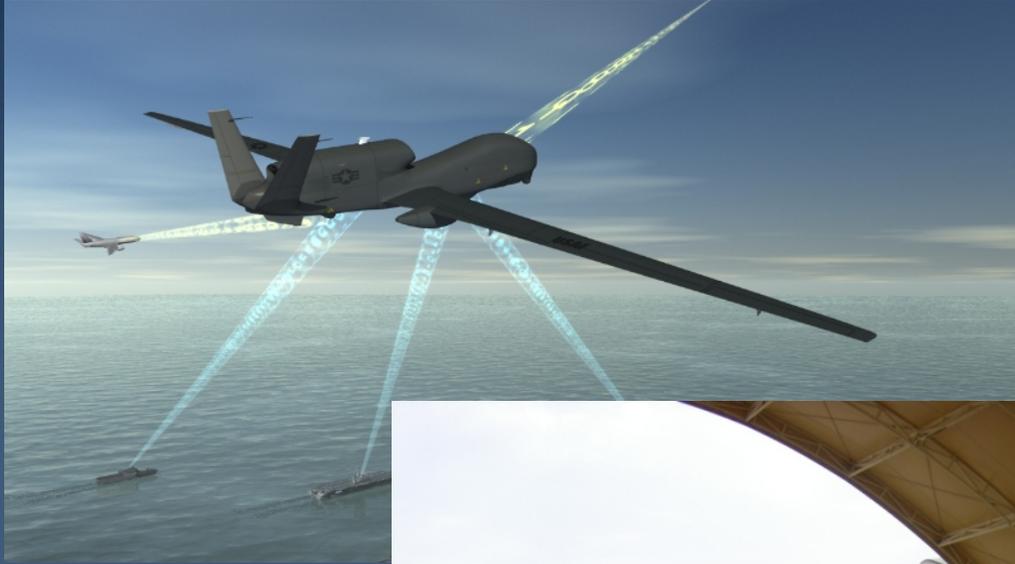
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- **ISR Communication Systems**
- **Tactical and Strategic SATCOM Terminals**
- **Sustainment Support and Services**
- **Networking Solutions**
- **Tactical Pods and Hand-Held Data Links**
- **Telemetry and UGV Communications**
- **Integrated Communications**



Why do we strive to maintain a Preferred Parts List (PPL)?

- Improve the Quality of New Designs;
- Minimize Costs and Avoid Duplications;
- Minimize Lead Times;
- Minimize Vanished Vendor (DMS) issues; and
- Minimize the Risk of Including Counterfeits in Product.

Improve the Quality of New Designs



By using the best components we build the best assemblies.



