

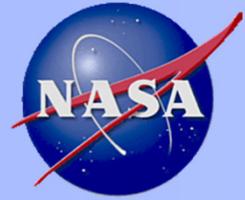
***A Virtual Watering Hole for  
NASA Project Managers***

**Junilla Applin, NASA HQ**

**Len Sirota, NASA HQ**

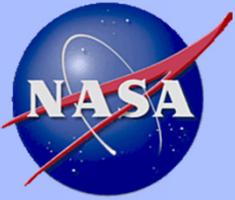
**Manson Yew,**

**Jet Propulsion Laboratory, California Institute of  
Technology**



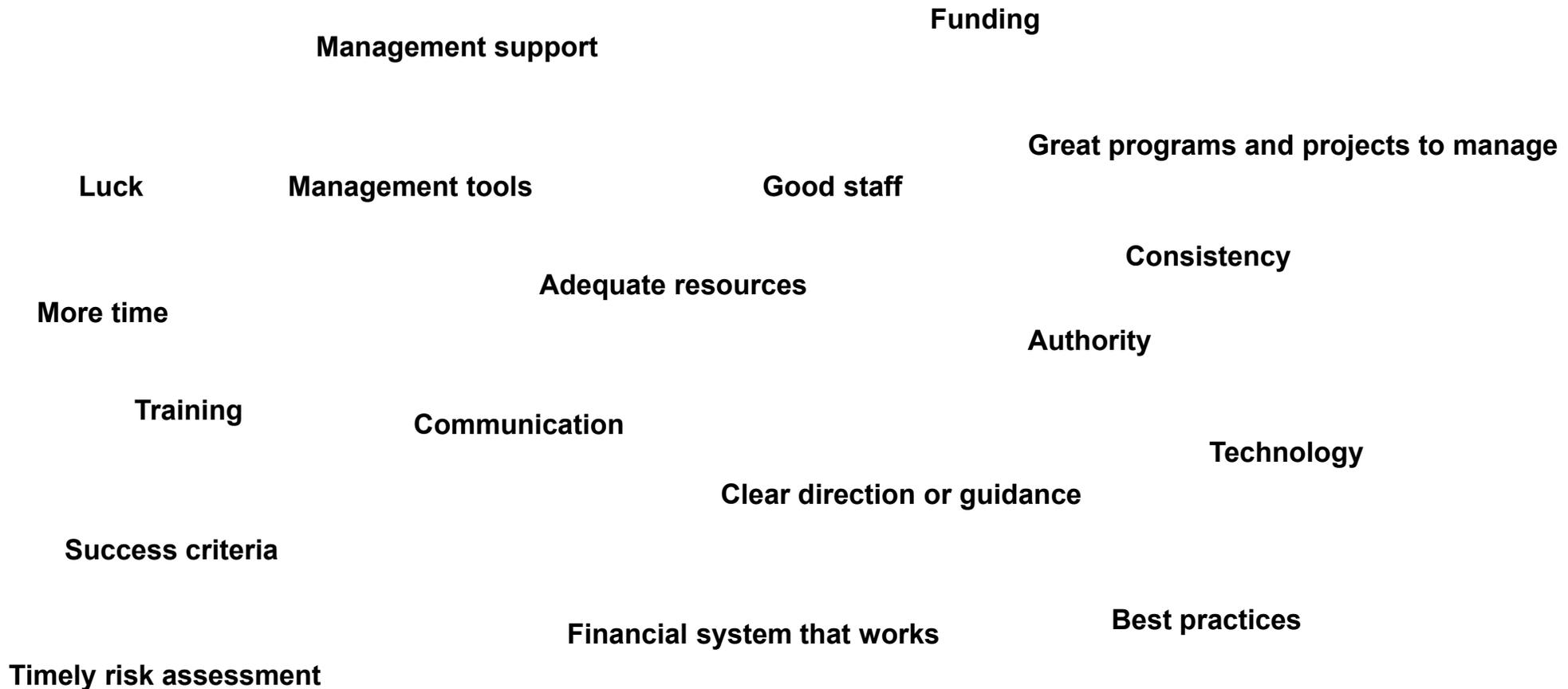
## *Question?*

- **What do program and project managers need to succeed and grow at NASA?**



## ***Question?***

- **What do program and project managers need to succeed and grow at NASA?**





## *Objective*

- **“...governance model, standards, clear lines of authority, open communications, and enhanced training represent real steps forward in fostering engineering excellence.”**

» Chris Scolese, NASA Associate Administrator

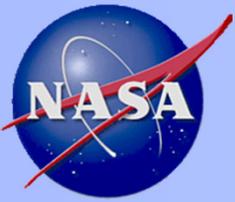




## ***What is a Community of Practice?***

***Communities of Practice (CoPs) are groups that form to share what they know, and to learn from one another regarding some aspects of their work. Although the term “Community of Practice” is new, CoPs are not. Such groups have been around ever since people in organizations realized they could benefit from sharing their knowledge, insights, and experiences with others who have similar interests or goals...The business case for CoPs is this: for a quite modest investment in terms of today's resources, organizations can reap huge rewards in terms of tomorrow's results.***

- ***“Communities of Practice: The Organizational Frontier.” Etienne Wenger and William Snyder. *Harvard Business Review* (Jan-Feb 2000)***



## ***Who Sponsors the PPM CoP?***

- **Sandra Smalley, Director,  
Engineering Program and  
Project Management  
Division, NASA Office of the  
Chief Engineer**
  - **NPR 7120 series**
  - **Software Engineering**
  - **Systems Engineering**
  - **Program Project  
Management Board**

### **WELCOME**

Welcome to the  
Program/Project  
Management  
Community. The  
purpose of this  
community is to provide  
a Web-based

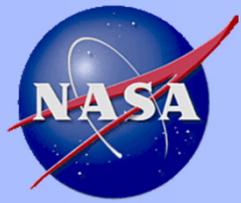


environment for program and project  
managers across NASA to exchange  
information, knowledge, best practices,  
experience, lessons learned, and  
ideas. As Director of the Engineering  
and Program Management Division, I  
am leader of the Program & Project  
Management Community of Practice. I  
welcome your ideas and experiences.  
-- *Sandra Smalley*

+ [Community Charter](#)

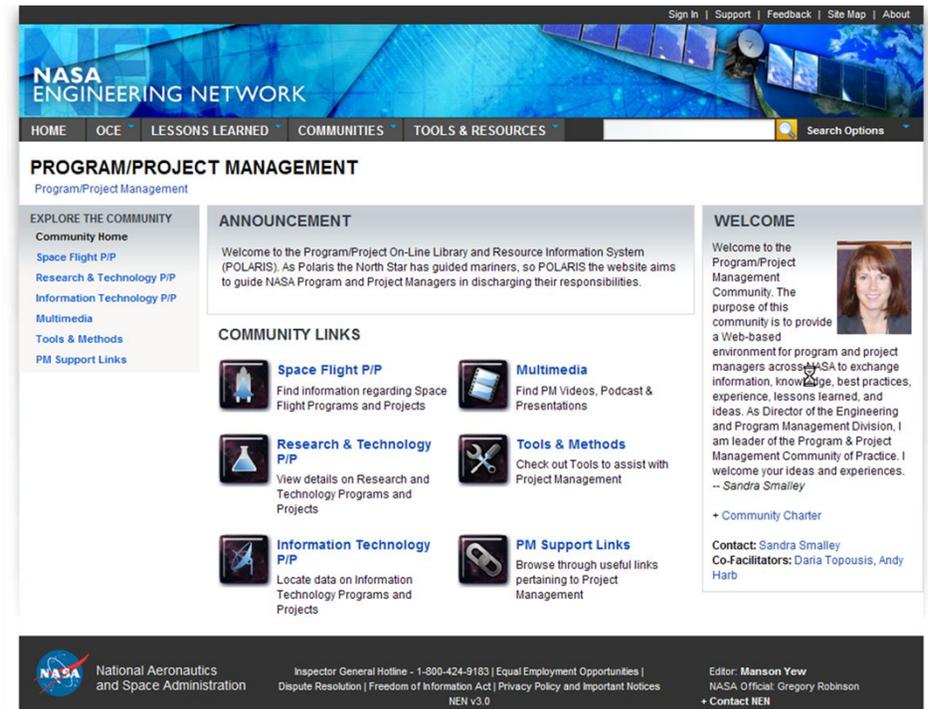
**Contact:** [Sandra Smalley](#)

