

ABSTRACT AND BIOGRAPHY

Management and Engineering Costs in a Changing Environment

Today's aerospace products are more complex while being developed by teams located across many centers. Our challenge is to optimally organize, direct, and manage these teams, their interactions and dependencies, and their priorities during the program. The complexity of these systems and multiple layers of system architecture make it difficult for internal and external teams to develop and maintain a shared situational awareness of the total product architecture, project schedule, and most significant risks. While information management approaches backed by information technology offer the promise of access to shared knowledge by these teams, evidence has shown that the piling on of detailed information – without sustainable information architecture and matching coordination priorities and practices – can prevent rather than promote the sharing of tacit knowledge and archiving of relevant knowledge across teams.

We show a better approach from our experience in building integrated information architectures and coordination practices that stand the test of years and ongoing shifts in missions, systems, and product architectural versions. In particular, we show how day to day practices of working across dependencies during system development, build and operation should include a forecast of value vs. waste in coordination efforts. With a focus on valuable coordination, these efforts are budgeted, the satisfaction of dependencies monitored, and team efforts to supply knowledge to the information architecture evolves while remaining relevant.

Steve Shinn

Group Supervisor – Operations Management, APL Space Department
John Hopkins University/Applied Physics Laboratory

Steve Shinn is the Group Supervisor for the Space Operations Management group at APL. In this capacity, he manages about 40 individuals whose duties include finance, pricing, project control, cost engineering, earned value management, scheduling, and capital planning.

Prior to his current position at APL, Mr. Shinn worked in industry where he developed integrated cost and schedule control systems for over 30 programs. He also worked in the capacity of Cost Estimating Manager on the multi-billion dollar IRS Modernization Program. Mr. Shinn has held various management positions in pricing, cost management, estimating, software management, negotiating, EVMS, and scheduling. He has led large organizations responsible for planning, managing and controlling complex systems development, system integration and infrastructure engineering programs. He has conducted workshops on topics such as cost estimating, pricing strategy, variance analysis, IBR/System Review, baseline development, performance-based management, and cost modeling. He has an extensive background in contracting, major proposal preparations, cost estimating, program management, and customer system reviews.