Minimize Costs and Avoid Duplications

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	A	S	SN74LVC244APWR	IC, DGTL - BFR/DRVR (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	TSSOP-20, -40/+125 C																																																																																														
1	A	S	74LVC244APW, 112	IC, DGTL - BFR/DRVR (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	TSSOP-20, -40/+125 C																																																																																														
1	A	PV	74LVC244MTC	IC, DGTL - (74LVC244) BUFFER OCTAL, W/SERIES RES, 2-3.6V	TSSOP-20, -40 TO +85 C																																																																																														
1	A	PV	74ALVCH16244GRDR	IC, DGTL - (74ALVCH16244) 16-BIT BUFFER/DRIVER, 1.65 TO 3.6V	FBGA-54, -40 TO 85C																																																																																														
1	A	PV	74ACT244MTC	IC, DGTL - BUFFER (74ACT244) OCTAL, 3-STATE OUTPUTS, 5V	TSSOP-20, -40/+85 C																																																																																														
1	A	PV	74ACT244MTC	IC, DGTL - BUFFER (74ACT244) OCTAL, 3-STATE OUTPUTS, 5V	TSSOP-20, -40/+85 C																																																																																														
1	A	PV	MC74ACT244DTR2	IC, DGTL - BUFFER (74ACT244) OCTAL, 3-STATE OUTPUTS, 5V	TSSOP-20, -40/+85 C																																																																																														
1	A	PV	MC74ACT244DTR2G	IC, DGTL - BUFFER (74ACT244) OCTAL, 3-STATE OUTPUTS, 5V	TSSOP-20, -40/+85 C																																																																																														
1	A	PV	74VXC16244MTD	IC, DGTL - (74VXC16244) 16-BIT BUFFER/LINE DRIVER, 1.2 TO 3.6V	TSSOP-48, -40 TO 85C																																																																																														
1	A	PV	74VXC16244MTDX	IC, DGTL - (74VXC16244) 16-BIT BUFFER/LINE DRIVER, 1.2 TO 3.6V	TSSOP-48, -40 TO 85C																																																																																														
1	U	SV	74ACTQ16244SSC	IC, DGTL - BUFFER/DRVR(CQ16244) 16-BIT 3-ST BUFFER/LINE DRIVER	-40 TO +85 DEG C, SSOP-48, -40 TO 85C																																																																																														
1	A	PV	74LCX244WM	IC, DGTL - BUFFER (74LCX244) LOW V.LINE DRIVER, 2-3.6V	SOIC-20, -40 TO 85C																																																																																														
1	A	PV	74LCX244SJ	IC, DGTL - BUFFER (74LCX244) LOW V.LINE DRIVER, 2-3.6V	SOP-20, -40 TO 85C																																																																																														
1	A	SV	74LCX244MSA	IC, DGTL - BUFFER (74LCX244) LOW V.LINE DRIVER, 2-3.6V	SSOP-20, -40 TO 85C																																																																																														
1	A	PV	74LCX244MTC	IC, DGTL - BUFFER (74LCX244) LOW V.LINE DRIVER, 2-3.6V	TSSOP-20, -40 TO 85C																																																																																														
1	A	PV	74ACT16244DGGR	IC, DGTL - BUFFER (74ACT16244) BUFFER/LINE DRIVER, 16-BIT, 5V	9 SNS TPD, TSSOP48, -40 TO +85C																																																																																														
1	A	PV	IDT74FCT16244ATPV	IC, DGTL - BUFFER/LINE DRVR (16244) 16-BIT, 5 V	SSOP-48, -40+85C																																																																																														
1	A	PV	IDT74FCT16244ATPVG	IC, DGTL - BUFFER/LINE DRVR (16244) 16-BIT, 5 V	SSOP-48, -40+85C																																																																																														
1	A	PV	IDT74FCT244CTSOG	IC, DGTL - (FCT244CT) CMOS OCTAL BUFFER/LINE DRIVER, 5V	4, 1NS TPD, SOIC20, -40 TO +85C																																																																																														
1	A	PV	IDT74FCT244CTS0	IC, DGTL - (FCT244CT) CMOS OCTAL BUFFER/LINE DRIVER, 5V	4, 1NS TPD, SOIC20, -40 TO +85C																																																																																														
1	U	SV	74ACTQ244SC	IC, DGTL - BUFFER (74ACTQ244) OCTAL BUFFER/DRIVER, 5V	SOIC-20, -40 TO +85C																																																																																														
1	I	S	74LVC244AD	IC, DGTL - BFR/DRVR (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	SOIC-20, -40/+125 C																																																																																														
1	I	S	74LVC244AD, 112	IC, DGTL - BFR/DRVR (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	SOIC-20, -40/+125 C																																																																																														
1	I	S	74LVC244AD, 118	IC, DGTL - BFR/DRVR (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	SOIC-20, -40/+125 C																																																																																														
1	I	S	SN74LVC244ADW	IC, DGTL - BFR/DRVR (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	SOIC-20, -40/+125 C																																																																																														
1	U	SV	74VXC16244GX	IC, DGTL - (74VXC16244) 16-BIT BUFFER/LINE DRIVER, 1.2 TO 3.6V	2 SNS, FBGA-54, -40/+85C																																																																																														
1	U	SV	74VXC16244GX	IC, DGTL - (74VXC16244) 16-BIT BUFFER/LINE DRIVER, 1.2 TO 3.6V	2 SNS, FBGA-54, -40/+85C																																																																																														
1	U	SV	74ACTQ16244MTD	IC, DGTL - BUFFER/DRVR(CQ16244) 16-BIT 3-ST BUFFER/LINE DRIVER	-40 TO +85C, TSSOP-48, -40 TO 85C																																																																																														
1	U	ZV	74ACTQ244MSA	IC, DGTL - BUFFER (74ACTQ244) OCTAL BUFFER/DRIVER, 5V	5V, SSOP-20, -40/+85C																																																																																														
1	A	PV	74LCX16244MTD	IC, DIGITAL - LOGIC (LCX16244) LV 16-BIT BUFFER, 2.3V TO 3.6V	4 SNS, TSSOP-48, -40 TO +85C																																																																																														
1	A	PV	MC74LCX16244DT	IC, DIGITAL - LOGIC (LCX16244) LV 16-BIT BUFFER, 2.3V TO 3.6V	4 SNS, TSSOP-48, -40 TO +85C																																																																																														
1	A	PV	IDT74FCT16244ATPV	IC, DIGITAL - (FCT16244) 16-BIT BALANCED BUFFER, 5V	SSOP-48, -40 TO +85C																																																																																														

By focusing on fewer preferred parts we maximize purchasing power, minimize purchase orders and strengthen the best suppliers.