**Co-Facilitators:** [Daria Topousis](#), [Andy Harb](#)

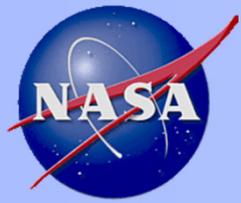


# Objective of NASA Program and Project Management CoP

- Provide Virtual Collection of NASA PPM Resources, including
  - Institutional Requirements
  - “How-To’s”
  - Training
  - Lessons Learned and Best Practices
  - Templates and Examples
  - Frequently Asked Questions
  - Experts and practitioners
  - *Facilitated* community



\*NEN resources are only available internally to NASA



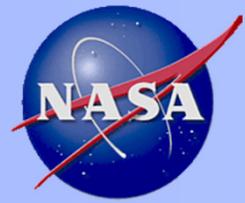
## ***What does the PPM CoP Provide?***

<b>For</b>	
People who know program and project management	NASA Specific Requirements Advanced Training Lessons Learned and Best Practices Community of other experts Up to date announcements
People who wish to learn program and project management	NASA Specific Requirements Training Community of PPM experts
People who are doing program and project management	NASA Specific Requirements Center requirements and resources Up to date announcements Templates and Examples Lifecycles
People supporting program and project management	NASA Specific Requirements Resources Templates and Examples

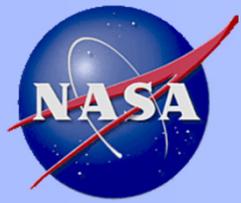


## ***Three Ways to Approach PPM CoP***

- **Narrative -- Guided tour of PPM at NASA**
- **Reference -- Just-In-Time information and resources**
- **Interactive Community -- Learn from other practitioners; Give back to NASA knowledge base**



# ***LIVE DEMO OF PPM COP***



# Access PPM CoP from NEN

**NASA ENGINEERING NETWORK**

HOME OCE LESSONS LEARNED COMMUNITIES TOOLS & RESOURCES Search Options

TECHNICAL DISCIPLINE	MANAGEMENT DISCIPLINE
Aerosciences	Customer Advisory Committee
Autonomous Rendezvous and Docking	Knowledge Management
Avionics	Product Data and Life-Cycle Management (PDLM)
Electrical Power	Program/Project Management
Environmental Test & Verification	
Fault Management	
Flight Mechanics	
Guidance, Navigation and Control	
Human Factors	
Life Support/Active Thermal	
Loads and Dynamics	
Mechanical Systems	
Nondestructive Evaluation	
Passive Thermal Control and Protection	
Propulsion	
Software Engineering	
Structures	
Systems Engineering	

[CLOSE](#)

### NASA Names Independent Verification and Validation Program Director

By David Weaver at HQ, 12/7/10

Gregory D. Blaney has been named director of NASA's Independent Verification and Validation, or IV&V, Program in Fairmont, W.Va. The IV&V program provides software verification and validation services, as well as software safety assurance support for the agency's most critical missions. NASA's Goddard Space Flight Center in Greenbelt, Md., oversees the West Virginia facility.

[Read More](#) [View All Announcements](#)

### WELCOME

Welcome to the NASA Engineering Network (NEN), where NASA engineers may access Lessons Learned, interact with their discipline's Technical Fellow, subject-matter experts, and other practitioners through participation in Communities of Practice, and find a wealth of tools and resources.

Mike Ryschewitsch  
NASA Chief Engineer (Bio)

NEN also provides an enterprise search engine that mines knowledge from a steadily growing number of repositories of interest located across the Agency.

I welcome your comments and suggestions. Please help us provide the content you need by exploring the site and submitting your [Feedback](#).

### POLL

What one thing keeps you from accomplishing your job as effectively and efficiently as you would like to?

- a. Not sure where to look for information
- b. Lack of easy access to experts / expertise
- c. Current search tools are inadequate
- d. Information overload

### SPOTLIGHT

#### Communities of Practice

Participate in distributed, peer-driven networks of individuals engaged in a specific discipline, who come together to share their collective knowledge and learn from one another.

#### Case Studies for Gaining Knowledge

Case studies illustrate the decisions and dilemmas managers face daily. They capture a project's complex nature and identify key decision points, allowing an inside look from a practitioner's point of view.

