Common Parts Catalog (CPC) Commonality Working Group (CWG) Update

Part Standardization & Management Committee

April 26-28, 2016
McLean, VA
Program
Mission
• Manage and focus national shipbuilding and ship repair research & development funding on technologies and processes that will:
  • **Reduce the total ownership cost** of ships for the U.S. Navy, other national security customers and the commercial sector
  • Develop and leverage **best commercial and naval practices** to improve the efficiency of the U.S. shipbuilding and ship repair industry

• Provide a **collaborative framework** to improve shipbuilding-related technical and business processes
NSRP Collaboration
Anti-Trust Rules – Don’t Discuss:

• Your company’s or your competitors’ product & services (pricing, sales, marketing, etc.)
• Your company’s or your competitors’ selection of their supplier companies
• Your company’s or your competitors’ trade secrets
Program Overview
Program Focus

Technology Transfer
- Panel Meetings
- Industry Conferences
- Project Demonstrations

Primary channel for dissemination of project results

R&D Projects
- Project Solicitations
- Project Management and Execution

Majority of Program $

Ad Hoc Initiatives
- Specific target areas
- Quickly established to include key stakeholders
- Disbanded when required actions are completed

Key Benefit of Collaborative Framework
Greatest portion of Program funding goes to Projects
Organization

Sponsors

Executive Control Board

Executive Director and Staff

Extended Team

Major Initiatives

Aligned with Shipbuilding Enterprise

Panels

Ship Design & Material Technologies

Ship Production Technologies

Business Processes & Information Technologies

Infrastructure & Support

Ship Design & Material Technologies

Electrical Technologies

Business Processes

Environmental

Ship Warfare Systems Integration

Planning, Production Processes & Facilities

Information Technologies

Risk Management

Surface Preparation & Coatings

Workers’ Compensation

Welding Technology

Safety & Health

Workforce Development
Bi-monthly Newsletter

Embedded Project News Bulletin

Tri-fold Project News Bulletin (hardcopy and pdf)
New in 2016

- NEW WEBSITE!
- Responsive
- Highly searchable with tags and categories
R&D Projects
Project Snapshot

Total # of projects

339

Projects with > 1 shipyard

207

63% transition rate

31% limited transition

267 project implementations across the industry
Project Solicitations
# Research Announcements

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<th>Type</th>
<th>SCOPE</th>
<th>Funding</th>
<th>Duration</th>
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<tr>
<td>Research Announcements</td>
<td>More comprehensive</td>
<td>Gov’t and Industry Cost Share</td>
<td>up to 2 years</td>
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<tr>
<td>Panel Project Solicitations</td>
<td>Smaller, targeted</td>
<td>Up to $150K</td>
<td>up to 1 year</td>
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Panel Project Solicitation Process

- Proposers submit white papers to Ad Hoc Leads
- Ad Hoc Group Downselect
- Panel Chairs/Ad Hoc Leads submit (up to 3) White Papers to NSRP Executive Director
- Executive Director
- Panel Chairs present to ECB
- Executive Control Board Selection
- Proposers submit white papers to Panel Chairs
- Panel Downselect

Sponsors:
- Navy
Panel Project Solicitation 2016 Timeline

April – Panel Project Solicitation Issued

Proposers submit white papers to Panel Chairs/Ad Hoc Leads (Panel Chairs/Ad Hoc Leads determine submission deadline)

Panel Chairs/Ad Hoc Review and down-select

Q&A Period

August - Panel Chairs/Ad Hoc Leads submit white papers to SCRA

August - Panel Chairs/Ad Hoc Leads present project portfolio to ECB for award

September - Panel Chairs/Ad Hoc Leads present project portfolio to ECB for award
39 white papers submitted

11 all panels submitted + commonality and big data working groups

19 selected by ECB at Sept meeting

$\approx 2.7$ M total funding award
Research Announcement Proposal Process

Proposal Teams → Summary Proposal Screening

Summary Proposal Screening → Technical Evaluation Review Panel
3rd Party Subject Matter Experts
- Rank-Ordered List

Blue Ribbon Panel Review
- Recommended Portfolio
- Standby Recommendations

Executive Control Board Decision
- Selection Decisions
- Standby Decisions

Cost Analysis
Final Tech Review

Award

Notify

Full SOW/Cost Proposal
Tech Transfer & Implementation Plan

Notify
Technology Transfer
NSRP Day @ NAVSEA

• Thursday, October 1\textsuperscript{st}
• NAVSEA HQ building, Washington Navy Yard
• Over 30 project teams discussed and demonstrated the tools and technologies they are developing to key Navy stakeholders
• NAVSEA Executive Director
World Maritime Technology Conference 15