Minimize Lead Times

Pref	ST	SC	VendorPN	BodyDescription	SuffixDescription
1	A	S	SN74LVC244APWR	IC, DGTL-- BFR/DRV (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	TSSOP-20, -40/+125 D
1	A	S	74LVC244APW,112	IC, DGTL-- BFR/DRV (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	TSSOP-20, -40/+125 D
1	A	PV	74LCX2244MTC	IC, DGTL--(74LCX2244) BUFFER OCTAL, W/SERIES RES, 2-3.6V	TSSOP-20, -40 TO +85
1	A	PV	74ALVCH16244GRDR	IC,DGTL--(74ALVCH6244) 16-BIT BUFFER/DRIVER, 1.65 TO 3.6V	FBGA-54, -40 TO 85C,

We can maximize our leverage with suppliers and minimize lead times.

Minimize Vanished Vendor (DMS) issues

We can maximize our purchasing of these preferred parts therefore reinforcing the desire of the manufacturer to continue its production.

Pref	ST	SC	VendorPN	BodyDescription	SuffixDescription
1	A	S	SN74LVC244APWR	IC, DGTL-- BFR/DRV (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	TSSOP-20, -40/+125 D
1	A	S	74LVC244APW,112	IC, DGTL-- BFR/DRV (74LVC244) OCTAL, 3-STATE OUTS, 1.65-3.6V	TSSOP-20, -40/+125 D
1	A	PV	74LCX2244MTC	IC, DGTL--(74LCX2244) BUFFER OCTAL, W/SERIES RES, 2-3.6V	TSSOP-20, -40 TO +85
1	A	PV	74ALVCH16244GRDR	IC,DGTL--(74ALVCH6244) 16-BIT BUFFER/DRIVER, 1.65 TO 3.6V	FBGA-54, -40 TO 85C,

Minimize the Risk of Including Counterfeits in Product

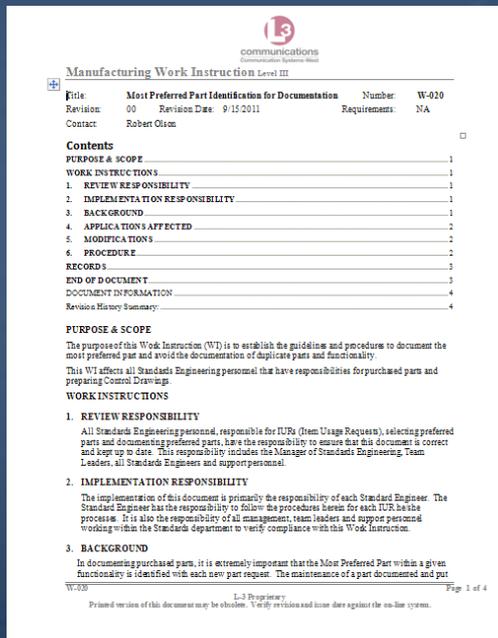


By focusing on fewer preferred parts we can maximize our purchasing of these parts and reduce the desire of the manufacturer to discontinue its production.

Having an effective PPL requires commitment :

- * New Processes and Procedures;
- * Aggressive Goals and Timetables;
- * Visibility of Real-Time Metrics;
- * Open Communications with Design Engineering and Program Management;
- * Flexibility; and
- * A Highly Refined Taxonomy to compare like parts within a given functionality at the finest degree of granularity.

New Processes and Procedures



communications
Communication Systems West

Manufacturing Work Instruction Level III

File: **Most Preferred Part Identifications for Documentation** Number: **W-020**
Revision: **00** Revision Date: **9/15/2011** Requirements: **NA**
Contact: **Robert Olson**

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PURPOSE & SCOPE
The purpose of this Work Instruction (WI) is to establish the guidelines and procedure to document the most preferred part and avoid the documentation of duplicate parts and functionality.
This WI affects all Standards Engineering personnel that have responsibilities for purchased parts and preparing Control Drawings.