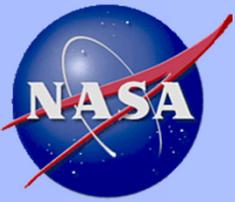
### FEATURES

#### Associations & Societies

Access professional

#### Ask an Expert

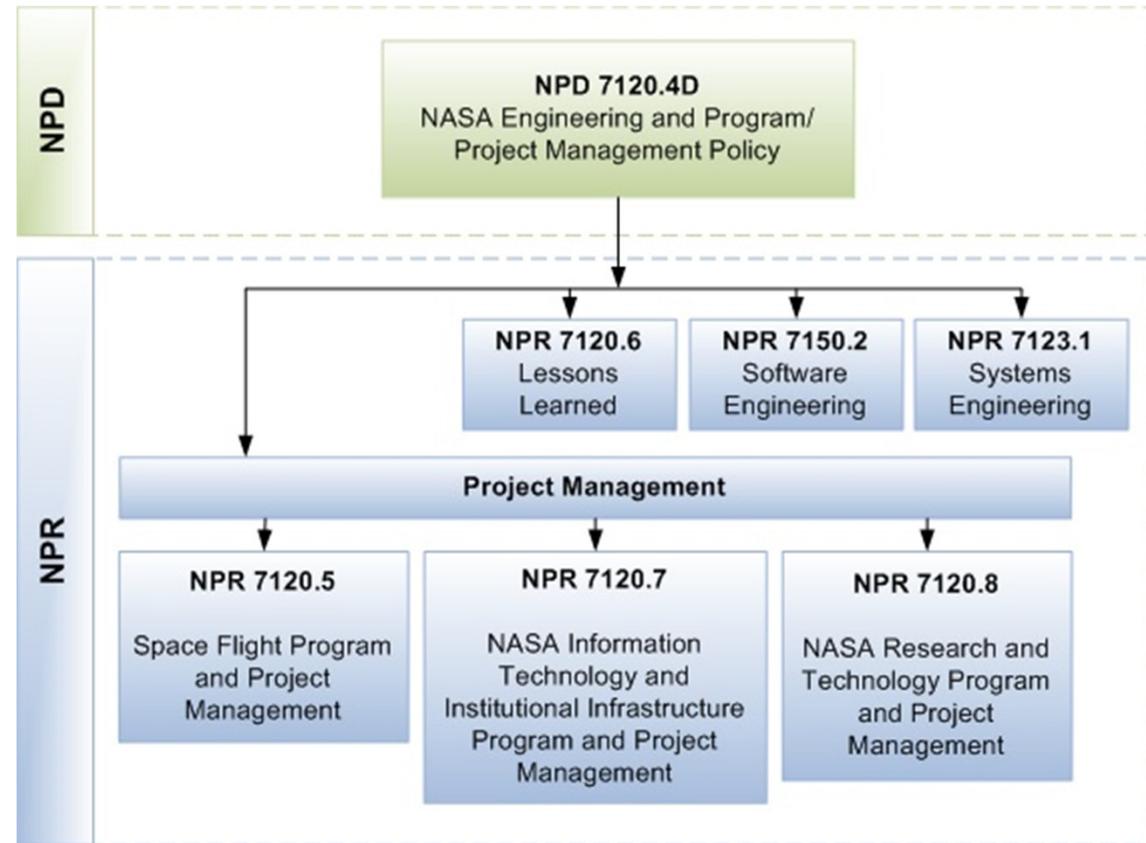
Select an engineering



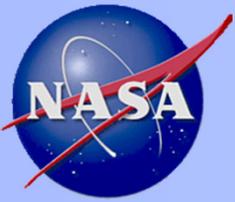
# Narrative

- **Institutional Requirements**

- NPD 7120.4D
- NPR 7120.5
- NPR 7120.7
- NPR 7120.8



Screen Shot from NEN

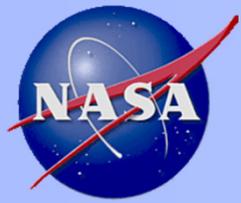


# Narrative (cont)

- **Supporting Information**

<input type="checkbox"/>	Type	Title	Owner	Edited	Size	Actions
<input type="checkbox"/>	PDF	<a href="#">A. One-Page Summary of Significant Changes to 7120.5D</a>	myew	08/29/07	28 KB	
<input type="checkbox"/>	PDF	<a href="#">B. A Walkthrough of 7120.5D</a>	myew	04/30/07	979 KB	
<input type="checkbox"/>	PDF	<a href="#">C. General Frequently Asked Questions</a>	myew	05/02/07	68 KB	
<input type="checkbox"/>	PDF	<a href="#">D. Dissenting Opinion FAQs</a>	myew	08/29/07	28 KB	
<input type="checkbox"/>	PDF	<a href="#">E. Standing Review Board FAQs</a>	myew	08/29/07	22 KB	
<input type="checkbox"/>	PDF	<a href="#">F. Technical Authority FAQs</a>	myew	08/29/07	37 KB	
<input type="checkbox"/>	PDF	<a href="#">G. Waiver FAQs</a>	myew	08/29/07	23 KB	

**Screen Shot from NEN**



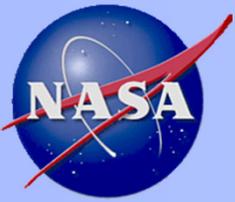
# Narrative (cont)

- PPM Lessons Learned

The screenshot shows the NASA Engineering Network (NEN) search results page. The page header includes the NASA logo and navigation links: HOME, OCE, LESSONS LEARNED, COMMUNITIES, TOOLS & RESOURCES, and Search Options. A search bar is present with the text "Enter search term:" and a "Search" button. Below the search bar, the results are categorized by "Program and Project Management". The search results are displayed in a table with columns for "Search", "Results 1 - 10 of about 102", and "Search took 0.02 seconds". The table lists several search results, including "Risk Management: Cascading and Worst Case Events - 7k", "NASA Engineering and Safety Center Consultation on Mars Exploration Rover Entry, Descent and Landing - 7k", "Project Termination & Transition - 7k", "Next Generation Launch Technology (NGLT) - 7k", "Risk Management: Balancing Domain Expertise Between NASA and Contractor - 4k", and "Next Generation Launch Technology (NGLT) - 7k". Each result includes a description, creator, subject, NASA organization, and collection information.

Search	Results 1 - 10 of about 102	Search took 0.02 seconds
<b>Risk Management: Cascading and Worst Case Events - 7k</b> Description: Cascading and/or multiple failures must be considered during risk assessments to ensure hazard controls are adequate should they be required to address more than one failure at a time. Creator: Donald R. Mendoza Subject: Program and Project Management, Risk Management/Assessment, Safety & Mission Assurance NASA Organization: ARC Collection: LUIS - Lessons Learned Information System	2005-08-29	
<b>NASA Engineering and Safety Center Consultation on Mars Exploration Rover Entry, Descent and Landing - 7k</b> Description: Engineering sensors included on board the Spirit and Opportunity Mars Exploration Rovers were inadequate to allow an unambiguous physical reconstruction of vehicle performance during the critical entry, descent and landing phase. Suitable sensors to measure pressure, temperature and/or other k Creator: David Ledroone Subject: Flight Operations, Hardware, Program and Project Management, Risk Management/Assessment, Safety & Mission Assurance, Spacecraft NASA Organization: GSFC Collection: LUIS - Lessons Learned Information System	2004-05-10	
<b>Project Termination &amp; Transition - 7k</b> Description: The termination phase of a Projects life cycle whether it is implemented early or as scheduled, requires appropriate planning to ensure the Agency's investments (intellectual and real properties) and resources developed during the Projects run are preserved, communicated and returned for Age Creator: Donald R. Mendoza Subject: Administration/Organization, Human Resources & Education, Policy & Planning, Program and Project Management NASA Organization: ARC Collection: LUIS - Lessons Learned Information System	2004-01-01	
<b>Next Generation Launch Technology (NGLT) - 7k</b> Description: The X-43C Project developed an internal cost effort using X-43A actual cost data and heritage United States Air Force (USAF) engine cost data. Two independent cost estimates were performed that were within 10% of the project estimate. Contract proposal estimates came in more than 50% over the Creator: Donald Dugal Subject: Administration/Organization, NASA Standards, Policy & Planning, Program and Project Management, Research & Development NASA Organization: MSFC Collection: LUIS - Lessons Learned Information System	2004-07-01	
<b>Risk Management: Balancing Domain Expertise Between NASA and Contractor - 4k</b> Description: The contractor's primary area of expertise with respect to heat transfer was in an environment different than required (atmospheric versus space flight). Thus, their initial design approach using analogies to atmospheric flight did not capture the true heat transfer issues. The Project d Creator: Donald R. Mendoza Subject: Program and Project Management, Risk Management/Assessment, Safety & Mission Assurance NASA Organization: ARC Collection: LUIS - Lessons Learned Information System	2005-08-11	
<b>Next Generation Launch Technology (NGLT) - 7k</b> Description: The NGLT middle-managers forum for integration across the program greatly improved overall program execution. NASA programs should create a middle managers' forum for integration at the Program Office-level. Program managers should pay close attention to how middle managers integrate with th Creator: Stephen Cook/Donald Dugal Subject: Administration/Organization, Policy & Planning, Program and Project Management NASA Organization: MSFC Collection: LUIS - Lessons Learned Information System	2004-07-01	

