NDIA - ICPM
Program Planning & Scheduling Subcommittee (PPSS)

Planning & Scheduling Excellence Guide (PASEG) Overview

Presented by:

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NDIA
Industrial Committee for Program Management (ICPM)

PPSS - Overview

Created by the NDIA Industrial Committee for Program Management (ICPM)

Program Planning & Scheduling Subcommittee (PPSS)

Purpose: Define, develop & implement solutions to improve program planning & execution practices throughout Industry and DoD

- **Initial focus (PASEG) → Gain consistency, predictability & usefulness of program schedules**

Deliverable products:

- **GUIDE: Develop & release joint Industry & DoD schedule management implementation guide (PASEG)**
- **CURRICULUM: Develop joint training curriculum for all levels of Industry & DoD management**
- **CAREER PATH: Develop approach to favorably influence recruiting, training & retention of planning talent**
- **INDUSTRY DAY: Sponsor an Industry Day for DoD consultants & software tool vendors**
- **CULTURE: Develop a joint cultural change management plan to be implemented across Industry & DoD**

Table of Contents

PPSS Members

PPSS Management Team

-Lil Vayhinger (Co-Chair), VP Raytheon Missile Systems – Program Management Excellence

-Carol Boser, VP Lockheed Martin Program Performance

-Becky Davies (Co-Chair), US Air Force Director – Program Management & Acquisition Excellence

-Dave Burgess, NAVAIR, Director Air 4.2

Industry Members

BAE…Bell Helicopter…Boeing…Lockheed Martin… Northrop Grumman
Pratt & Whitney…Raytheon…Rockwell Collins…Sikorsky

Government Members

Air Force (SAF/AQ)…Army…DAU…DCMA…NAVAIR…NGA…Navy (ASN-RDA)

Table of Contents

Generally Accepted Scheduling Principles (GASP)

- Created as a governance mechanism for PPSS
- 8 tenets for building, maintaining & using schedule
- A valid schedule provides reasonable & credible information based on realistic logic, durations, & dates:
  1. Complete: Schedule captures entire discrete, authorized project effort from start through completion.
  2. Traceable: Schedule logic is horizontally & vertically integrated with cross-references to key documents & tools.
  3. Transparent: Schedule provides visibility to assure it is complete, traceable, has documented assumptions, & provides full disclosure of program status & forecast.
  4. Statused: Schedule has accurate progress through status date.
  5. Predictive: Schedule provides meaningful critical paths & accurate forecasts for remaining work through program completion.
- An effective schedule is useful, helps align time-phased resources, & is built & maintained using a controlled process:
  6. Usable: Schedule is indispensable tool for timely & effective management decisions & actions.
  7. Resourced: Schedule aligns with actual & projected resource availability.
  8. Controlled: Schedule is built, baselined, & maintained using a stable, repeatable, & documented process.

PASEG is based on GASP tenets

Table of Contents

PASEG Overview

Objective: Develop a joint Industry & DoD schedule management implementation guide to standardize key elements of schedule planning, construction & use.

Strengthen planning/scheduling business practices in both government & industry resulting in improved program performance

PASEG...

- **Provides practical approaches for building, using & maintaining an Integrated Master Schedule (IMS)**
- **Identifies knowledge, awareness & processes enabling reasonable consistency & standardized approach to project planning, scheduling and analysis**

Intended users include government & industry…

- **Program Managers & Management Teams**
- **Program Team Members (CAMs, IPTs, Engineers, etc)**
- **Program Planning & Scheduling Professionals**
- **Earned Value Analysts & Business Managers**

Table of Contents

PASEG Development Process

Chapter/Outline created by co-leads, Approved by PPSS

Content drafted & revised by 18 “Author Teams”

- Author Teams made up of…
  - 2 Industry planning/scheduling SMEs
  - 1 Government planning/scheduling SME

Content review by “Content Review Board”

- Content Review Board made up of…
  - 3 Industry planning/scheduling SMEs
  - 4 Government planning/scheduling SMEs

Table of Contents

PASEG Content Review Board

Government

- **Project Lead - Jeff Upton - Scheduling SME, NAVAIR**
- **SME - Donna Holden – DCMA, Earned Value Management Center**
- **SME - Ivan Bembers – Chief, NGA EVM Center of Excellence**
- **SME - Luis Contreras – Principle Consultant, AzTech Int'l (rep. Air Force PM&AE)**