WORK INSTRUCTIONS

1. REVIEW RESPONSIBILITY
All Standards Engineering personnel, responsible for IURs (Item Usage Requests), selecting preferred parts and documenting preferred parts, have the responsibility to ensure that this document is correct and kept up to date. This responsibility includes the Manager of Standards Engineering, Team Leaders, all Standards Engineers and support personnel.

2. IMPLEMENTATION RESPONSIBILITY
The implementation of this document is primarily the responsibility of each Standard Engineer. The Standard Engineer has the responsibility to follow the procedure herein for each IUR he/she processes. It is also the responsibility of all management, team leaders and support personnel working within the Standards department to verify compliance with this Work Instruction.

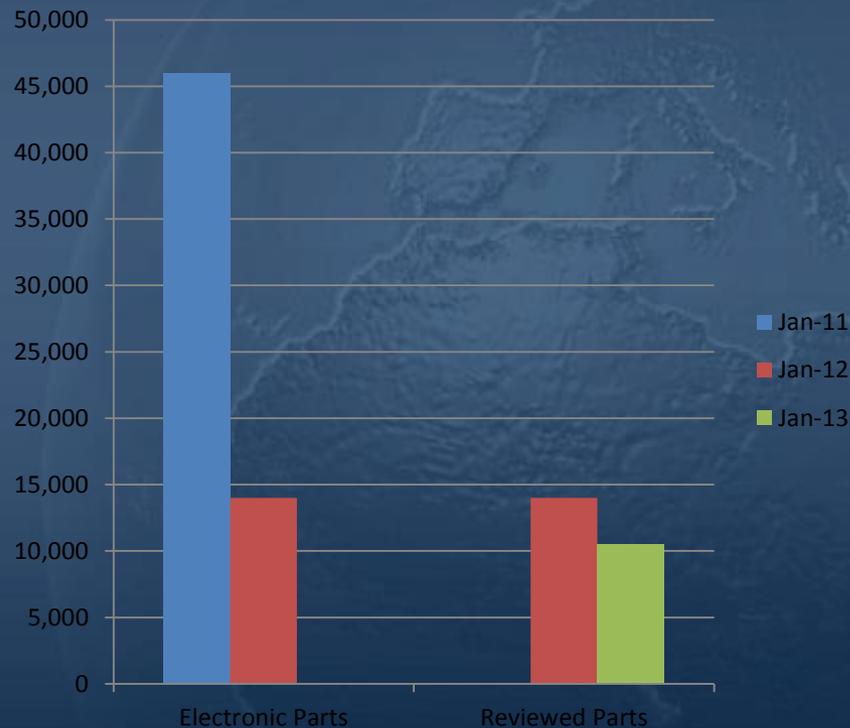
3. BACKGROUND
In documenting purchased parts, it is extremely important that the Most Preferred Part within a given functionality is identified with each new part request. The maintenance of a part documented and put

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Printed version of this document may be obsolete. Verify revision and issue date against the on-line system.

To create and maintain an effective PPL requires a paradigm shift focusing on continuous performance improvement (CPI).



Aggressive Goals and Timetables





Visibility of Real-Time Metrics

	WEEK ENDING	16-Mar	23-Mar	30-Mar	6-Apr	13-Apr	PC-3 GOAL
COMMODITY ENGINEER	GOAL: # PC-3s ASSIGNED TO MOVE BY 1 JUNE 2012	0	563	584	530	584	5852
	ACTUAL - # MOVED (# PNs)	0	413	608	833	432	5852
	CUMULATIVE TOTAL	0	249	438	1426	1426	NA
	% COMPLETE	0%	3%	7%	20%	20%	20%
COMMODITY ENGINEER	GOAL: # OF PART TYPE TAXONOMIES ASSIGNED TO REVIEW	0	29	29	26	33	342
	# OF TAXONOMIES DEFINED / REDEFINED w Critical Attributes Fd (in components dB) (# PNs)	0	2	0	10	0	342
	CUMULATIVE TOTAL	0	2	2	12	12	NA
	% COMPLETE	0%	1%	1%	4%	4%	100%
DATA ANALYST (tbd)	GOAL: DEFINE # MISSING & WRONG CRITICAL ATTRIBUTES	TBD					
CO-OP ATTRIBUTES TEAM	GOAL: # OF CRITICAL ATTRIBUTES TO BE POPULATED	0	0	0	0	0	1
	# CRITICAL ATTRIBUTES POPULATED (5 # GOAL)	0	0	0	0	0	1
	CUMULATIVE TOTAL	1	3	6	10	15	NA
	% COMPLETE	100%	300%	600%	1000%	1500%	100%
COMMODITY ENGINEER	GOAL: # PNs ASSIGNED TO REVIEW LOWEST FUNCTIONALITY & ADJUST PCs	0	1833	1838	1835	1836	19072
	# OF PNs REVIEWED (# PNs)	0	1483	3255	1483	3313	12384
	CUMULATIVE TOTAL	0	1483	4744	6233	10146	NA
	% COMPLETE	0%	8%	25%	33%	53%	100%