## Screen Shot from NEN



# Narrative (cont)

## • Training

### WHAT COURSES TO TAKE AND WHEN

LEVELS OF PROJECT LEADERSHIP			
The levels of project leadership are guidelines to to whom doing an individual's course can be taken. Individuals should attend courses as they see fit to enhance competencies within their current positions, or for future development requirements.			
Team Practitioners/ Technical Engineers	Subsystem Leads	Project Managers, Project System Engineers	Program Managers/Chief Engineers
CORE COURSES			
The core curriculum provides foundational knowledge for NASA's technical workforce.			
• Foundations of Aerospace at NASA	• Project Management and Systems Engineering	• Advanced Project Management and Advanced Systems Engineering	• Executive (TED)
IN-DEPTH COURSES			
These courses are intended to provide in-depth, detailed, and supplemental knowledge and skills for achieving current and future job requirements and augment the core curriculum.			
Program/Project Management			
Program and project management (P/PM) training courses are designed to promote the conceptual and practical use of modern P/PM theories and applications throughout all phases of the NASA project life cycle.			
• Beyond Scheduling Basics	• Assessing Project Performance	• Integrating Cost and Schedule	
• NASA's Budgeting Process	• Continuous Risk Manag ement	• Intentional Project Management*	
• Project Planning Analysis and Control	• Cultural Debits	• Managing the P/PM Examination	
• Risk Management	• Performance Based Statement of Work	• Strategic Thinking for Project Success	
• Understanding Project Scheduling	• Project Acquisition Workshop		
	• Project Review Processes and Strategies		
	• Scheduling and Cost Control		

\*Course can be taken by anyone in a role that deals with international project management issues.

Earned Value Management			
The Academy provides intensive training in earned value management (EVM) to ensure that NASA project practitioners understand the use of this tool for measuring and assessing project performance.			
• EVM Overview	• Advanced EVM Topics		
• Beyond EVM Basics	• Integrating EVM with Acquisition		
• Understanding EVM			
Communication and Leadership			
These courses are designed to help internalize the skills that help facilitate open and continuous communication with colleagues, develop personal leadership qualities, and improve negotiation skills.			
• Communicating Technical Issues	• Team Leadership	• Leading Complex Projects	• Consider taking every leadership course offered by OFFICE
• Negotiations	• Project Management Leadership Lab		
• Team Membership			
• Technical Writing for the NASA Engineer			
• Workshop Dynamics***			

\*\*\*NSC only. Please refer to [https://www.nasa.gov/pdf/eos/ea/epa/epa/courses/leadership\\_wg3.html](https://www.nasa.gov/pdf/eos/ea/epa/epa/courses/leadership_wg3.html)

### NASA PPM TRAINING

#### Academy of Program/Project & Engineering Leadership (APPEL) Core Courses

(Enrollment and participation in the Core courses is by Center or organization nomination only. Please contact your Center Training Representative for more information about the nomination process.)

- **Foundations of Aerospace at NASA (APPEL-FOU)** — Learn about NASA's strategic direction, missions, governance structures, technical guidelines, mission directorates, and programs, as well as NASA's past accomplishments and current and future missions. Receive intensive instruction in technical communication skills, and benefit from insights shared by key NASA leaders and technical experts.
- **Project Management and Systems Engineering (APPEL-PM&SE)** — Enhance your proficiency in applying PM&SE processes and practices over the project life cycle. Course focus: Defining and implementing projects; managing and leading projects and technical teams. Additional topics: Requirements definition and management, system definition and realization, risk management, acquisition, and earned value management. Hear from senior leaders about relevant NASA PM&SE procedural requirements critical to mission success.
- **Advanced Project Management and Advanced Systems Engineering (APPEL-APM&ASE)** — Develop the capabilities to manage complex high-impact, high-risk and high-visibility projects. Course focus: Advanced PM&SE concepts and their integration in the management of all phases and facets of the project lifecycle; techniques for managing multiple stakeholders in the NASA environment. Critical Topics: System architecting, performance, risk, cost, schedule, reliability and operability, and acquisition strategies. Identify and complete a minimum of three personal learning objectives, which promote future learning and capabilities. **Methodology:** Participant-driven, case study approach.

#### In-Depth Courses — View Schedule and How-to-Register Information

Gain NASA-specific knowledge expertise in program and project management through courses aligned with NASA and Office of Management and Budget (OMB) requirements for project management.

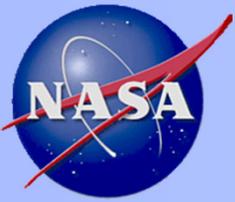
- **Project Management Essentials** — Learn the requisite essentials to develop effective project plans, provide comprehensive performance assessments, and implement effective review processes and strategies.

SATERN Descriptor	Course Title	Days
APPEL-APP	Assessing Project Performance	2
APPEL-IPM	International Project Management	4.5
APPEL-LCP	Leading Complex Projects	3
APPEL-ODM	Orbital Debris Mitigation and Reentry Risk Management	2
APPEL-PMP	Passing the Project Management Professional Exam	3.5
APPEL-PPAC	Project Planning Analysis and Control	5
APPEL-PRPS	Project Review Processes and Strategies	4
APPEL-STPS	Strategic Thinking for Project Success	3

- **Schedule and Cost Management** — Learn about the tools and techniques needed to effectively schedule projects and manage their costs and associated risks.

SATERN Descriptor	Course Title	Days
APPEL-BSS	Beyond Scheduling Basics: Analysis, Control, and Reserve Planning	1
APPEL-CRM	Continuous Risk Management	3
APPEL-ICS	Integrating Cost and Schedule	2
APPEL-NBP	NASA's Budgeting Process	1
APPEL-PAW	Project Acquisition Workshop	2.5
APPEL-RM	Risk Management	1
APPEL-SCC	Scheduling and Cost Control	4
APPEL-UPS	Understanding Project Scheduling	1

## Screen Shot from NEN

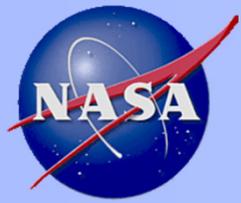


# Narrative (cont)

- **NASA Review Process**

The screenshot shows the NASA Engineering Network (NEN) website interface. The main content area displays the 'INDEPENDENT LIFECYCLE REVIEW PROCESS' flowchart. The flowchart is a complex diagram with multiple boxes and arrows indicating the sequence of steps. Key steps include: 'Program/project initiates internal review process', 'Program/project conducts internal system/project review in accordance with approved Review Plan', 'Program/project prepares summary package<sup>2</sup> defining the baseline, etc. for presentation to the associated SRB at an independent life-cycle review (SBR, SDR, PDR, CDR, etc.)', 'Independent life-cycle review (SBR, SDR, PDR, CDR, etc.) by SRB', 'SRB reports out to TA and program/project', 'Program/project dispositions SRB report findings', 'Review milestone complete', 'Convene governing PMC to consider: CMC/TA recommendations, SRB report, Program/project disposition of SRB report findings', 'Governing PMC recommendation to DA', and 'Decision Authority (DA)'. A 'KDP' (Key Decision Point) is marked at the end of the process. The flowchart also includes a legend for 'KDP' and 'Indicates program/project activity'. The source is cited as 'Source: NID for NPR 7120.5D, Figure 2-5'. The footer of the screenshot contains the NASA logo, National Aeronautics and Space Administration, Inspector General Hotline, and Editor information.

## Screen Shot from NEN



# Narrative (cont)

- **NASA Review Products Overview**

Welcome Manson Yew | My Profile | Sign Out | Support | Feedback | Site Map | About | Control Panel

**NASA ENGINEERING NETWORK**

HOME OCE LESSONS LEARNED COMMUNITIES TOOLS & RESOURCES Search Options

PROGRAM REVIEWS AND PRODUCTS  
Program/Project Management > Program Reviews and Products > Spaceflight P/P > Program Reviews

EXPLORE THE SUBCOMMUNITY  
Back to Program/Project Management

### SPACEFLIGHT PROGRAM REVIEWS

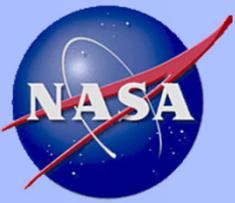
[Back to Space Flight Program Reviews and Products](#)

A NASA Program is a strategic investment by a Mission Directorate or Mission Support Office that has a defined architecture, and/or technical approach, requirements, funding level, and a management structure that initiates and directs one or more projects. A program defines a strategic direction that the Agency has identified as needed to implement Agency goals and objectives.

