Industry Executive Panel

How can systems engineering help improve program development and execution in times of tight budgets

17th Annual
Systems Engineering Conference

Sponsored by
NDIA Systems Engineering Division

In Conjunction With
Deputy Assistant Secretary of Defense, Systems Engineering
I'll have a Café-Mocha-Vodka-Valium-Latte to go, please.
Systems Engineering is not a silver bullet!

It is not the definitive answer to guaranteeing program success

Many other factors affect program performance, such as:
- Inadequate funding, especially program start
- Inadequate schedule
- Inadequate staffing
- 20-lbs of requirements in a 5-lb package
- (or $1Bn of requirements in a $550M bomber)

BUT systems engineering is an integrating discipline that CAN help assure program success
Systems Engineering is not a formula-driven engineering discipline

It is as much of a philosophy of engineering design as anything

“big picture” engineering
“critical thinking”

Tools are important to the systems engineer

New tools are headed our way
i.e. model-based engineering
(e.g. the “CREATE” tool suite of physics-based models from HPCMP)
BUT without competent and effective systems engineering, especially at the start of a program, including during development planning, the chances of program failure are very high.

Front-end systems engineering is absolutely essential to make sure we:

- Rationalize requirements
- Understand the intended use and environment
- Make sure the requirements lead us to a practical and feasible system

Build the RIGHT thing, and Build the thing RIGHT!
Truisms

There is no greater need among mankind than to edit the written word of another
Truisms

There is no greater need urgency among program managers software engineers software developers than to start initialize begin coding writing code on Day 1 at program start as soon as the contract is awarded.
LIFE OF PIE
The Panel

• Mr. Pat Seamon, Harris Corp, Vice-President, Engineering & Operations
• Dr. John Zolper, Raytheon Company, Vice-President, Research and Innovation
• Mr. Mark C. Anderson, Boeing Company, Director, National Security Programs
• Mr. Keoki Jackson, Lockheed Martin, Corporate Vice-President for Program Excellence
• Mr. Frank Serna, CS Draper Laboratories, Director, Systems Engineering

• Moderator: Bob Rassa, Director, Engineering Programs, Raytheon Space & Airborne Systems, and Chair Emeritus, NDIA Systems Engineering Division