Open Communications with Design Engineering and Program Management



Without open communications and the trust that goes with it, a PPL would be impossible to create and maintain.

Flexibility

Chk	Suffix	Suffix Description	Preferred Code
<input type="checkbox"/>	000	ST PLUG TO ST PLUG 420 IN	5- Restricted, Not Allowed
<input type="checkbox"/>	001	ST PLGS INT RUGG & W/H, 144 IN	5- Restricted, Not Allowed
<input type="checkbox"/>	002	ST PLUG TO ST BK JK 41 IN	4- Sustaining
<input type="checkbox"/>	003	ST PLUG TO ST PLUG 240 IN	5- Restricted, Not Allowed
<input type="checkbox"/>	004	ST PLGS INT RUGG & WH,103.4 IN	5- Restricted, Not Allowed
<input type="checkbox"/>	005	ST PLUG TO ST BK JK, 80 IN	1- Most Preferred
<input type="checkbox"/>	006	ST PLG TO BHJ, INT RUGG, 80 IN	4- Sustaining
<input type="checkbox"/>	007	ST PLUG TO ST PLUG, 110 IN	1- Most Preferred
<input type="checkbox"/>	008	ST PLG TO RT ANG PLG, RUGG	1- Most Preferred
<input type="checkbox"/>	009	ST PLUGS, INT RUGG, 1182 IN	4- Sustaining
<input type="checkbox"/>	010	ST PLUGS, INT RUGG, 1418 IN	4- Sustaining
<input type="checkbox"/>	011	ST PLGS, BRASS ARMORED, 36 IN	4- Sustaining
<input type="checkbox"/>	012	STR PLGS, 2 EA CAP & CH, 46 IN	5- Restricted, Not Allowed
<input type="checkbox"/>	013	STR PLGS, 1 EA CAP & CH, 60 IN	4- Sustaining
<input type="checkbox"/>	014	STR PLG TO STR JACK, 60 IN	5- Restricted, Not Allowed
<input type="checkbox"/>	015	STR PLGS, 2 EA CAP & CH, 12 IN	4- Sustaining
<input type="checkbox"/>	016	STR PLGS, 2 EA CAP & CH, 75 IN	4- Sustaining
<input type="checkbox"/>	017	ST PLUG TO ST PLUG 24 IN	1- Most Preferred
<input type="checkbox"/>	018	ST PLUG TO ST JACK, 72 IN	4- Sustaining
<input type="checkbox"/>	019	ST PLG TO 4 HOLE PNL JK, 30 IN	4- Sustaining

To create and maintain an effective PPL requires flexibility in the way we address each opportunity to identify and reduce our PPL.

A Highly Refined Taxonomy to compare like parts within a given functionality at the finest degree of granularity



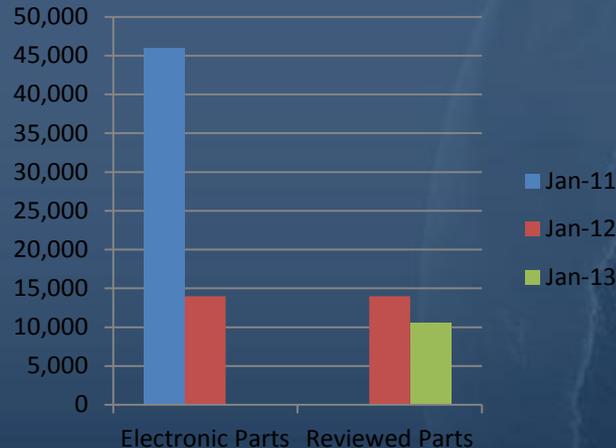
In order to select the most preferred part within a given functionality, it helps to refine the taxonomy of our parts to the finest degree of granularity in order to compare - not necessarily form or fit but definitely function.