Program reviews occur throughout the life cycle and ensure that the program continues to contribute to Agency and Mission Directorate goals and objectives within funding constraints. The reviews constitute essential elements of conducting, managing, evaluating, and approving space flight programs.

- **ASP - Acquisition Strategy Planning Meeting**
- **P/SRR (PPAR) - Program System Requirements Review / Preliminary Program Approval Review** — The P/SRR examines the functional and performance requirements defined for the program (and its constituent projects) and ensures that the requirements and the selected concept will satisfy the program and higher level requirements. It is an internal review. (The SRB may not have been formed.) Rough order-of-magnitude (ROM) budgets and schedules are presented. The PPAR is conducted (when requested by the DA) as part of this review to ensure that major issues are understood and resolved early and to provide Agency management with an independent assessment of the readiness of the program to continue with formulation.
- **KDP 0 - Key Decision Point 0**
  
- **ASM - Acquisition Strategy Meeting**
- **P/SDR (PAR) - Program System Definition Review / Program Approval Review** — The P/SDR examines the proposed program architecture and the flow down to the functional elements of the system. The PAR is conducted as part of this review to provide Agency management with an independent assessment of the readiness of the program to proceed into implementation. The proposed program's objectives and the concept for meeting those objectives are assessed. Key technologies and other risks are identified and assessed. The baseline Program Plan, budgets, and schedules are presented.
- **KDP I - Key Decision Point I**
  
- **PSR (PIR) - Program Status Review / Program Implementation Review** — PSRs are conducted by the program to examine the program's continuing relevance to the Agency's Strategic Plan, the progress to date against the approved Management Baseline, the implementation plans for current and upcoming work, budget, schedule, and all risks and their mitigation plans. PIRs are conducted as part of this review to provide Agency management with an independent assessment of the readiness of the program to continue with implementation.
- **PDR - Preliminary Design Review** — The PDR demonstrates that the overall program preliminary design meets all requirements with acceptable risk and within the cost and schedule constraints and establishes the basis for proceeding with detailed design. It shows that the correct design options have been selected, interfaces have been identified, and verification methods have been described. Integrated baseline cost and schedules, as well as all risk assessment, management systems, and metrics are presented.
- **KDP II - Key Decision Point II**
  
- **PSR (PIR) - Program Status Review / Program Implementation Review**
- **CDR - Critical Design Review** — The CDR demonstrates that the maturity of the program's design is appropriate to support proceeding with full-scale fabrication, assembly, integration, and test and that the technical effort is on track to complete the flight and ground system development and mission operations to meet overall performance requirements within the identified cost and schedule constraints. Progress against management plans, budget, and schedule, as
- **SIR - System Integration Review** — The SIR evaluates the readiness of the overall system (all projects working together) to commence integration and test. Verification and validation (V&V) plans, integration plans, and test plans are reviewed. Test articles (hardware/software), test facilities, support personnel, and test procedures are ready for testing and data acquisition, reduction, and control.
- **KDP III - Key Decision Point III**

## Screen Shot from NEN



# Narrative (cont)

- NASA Standing Review Board**

**SRB Convening Authorities**

The SRB has a single chairperson and a NASA Review Manager (RM). The chairperson and the RM are approved or concurred with by the same individuals who convene the independent life cycle reviews. The RM for programs and Category 1 and 2 projects that have a life cycle cost of \$250M and above is assigned by the Associate Administrator for PA&E. The RM for Category 2 projects below \$250M and Category 3 projects is assigned by the Technical Authority. The chairperson, with support from the RM, organizes the SRB and submits the names of proposed board members to the same individuals who convened the independent life cycle review for approval or concurrence.

		Decision Authority		Technical Authority*		Associate Administrator, PA&E
		NASA AA	MDAA	NASA CE	Center Director	
Establish SRB, Develop TOR, Approve Chairperson, RM, and Other Board Members	Programs	Approve	Approve	Approve		Approve
	Category 1 Projects	Approve	Approve	Concur	Approve	Approve
	Category 2 Projects		Approve		Approve	Approve**
	Category 3 Projects		Approve		Approve	

\* When applicable and at the request of the OCE, the OCHMO/HMTA will determine the need for health and medical participation on the SRB.  
 \*\* Only for Category 2 projects that are \$250M or above.

Source: NID for NPR 7120.50, Table 2-4

**STANDING REVIEW BOARD (SRB)**

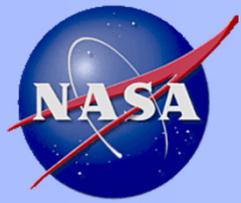
The Standing Review Board (SRB) is charged with the responsibility of making an independent assessment. The SRB's role is to provide the convening authorities with an expert judgment concerning the adequacy of the program/project technical and programmatic approach, risk posture, and progress against the Management Baseline and the readiness against criteria in the NASA Interim Directive (NID) for NPR 7120.50 and NPR 7123.1

Option	CS	CS2	NC
Description	Civil Service (CS) Consensus Board – No Expert Support	Civil Service Consensus Board with Expert Support	Non-Consensus Mixed Board
SRB Chair	CS	CS	Either CS or non-CS
SRB Review Manager	CS or JPL*	CS or JPL*	CS or JPL
SRB Composition	CS Only	CS Only; Experts provide analyses to SRB	Either CS or non-CS
SRB Product	SRB produces a report and briefings with findings of fact and recommendations; RFAs (or equivalent) from individual members**; chair briefs report.	SRB produces report and briefings with findings of fact and recommendations; RFAs (or equivalent)**; reports from individual experts***; chair briefs SRB report.	Review manager assists the chair in assembling the report based on inputs and RFAs from all individuals***; chair briefs personal findings and recommendations.
Minority Report	Minority reports documented in SRB report and in RFAs.	Minority reports documented in SRB report and in RFAs.	No minority report****
SRB Interaction	Consensus is reached by the Civil Service board members under the civil service consensus (CS) and the civil service with consult support (CS2) SRB configurations. Consultants supporting CS2 boards may interact with the projects or programs on behalf of the SRB members to gather information used to support SRB pre-consensus discussions. All board members can participate in open discussion with the project and within the SRB. Everyone can openly discuss individual points of view.		
Independence	Minimal CS ethics rules apply.	Experts providing support are not on the SRB. Apply independence standards to experts.	Apply independence standards to experts but allow some impairments, if approved.

\* JPL review managers are not members and do not have a vote.  
 \*\* Reports and RFAs can contain individual recommendations.  
 \*\*\* The minority report requirements do not abridge NASA's Dissenting Opinion process per NPD 1000.0.

Source: NID for NPR 7120.50, Table 2-5

## Screen Shot from NEN



# Narrative (cont)

- Center Resources

DAILY PLANET INSIDE JPL JPL RULES NBS JPL HOME CALTECH NASA

## JPL PROJECT SUPPORT

Formulation Approval Implementation

### WELCOME TO JPL'S PROJECT SUPPORT WEBSITE

The Project Support Website assists project managers and team members by providing convenient access to information and support for projects, with a focus on project planning activities and developing lifecycle gate products. This includes document templates, tools, services and training information. Together with The Frontline Website, which focuses on strategic, conceptual, and early formulation activities, support is provided throughout a project's lifecycle.