- November 3-7, 2015
- Held in conjunction with SNAME Maritime Convention
- Ship Production Symposium
  - Panel Chairs put their SNAME Ship Production T&R Committee hats on to review abstracts and moderate technical sessions
- NSRP Project Demos & Displays
  - 22 NSRP Project Teams participated
ShipTech 2016

- March 1-2, 2016
- Sponsored by Office of Naval Research-Navy Manufacturing Technology Program
- Co-supported by NSRP and the Navy Metalworking Center
- 24 NSRP Project Teams presented abstracts during the technical sessions
Looking for more information?

- Resource Documents
- Contact Information
- Panel Information
- Ad Hoc Initiatives
- Presentations
- NSRP History
- Solicitations
- Teaming
Common Parts Catalog (CPC)
Background

- The collaborative Common Parts Catalog has been in production since May 2004.
- Senior Navy Leadership are briefed and engaged.
- DDG1000 Support activities included:
  - Part Standardization Program supported with defined standardization criteria and coding
  - Part Equivalency supporting a joint design with part catalog definition
- CGN(x) and CG(x) materials team was represented by CPC CCCG representatives
- CPC Navy Pilot was completed on June 1, 2008.
- Defense Standardization Program Office published a case study “Common Parts Catalog for Industry Shipyards”
Role and Responsibilities

- **Steering Committee**
  - Senior level executives from the Participating Shipyards
  - Ensures resources are provided for the CWG’s operation
  - Acts as mediator and final decision body on issues
  - Quarterly status reviews are recommended

- **CWG Lead**
  - Manage the everyday activities to assure the CWG projects are consistent with business requirements, schedules and budgets
  - Teleconference and face to face meetings per year

- **CWG Representative**
  - Subject Matter Experts and Support group to the team as required

- **IT Integrators**
  - Manage the IT resources necessary for production system support, application enhancements and software vendor management
NSRP Research Announcement (RA)

- April 2010 – NSRP RA contract awarded – CPC Enhancement Task
  - There were 4 tasks and 1 was for the evaluation of NASSCO and HII-NNS joining the CPC collaboration. The P.O.P. was Sept. 2011 – Dec. 2012.
- December 2012 – Project team provided the NSRP Executive Control Board (ECB) with high level cost estimates and schedule for re-engineering CPC and implementing at all 5 shipyards (EB, BIW, HII-Ingalls, HII-NNS, NASSCO).
  - Based on this estimate, the ECB tasked the project team to develop additional detail on the proposed activities and schedule drivers as well as a value/impact assessment of the strategic initiatives identified.
  - The team was asked to form a cross functional group consisting of the CPC team leadership and representatives from the Navy, NNS, NASSCO and other interested NSRP members including mid-tier shipyards.
- March 2013 – Completed CPC Enhancement Task and provided Strategic Initiative Recommendations to NSRP
- NSRP Commonality Working Group (CWG) was established
Commonality Working Group (CWG)
Purpose

- Discuss past, present, and future of CWG
- Discuss commonality barriers and strategic focus areas
- Develop a CWG 2016 budget request for SCRA
- Review NAVSEA Commonality Handbook comments
- Discuss each of our approved 2016 panel projects
- Discuss potential panel projects and RA projects for 2017
Commonality (NAVSEA Definition)

Reduced variation in the application of systems, sub-systems, and components that meet cross platform requirements and provide optimum acquisition and life-cycle costs (i.e. total ownership costs).
Importance

“Maximizing Commonality across Platforms has tremendous potential to reduce life cycle costs and improve the readiness of our fleet. Significant savings can be achieved by implementing cross platform commonality to reduce the amount of unique systems, subsystems, and components in the fleet inventory.”

-Vice Admiral
Commander, Naval Sea Systems Command
Importance (cont’d)
Future Membership?