These are steps we employed:

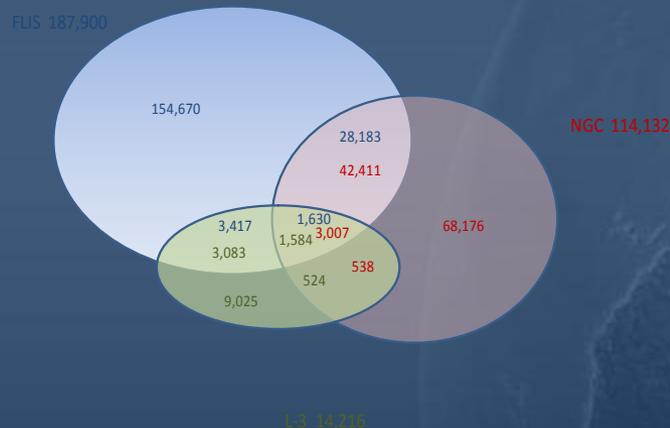
- * Aggressive queries and filters to eliminate those parts not recently included in parts lists, BOMs and initial releases;
- * Implement reductions found possible through participation in the DLA/LMI Data Sharing Initiative;
- * Continuous review of all active functionally equivalent parts with each part query;
- * Complete review of all remaining Preferred Parts by functionality over a period of 15 months; and
- * Continuous Performance Improvements (CPI).

Aggressive queries and filters to eliminate those parts not recently included in parts lists, BOMs and initial releases;

Last year's goal was to reduce 46,000 electronic parts to 14,000. The goal for this year is to review 70% of the remaining parts and complete the complete review by April of 2013.



Implement reductions found possible through participation in the DLA/LMI Data Sharing Initiative;



Because of the findings of the Data Sharing Demonstration we were able to implement the following reductions:

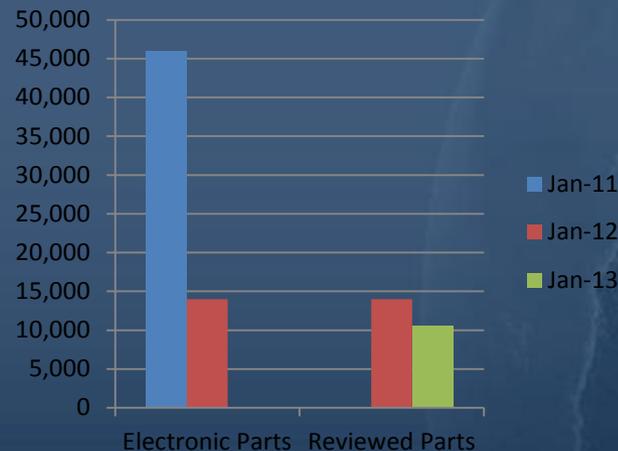
- 1.) Connectors - Reduce PC-1's from 6008 to 1558.
- 2.) Fasteners - Reduce PC-1's from 2036 to 529.

Continuous review of all active functionally equivalent parts with each part query;



“This here bell was made to tell that parts not needed can go to HELL!”

Complete review of all remaining Preferred Parts by functionality over a period of 15 months



It is anticipated that nearly 3600 man-hours will be required for the complete review of the remaining 14,000 preferred parts.

Continuous Performance Improvements (CPI).



Over the past year many initiatives have been undertaken in order to reduce our PPL. As we go forward many more initiatives will be undertaken as we gain more experience and understanding of those items already documented and their replacements.



We have already realized and will continue to realize:

- * Cost savings alone save \$9400 over the life of each part not introduced to our BOM (Coopers and Lybrand 1998);
- * Reduction in Counterfeit Issues; and
- * Actively identified and minimized DMS issues for follow-on contracts.

Cost savings alone save \$9400 over the life of each part not introduced to our BOM (Coopers and Lybrand 1998)



In the six months since instituting the Bell Ringing and the PPL Work Instruction (WI-20), Standards Engineers have avoided the creation of 56 parts thus saving L-3 \$532K!

Reduction in Counterfeit Issues



It is too early to quantify the impact of having an effective PPL will have on the mitigation of counterfeit issues. Nonetheless there is no question that as we strive diligently to use only preferred parts in our new (and to a degree our sustaining) designs, we will dramatically mitigate the possibility of integrating counterfeit parts into our product for the warfighter.

By maintaining an effective PPL, we will:

Improve the Quality of New Designs;

Minimize Costs and Avoid Duplications;

Minimize Lead Times;

Minimize Vanished Vendor (DMS) issues; and

Minimize the Risk of Including Counterfeits in Product.



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