- PROJECT INFORMATION**  
Information, status and calendars for current projects.
  - Summary Information
  - Project Key Contacts List
  - Projects by Phase
  - Monthly Report
  - Quarterly Report
  - Project Manager's Monthly Meeting
  - Flight Projects' Master Calendar
- PROJECT REQUIREMENTS**  
Institutional requirements, guidelines, templates and examples.
  - JPL Policies
  - Flight Project Practices
  - Design Principles
  - Software Development Requirements
  - Life Cycle Reviews
  - Gate Products
  - Examples & Templates
  - Standard WBS
- TECH & MOMT SUPPORT**  
Information about institutional support available for projects.
  - The Frontline
  - Proposal Development Support
  - Help for New Projects
  - Project Management
  - Project Systems Engineering
  - Software Engineering
  - Safety & Mission Assurance
  - Science & Technology
  - Spacecraft System
  - Mission Operations System
  - Launch System
  - Ground Data System
  - Systems Integration & Test
  - Education & Public Outreach
  - Mission Design
  - Training & Education
  - Centers & Facilities
- NASA LINKS**  
Links to NASA information resources that are useful to JPL Projects.
  - POLARS
  - NASA Engineering Network (NEN)
  - Help for New Projects
  - NPR 7120.5D (NODS)
  - NPR 7123.1A (NODS)
  - NASA Lesson Learned
  - NASA Graphics Markings

Home  
Contact  
Feedback  
Admin Login  
Project Status  
Summary Login

#### FREQUENTLY ACCESSED DOCUMENTS

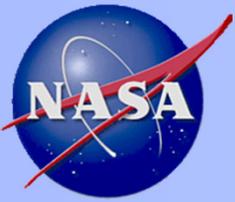
- Fight Project Practices
- Design Principles
- JPL Gate Products List, Rev 8
- Fight Subsystem Hardware Gate Products Listing, Rev 0
- JPL Standard WBS, Rev 5
- Project Time and Cost per Phase Rules of Thumb
- JPL Project Summary Bar Charts
- Project Reference List
- APL & JPL Memorandum of Agreement
- GSFC/JPL Memorandum of Agreement

#### WHAT'S HOT

- NASA Project Management Challenge Feb 9-10, 2011 - Long Beach, CA
- DNP Category A Waivers, Rev 0 (DocD 78219); New Rules' Requirements Doc
- Science Mission Directorate (SMD) Management Handbook

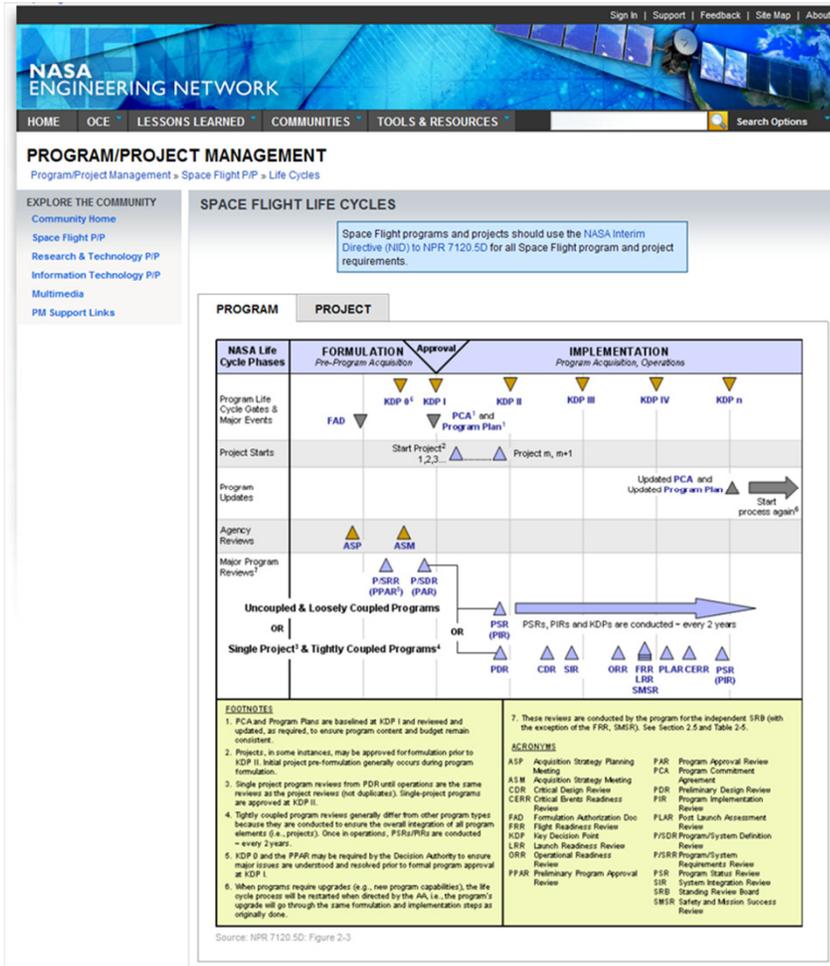
Site developed by Web Applications Development (1720)  
Version 2.6.2 Released: November 10, 2010 5:33 PM

## Screen Shot from JPL Project Support

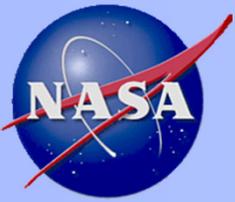


# References

- What is needed and when is it needed?



Screen Shot from NEN



# References (cont)

- PPM Acronyms

Welcome Manson Yew | My Profile | Sign Out | Support | Feedback | Site Map | About | Control Panel

**NASA ENGINEERING NETWORK**

HOME | OCE | LESSONS LEARNED | COMMUNITIES | TOOLS & RESOURCES | Search Options

SPACEFLIGHT P/P  
Program/Project Management » Spaceflight P/P » Acronyms

EXPLORE THE SUBCOMMUNITY

- Acronyms
- Authority
- Governance
- Lifecycles
- Lifecycle Review Process
- Management Process Overview
- Program Reviews and Products
- Project Reviews and Products
- Requirements: Programmatic Hierarchy
- Requirements: Institutional Flowdown
- Roles and Responsibilities
- Standing Review Board (SRB)
- Back to Program/Project Management

**SPACEFLIGHT P/P ACRONYMS**

Click each letter to display/hide acronyms beginning with that letter.