Industry

- **Project Lead - Joshua Anderson - Chief Planning Eng, Raytheon Missile Systems**
- **SME - Mark Burch – Senior Manager, Integrated Scheduling, Boeing**
- **SME - Buck Wilkerson – Professional Staff, Humphreys & Associates (rep. LMC)**

Notes

- **Project leads chair the Content Review Board**
- **Content Review Board responsible for reviewing and approving PASEG content**
- **Items that cannot be resolved by Content Review Board are elevated to PPSS Members**

Table of Contents

PASEG Content – 13 Major Sections

Major Sections

1. Purpose & Scope
2. GASP
3. Leadership, Buy-in, Commitment
4. Schedule Architecture
5. Schedule Modeling Techniques
6. Cost & Schedule Integration
7. External Schedule Integration
8. Horizontal & Vertical Traceability
9. Schedule Maintenance
10. Schedule Analysis
11. Business Rhythm & Submittal
12. Training
13. Program / Contract Phase Considerations

Appendices

Sections broken down into 57 chapters

Included to Address PARCA Action

Table of Contents

PASEG Content – Chapter Template

PASEG Chapter Template (sub-headings)

- Manager's View
- Description
- Example
- Calculations
- Optional Techniques
- Things to Promote
- Things to Avoid
- Related Topics

Each chapter contains these sub-headings (as applicable)

Table of Contents

PASEG Development Process

Development Schedule

- Phase 1 (Jan-Mar 2010) – Planning / Team Development
- Phase 2 (Mar-May 2010) – Initial Outlines
- Phase 3 (May-Oct 2010) – 1st Drafts
- Phase 4 (Oct-Nov 2010) – Final Drafts

Phase 5 (Nov 2010 – Feb 2011) – Review & Integration

Release Schedule

- Release v1.0 – (11/05/10) PPSS Member Review

Release v1.1 – (02/18/11) Leadership Communication Release

Release v1.1 – (03/31/11) Public Release for review as NDIA Working Draft

Table of Contents

PASEG Deployment

- PASEG “working draft” to be released via NDIA ICPM website March 2011
- One year review period for change requests
- All change requests will be dispositioned by PASEG Content Review board
- Accepted changes will be incorporated into subsequent “working draft” releases of PASEG
- Subsequent to 1 year review period, PASEG will be maintained by NDIA & updates will be made as necessary

Table of Contents

PASEG Use

How should you use the PASEG?

Government & Industry program stakeholders →
Use PASEG to assist with *creation, maintenance, analysis, and management* of Integrated Master Schedules.

PASEG was jointly developed to be consistent with the following:

- **IMS-DID-81650**
- **EVMS Implementation Guide (EVMIG)**
- **Contract IMS CDRL**

In support of compliance to ANSI/EIA-748b Standard Guidelines

Table of Contents

NATIONAL DEFENSE INDUSTRIAL ASSOCIATION
STRENGTH THROUGH INDUSTRY & TECHNOLOGY

PARCA EVMS Stakeholders Meeting

IMS Submittal Action

- **Expand ICPM PPSS charter to include…**
  - Delivery mechanisms and formats for IMS
  - IMS consistency with EVMS reporting elements
  - Coordination of IMS reporting with EVMS reporting
- **Address…**
  - Hierarchy, Fields & Frequency
  - Evolution over program lifecycle
  - Synchronization with EV data reporting (CPR)
  - DiD and Format of Submittal

PASEG - Schedule Development, Management, Use & *Submittal*

Backup

Table of Contents

Valid Schedules Meet these 5 Generally Accepted Scheduling Principles

Complete	**Schedules represent all authorized discrete effort for the entire contract, with essential subcontracted or other external work or milestones integrated yet distinguishable from internal work. Level of Effort may be excluded from the IMS.**
Traceable	**Schedules reflect realistic & meaningful network logic that horizontally & vertically integrates the likely sequence for program execution. Schedules are coded to relate tasks or milestones to source or dependent documents, tools, & responsible organizations.**
Transparent	**Schedules provide full disclosure of program status & forecast & include documented ground rules, assumptions, & methods for building & maintaining schedules. Documentation includes steps for analyzing the critical paths, incorporating risks & opportunities, & generating schedule health & performance metrics.**
Statused	**Schedules reflect consistent & regular updates of completed work, interim progress, achievable remaining durations relative to the status date, & accurately maintained logic relationships.**
Predictive	**Schedules accurately forecast the most likely completion dates and impacts to the program baseline plan through valid network logic and achievable task durations from the status date through program completion.**

