

# Technical Management Using a SEMP

## Effective Guidance of Large-Scale Engineering Efforts

**April 8-10, 2008**  
Beltsville, Maryland  
\$1390 (8:30am - 4:30pm)

**DOD now requires a  
Systems Engineering Plan  
(SEP) on every major project.  
This course will tell you how!**

*Without a documented, well-considered, articulated plan, a system development effort can easily founder on the complexity of the many technical issues. The plan provides the means to put each issue in context and ensure that each gets the attention it deserves. Roles and responsibilities must be clearly defined and widely understood, and this applies just as much within a project as at higher levels*

### Summary

This three day workshop introduces participants to the planning, development and execution of technical efforts using a Systems Engineering Management Plan (SEMP). The course is designed for program managers, project managers, systems engineers, technical team leaders, logistic support leaders, and others who lead today's complex system development.

### Instructors

**Eric Honour**, international consultant and lecturer, has a 37-year career of complex systems development & operation. Founder and former President of INCOSE. He has led the development of 18 major systems, including the Air Combat Maneuvering Instrumentation systems and the Battle Group Passive Horizon Extension System. BSSE (Systems Engineering), US Naval Academy, MSEE, Naval Postgraduate School, and PhD candidate, University of South Australia.



### What You Will Learn

- Concepts of technical management and planning.
- How to create a technical plan.
- How to execute to the technical plan.
- Coordinating efforts of many people.
- Effective formats for the SEMP.
- How to gain buy-in and approval.

### Course Outline

- 1. Technical Plan Development.** Essentials of planning for technical work.
  - Technical Planning Concepts. Introduction to the SEMP document and to key issues: technical management, planning successful technical work.
  - Patterns for Planning. Patterns as a tool to creativity. Choosing and applying particular management processes.
  - Defining Technical Work. How to identify the work to be done: gather information., define technical work, schedule, organize and cost the work.
  - Types of Technical Work. Types of work that included in a technical plan: technology insertion, requirements definition., technical solution definition., design realization., evaluation, product transition.
  - Tailoring Plans. Concepts of tailoring, sources for planning materials, verification/validation plans, patterns in tailoring.
  - Plan Relationships. Relationships to other plans, responsibility & authority, negotiating stakeholder commitments, work directives.
- 2. Technical Plan Execution.** How to use the plan in technical management during a project. Technical control methods.
  - Technical Management. Introduction to the execution issues. Define technical management by contrasting it to (a) project management and (b) technical design. Collaborative environments and leadership
  - Scope Control. Keeping the technical scope within bounds during a project, across the barriers of space, time, and technical concepts. Stakeholder involvement, SEMP as a contract among stakeholders, focusing management attention, applying expertise, technical contract oversight.
  - Technical Reviews. Using effective reviews as a control process to assess performance against the SEMP.
  - Technical Control Processes. Common technical processes that are used in the execution stage to control technical progress: Requirements Management, Interface Management, Risk Management, Configuration Management, Technical Data Management, Safety and Mission Assurance.
  - Technical Assessment. Developing and maintaining a usable and accurate management view of how the technical part of the project is moving forward. Productivity assessment, technical performance measurement, metrics, leading indicators.
- 2. Planning Documentation.** Writing and using the SEMP document. Good plans and bad plans. Methods to create and approve the SEMP. Cycles of update.