**A**

AA	Associate Administrator
ACD	Architectural Control Document
AO	Announcement of Opportunity
AOA	Analysis of Alternatives
ASM	Acquisition Strategy Meeting
ASP	Acquisition Strategy Planning
ATD	Advanced Technology Development

**B**

**C**

**D**

**E**

EAC	Estimate At Completion
EMO	Environmental Management Office
EPO	Education and Public Outreach
EVM	Earned Value Management
EVMS	Earned Value Management System

**F**

**G**

GDS	Ground Data System
GFE	Government Furnished Equipment
GFY	Government Fiscal Year
GSE	Ground Support Equipment

**H**

**I**

**K**

**L**

**M**

**N**

**O**

**P**

**Q**

**R**

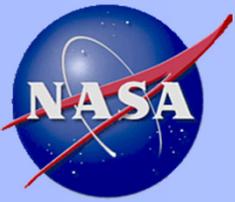
**S**

**T**

**V**

**W**

## Screen Shot from Project Support



# References (cont)

- Reading Room

READING ROOM [Upload and/or Manage Files](#)

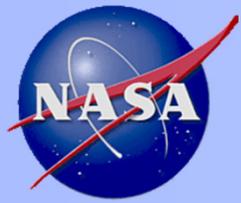
PPM Articles re: 7120.5D (from ASK Magazine)

Search This Collection For

Type	Title	Owner	Edited	Size
	<a href="#">A. ASK Article -- "A Look Under the Hood of NPR 7120.5D"</a> by Mike Blythe	myew	05/01/07	341 KB
	<a href="#">B. ASK Article -- "Developing Engineering Excellence for Program and Projects"</a> By Chris Scolese	myew	05/01/07	175 KB
	<a href="#">C. ASK Article -- "Safety and Mission Assurance: Independent Yet Engaged"</a> by Bryan O'Connor	myew	05/01/07	1 MB
	<a href="#">D. ASK Article -- "Exploration Systems Mission Directorate and 7120.5D: Enabling Exploration"</a> by Garry Lyles	myew	05/01/07	267 KB
	<a href="#">E. ASK Article -- "The Role of Governance"</a> by Dr. Michael D. Griffin	myew	05/01/07	111 KB
	<a href="#">F. ASK Article -- "Documented Experience: Re-defining Project Management Processes"</a> by Don Cohen	myew	05/01/07	293 KB
	<a href="#">G. ASK Article -- "Interview with Rob Manning"</a> by Don Cohen	myew	05/01/07	363 KB

**PRESENTATIONS**

- [What's New with NPR 7120.5D](#) — Mike Blythe
- [Preparing for a NPR 7120.5D Life-cycle Review](#) — Randall Taylor
- [IT Project Success with 7120.5D and 7123](#) — Tina Walley



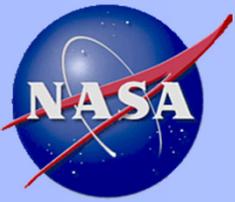
# References (cont)

- Videos/Multimedia

The screenshot shows the NASA Engineering Network (NEN) website. At the top, there is a navigation bar with links for HOME, OCE, LESSONS LEARNED, COMMUNITIES, TOOLS & RESOURCES, and a search bar. Below this is the main heading 'PROGRAM/PROJECT MANAGEMENT' with a sub-link for 'Multimedia'. On the left side, there is a sidebar titled 'EXPLORE THE COMMUNITY' with links for 'Community Home', 'Space Flight PIP', 'Research & Technology PIP', 'Information Technology PIP', 'Multimedia', and 'PM Support Links'. The main content area is titled 'MULTIMEDIA' and has two tabs: 'Videos' (selected) and 'Podcast & Presentations'. There are three video entries listed:

- Project Management: Are You Using the Right Stuff?**  
Steve Goo describes the Boeing Program Management Best Practices, an integrated management system the company has refined over the past ten years to enable programs of all sizes achieve high levels of performance and customer satisfaction. He discusses the importance of staying focused on the fundamentals, sharing lessons learned, and balancing new technologies with proven methods of program management as well as the essential elements of leadership and creating a culture of success.  
For the full length video please visit APPEL's page on the Masters Forum 16 videos here <http://appel.nasa.gov/multimedia>
- 2009 Project Management Challenge Video**  
Description of Video  
James Wood  
Chief Engineer for Launch Services Program, MSC
- NASA Project Management Challenge 2008**  
NASA Project Management Challenge 2008  
<http://pmchallenge.gsfc.nasa.gov/presentations2008.htm>  
No copyright protection is asserted for this video. If a recognizable person appears in this video, use for commercial purposes may infringe a right of privacy or publicity. It may not be used to state or imply the endorsement by NASA employees of a commercial product, process or service, or used in any other manner that might mislead. Accordingly, it is requested that if this video is used in advertising and other commercial promotion, layout and copy be submitted to NASA prior to release.

Screen Shot from NEN



# Interactive Community

- **Polls**

**POLL**

Which of the following would most motivate you to share your knowledge and expertise with others?

- a. Receiving an award
- b. Salary increase
- c. Promotion
- d. Recognition from management
- e. Recognition from peers
- f. Increased reputation in my organization
- g. Gaining status as an expert
- h. Professional and personal development
- i. None -- I share because I enjoy it

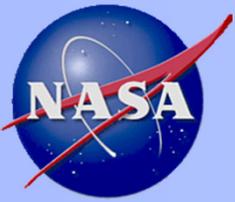
**POLL**

Which of the following would most motivate you to share your knowledge and expertise with others?

%	Votes	
43%	72	a. Receiving an award
8%	14	b. Salary increase
3%	5	c. Promotion
4%	6	d. Recognition from management
2%	4	e. Recognition from peers
3%	5	f. Increased reputation in my organization
3%	5	g. Gaining status as an expert
5%	9	h. Professional and personal development
28%	48	i. None -- I share because I enjoy it