Table of Contents

Effective Schedules Meet These Additional 3 Principles (Narratives)

Usable	**Schedules produce meaningful metrics for timely and effective communication and tracking and improving performance, mitigating issues and risks, and capturing opportunities. Schedules are robust and functional to help stakeholders manage different levels, groupings, or areas as needed. Schedules are developed and maintained at a size, level, and complexity such that they are timely and enable effective decision-making.**
Resourced	**Resources align with the schedule baseline & forecast to enable stakeholders to view & assess the time-phased labor & other costs required to achieve project baseline & forecast targets. Each program is unique & uses varying techniques to load, baseline, & maintain the time-phased resources at levels that are practical & produce meaningful & accurate projections. When resource-loaded schedules are used they enable flexible updates to resource requirements as conditions change. Whether or not resource-loaded schedules are used, cost & schedule data are integrated for internal & external reporting.**
Controlled	**Schedules are baselined and maintained using a rigorous, stable, repeatable, and documented process. Schedule additions, deletions, and updates conform to this process and result in valid and accurate results for sound schedule configuration control and maintenance.**

Table of Contents

PASEG Content (Sections 1-7)

Section 1 – Purpose & Scope (1 chapter)

Summarizes overall guide content, layout, background, & recommendations for use.

Section 2 – Generally Accepted Scheduling Principles (GASP) (1 chapter)

Introduces GASP tenets, describes its background, & provides recommendations for use.

Section 3 – Leadership, Buy-in, & Commitment (4 chapters)

Covers managing using IMS, IMS as a tool (vice just a report), integration of management tools, & IMS related roles & responsibilities of program personnel.

Section 4 – Schedule Architecture (3 chapters)

Includes IMS architecture (i.e. WBS or IMP), schedule hierarchy (summary master, intermediate, and detailed), & top down vs. bottom up planning.

Section 5 – Schedule Modeling Techniques (12 chapters)

Contains chapters on task naming, duration, relationships, lead/lag, constraints, milestones, summaries/hammocks, LOE, apportioned effort, & working calendars. Gives an overview of schedule calculation algorithm & schedule margin.

Section 6 – Cost & Schedule Integration (3 chapters)

Covers content on resource & non-resource loaded schedules.

Section 7 – External Schedule Integration (3 chapters)

Includes integration of subproject & external schedules in addition to interface handoff milestones & schedule visibility tasks (SVTs)

Table of Contents

PASEG Content (Sections 8-13)

Section 8 – Horizontal and Vertical Traceability (3 chapters)

Contains content on horizontal & vertical traceability & includes a related chapter on task coding.

Section 9 – Schedule Maintenance (6 chapters)

Includes status to "timenow", forecasting, schedule acceleration techniques, estimates at complete, baseline change maintenance, & rolling wave planning.

Section 10 – Schedule Analysis (12 chapters)

Contains content on critical/driving path analysis, schedule health, incorporation of risk & opportunities, schedule risk assessments, CPLI, SPI, BEI, Current Execution Index (CEI), Duration vs Scope Based percent complete, & schedule rate charts.

Section 11 – Business Rhythm & Submittal (5 chapters)

Includes IMS supplemental guidance, desktop procedures, submittal of IMS data, business rhythm, & program schedule reviews.

Section 12 – Training (2 chapters)

Covers IMS related training for program leaders & planning/scheduling professionals

Section 13 – Program/Contract Phase Considerations (2 chapters)

Describes scheduling in a production environment & different program/contract types

Appendix A – Terms & Definitions
Appendix B – References
Appendix C – GASP to PASEG Roadmap
Appendix D – Credits & Acknowledgements

Table of Contents

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Table of Contents