- Naval Ship Systems Engineering Station (NAVSSES)
- Naval Supply Systems Command (NAVSUP)
- Austal USA
- BAE Systems-SE Shipyards
- Marinette Marine
- Vigor Industrial
- VT Halter Marine
- Shipbuilding Suppliers
CWG Objectives

Established by the NSRP to accomplish the following:

- Identify the top barriers preventing material commonality across platforms and between shipyards
- Provide recommendations and a phased approach for overcoming each of the barriers identified
- Begin taking action to eliminate the barriers through panel projects and RA projects
Top 5 Recommendations

- Establish More Uniform Part Design Approval and Manufacturer Qualification Requirements (Across Contracts)
- Develop Consistent Inter/Intra Ship Class Contract Language
- Establish a Standard for the Navy and Shipyards to Identify Preferred Parts
- Navy Invoke Commonality for Specifications, Effective Dates, Approval Requirements, and Specification Modifications
- Establish Common Content and Format for Sharing Catalog Data
Additional Recommendations

- Establish Common Content and Format for Sharing Engineering (2D/3D) Data Models and Attributes
- Align Procurement Notes
- Establish and Maintain Part Equivalency Relationships with Parts ‘Owned’ by Other Participating Shipyards
- Part Template and Spec Profile Development
- Enter Into an Agreement to Exchange Material Requirement Identification and Acquisition Plan/Schedule Dates
- Enter Into an Agreement to Identify On-Hand Available Excess/Surplus Material Inventory
- Establish Navy Part Data in the CPC Including NSN, Procurement Data, Related Documentation, Qualifications, and Manuals
Top Strategic Focus Areas

1. Develop Consistent Contract Language
2. Invoke Common Specifications and Revisions
3. Establish Uniform Qualification Requirements
4. Establish a Standard to Identify Preferred Parts
5. Enable the Sharing of Material Catalog Data

Supplier Input Incorporated into Strategic Focus
CWG Timeline / Milestones

- 2013
- 2014
- 2015
- 2016
• CWG formed by Executive Control Board (ECB) for Government and Industry collaboration
• Completed CPC Enhancement Task Value Assessments and provided Strategic Initiative Recommendations to NSRP ECB
• Developed and conducted a consensus survey with 12 potential barriers to commonality to identify the Top 5
• Developed recommendations for a phased approach to address the Top 5 barriers identified

2013
Joint meeting held at EB WEO between NAVSEA 06 and CWG to discuss funding, synergy, and strategy

CWG awarded 2 panel projects to perform in 2015:
- Shared Specification Effectivity Management
- Shared Manufacturer Drawing Qualification Requirements

Requested funding to develop a phased approach and repeatable process for conducting joint Deep Dives

Reviewed and provided NAVSEA with feedback on draft commonality contract language
Established CWG By-Laws for conducting operations
Successfully completed 2014 panel projects
CWG awarded 4 panel project to perform in 2016:
  - Develop Process for Conducting Joint Deep Dives
  - Perform Shipyard Deep Dive on Vaneaxial Fans
  - Integrate Virtual Shelf Data into CPC and NNS Parts Catalog
  - Improvement to Supply Base Oversight Program
Developed RA Project for CWG to perform requirement variation/standardization analyses on 8 commodities
  - Project wasn’t selected by the Blue Ribbon Panel
2015 CONT’D

• Reviewed and provided NAVSEA 06 with comments on S9000-AE-MAN-010, NAVSEA Commonality Handbook
• Developed commonality pilot project recommendations for new design program as requested by Sean Stackley, Assistant Secretary of the Navy
  • Joint meeting held at Washington Navy Yard to discuss
  • Recommendations presented to ECB at December meeting
  • White paper provided to SCRA in February 2016 which summarizes the CWG’s recommendations
• Hold CWG 2016 Kick-Off Meeting at NNS
• Perform and complete panel projects approved in 2015
• Develop, solicit, and vote on panel projects for 2016-2017
• Discuss potential RA project ideas for 2016-2017
Major Accomplishments

- Identified the top barriers preventing material commonality and provided recommendations to overcome each barrier
- ECB has approved 6 different CWG submitted panel projects
- Completed Specification Effectivity Management Project
  - Developed Process Agreement for sharing spec comparisons
  - Developed an index to identify interchangeable spec revs
  - Letter sent to NAVSEA requesting reciprocal Navy approvals
- Completed Shared Manufacturer Drawing Qualification Project
  - Developed standard set of minimum requirements to invoke on suppliers
- Provided ECB with recommendations for commonality on a new ship design program to support Sean Stackley request
The People, Process, and Tools are in place to enable advancements in commonality

- **People** – The CWG has established itself as an industry-wide collaborative group making significant strides in commonality.
- **Process** – The CWG is successfully addressing barriers that have inhibited part commonality.
- **Tools** – Knowledge gained through CWG efforts will allow the re-engineering of CPC to enhance the current capabilities and processes and will establish a shipbuilding “Best Practice” that will integrate the Virtual Shelf.
Questions?