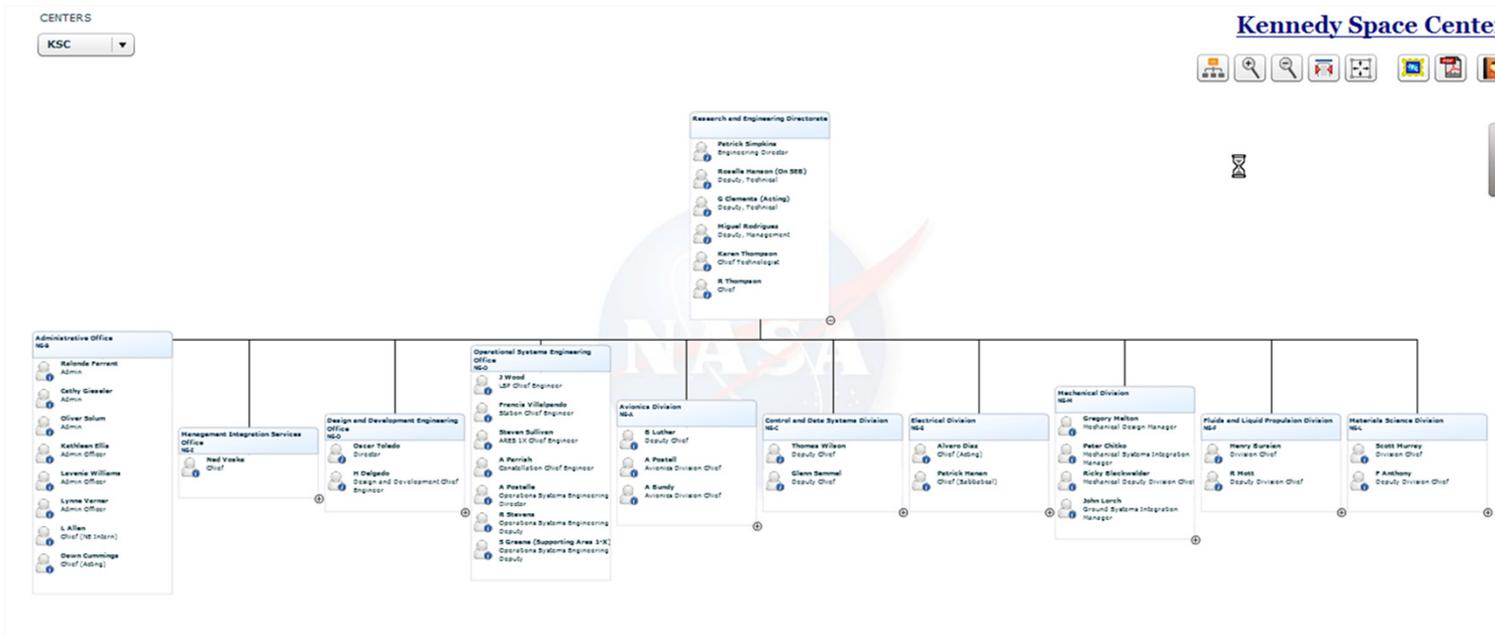
Total Votes: 166

## Screen Shot from NEN

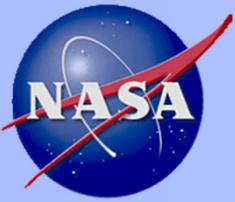


# Interactive Community (cont)

- Find technical staff at other centers



Screen Shot from NEN



## *Interactive Community (cont)*

Welcome Manson Yew

My Profile | Sign Out | Support | Feedback | Site Map | About | Control Panel

**NASA ENGINEERING NETWORK**

HOME | OCE | LESSONS LEARNED | COMMUNITIES | TOOLS & RESOURCES | Search Options

Add Application | Layout Template | Manage Pages | Toggle Edit Controls

**PPMB**  
Program/Project Management » PPMB » Forums

EXPLORE THE SUBCOMMUNITY

- Calendar
- Document Library
- Forums
- Suggestions
- Back to Program/Project Management

**FORUMS (PPMB)**

Categories | My Posts | My Subscriptions | Recent Posts | Statistics | Banned Users

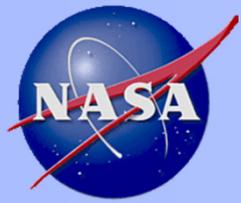
Search  Search Categories Add Category Permissions

Category	Categories	Threads	Posts	
General General Discussions on PPMB	0	0	0	Actions

Showing 1 result.

- **Hold discussions with other PPM's**

**Screen Shot from NEN**



# Interactive Community (cont)

- Ask questions of experts

Welcome Manson Yew

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## NASA ENGINEERING NETWORK

HOME OCE LESSONS LEARNED COMMUNITIES TOOLS & RESOURCES

Search Options

Add Application Layout Template Manage Pages Toggle Edit Controls

### TOOLS & RESOURCES

Tools » Ask an Expert

#### TOOLS

- Ask an Expert
- Collaboration Tools
- Eyes on the Solar System
- Organization Charts
- POPS Expertise Locator
- Technology Assessment Calculator

#### RESOURCES

- Associations & Societies
- InsideNASA
- PBMA Enhanced Security Work Groups
- Public LLIS
- Public OCE Site

#### ASK AN EXPERT

Submit a question and receive a response from a vetted subject-matter expert in an engineering discipline or sub-discipline. Questions and answers are archived for future access.

Each Community of Practice has its own Ask an Expert component. To browse existing answered questions or ask a new question related to a specific discipline, click the desired community below.

#### Communities

- Flight Mechanics
- Guidance, Navigation, and Control
- Propulsion
- Software Engineering

#### Ask an Expert

Mechanical Systems

Search for questions

All Categories

Latest Questions

3 RESPONSES

AS: I am a summer intern at JPL in Pasadena, CA. I will be conducting mechanical tests on lunar simulators in the coming weeks and was curious if there is any available data or simulated data as a function of the level of compaction. I am currently struggling with a lack of data on granular and fine mechanical behavior during various tests. Any information about the testing of lunar simulators, or details on comparing data would be greatly appreciated and addressed. Thanks, Christopher J. Lee  
Answer: 8/28/2010 by Christopher J. Lee  
Category: General

2 RESPONSES

Can you provide a comparable value for PSD (Other Ultimate Stress) for A36 steel, and how you came to that value, please?  
Answer: 8/24/2010 by Stuart Williams  
Category: General

ASK A QUESTION

Categories

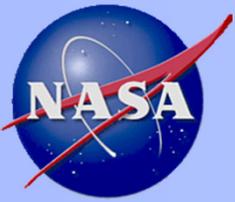
- Latest Questions
- Archived Questions
- Beating Systems & Technology (including Lubrication Science) (2)
- Organic Mechanisms (2)
- Deployment Systems (2)
- EVA Mechanisms (2)
- Gear & Transmission Systems (2)
- General (2)
- Kinematic & Structure Analysis for Mechanical Systems (2)
- Structural and Instrument Mechanisms (2)
- Test Capabilities for the use of NASA Mission Mechanical Systems (2)

Experts

Help

- Comment or Question?
- FAQ

Screen Shot from NEN



# Interactive Community (cont)

- Feedback to NEN, OCE, HQ

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## NASA ENGINEERING NETWORK

HOME OCE LESSONS LEARNED COMMUNITIES TOOLS & RESOURCES Search Options

Add Application Layout Template Manage Pages Toggle Edit Controls

### Feedback

Your feedback is important! Please submit your comments and suggestions for improvements. Click "Support" above for technical assistance or to report a problem.

NAME:

E-MAIL ADDRESS:

PHONE:

NASA CENTER:  
[Select Center]

CATEGORY:  
[Select Category]

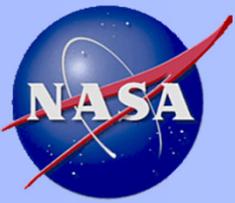
TYPE:  
[Select Type]

REPLY REQUESTED?  
 Yes  
 No

DESCRIPTION:

Send

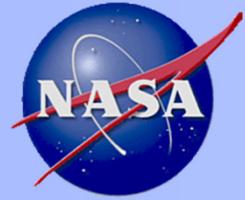
Screen Shot from NEN



# Conclusion

- Summary of current offerings to support NASA PPM expertise
- It is a work in progress
- NASA committed to developing and growing PPM resources

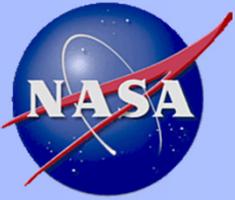
The screenshot displays the NASA Engineering Network website. At the top, there is a navigation bar with links for HOME, OCE, LESSONS LEARNED, COMMUNITIES, and TOOLS & RESOURCES. Below this is a search bar. The main content area is titled "PROGRAM/PROJECT MANAGEMENT" and includes a sub-header "Program/Project Management". On the left, there is a sidebar titled "EXPLORE THE COMMUNITY" with links for "Space Flight P/P", "Research & Technology P/P", "Information Technology P/P", "Multimedia", "Tools & Methods", and "PM Support Links". The main content area features an "ANNOUNCEMENT" section with a welcome message, a "COMMUNITY LINKS" section with icons and descriptions for "Space Flight P/P", "Research & Technology P/P", "Information Technology P/P", "Multimedia", "Tools & Methods", and "PM Support Links". On the right, there is a "WELCOME" section with a photo of Sandra Smalley and a message from her, along with a "Community Charter" link and contact information for Sandra Smalley, Daria Topousis, and Andy Harb. The footer contains the NASA logo, "National Aeronautics and Space Administration", contact information for the Inspector General, and the Editor, Manson Yew.



## ***What else do you need from a virtual watering hole?***

- **Help us help you**
- **This is your community**
- **Let us know needs, likes/dislikes**

**Please fill out the survey!**



## *Questions?*

- **Visit us at the OCE Booth in the PM Challenge Exhibit Hall**
- **Junilla Applin,  
<junilla.i.applin@nasa.gov>**
- **Len Sirota <Len.Sirota@nasa.gov>**
- **Manson Yew, <Manson.Yew-1@nasa.gov>**