



# Industry Executive Panel

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

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## 16<sup>th</sup> 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

**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 at the start of the program**
- **Inadequate schedule**
- **Inadequate staffing**
- **20-lbs of requirements for desired performance in a 5-lb package**

# Keep in mind---

**Systems Engineering is not a formula-driven engineering discipline**

**It is as much of a philosophy of engineering design as anything  
“big picture” engineering**

**Tools are important to the systems engineer**

**New tools are headed our way  
model-based engineering  
(e.g. the “CREATE” tool suite of physics-based models from HPCMP)**

# Systems Engineering

**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

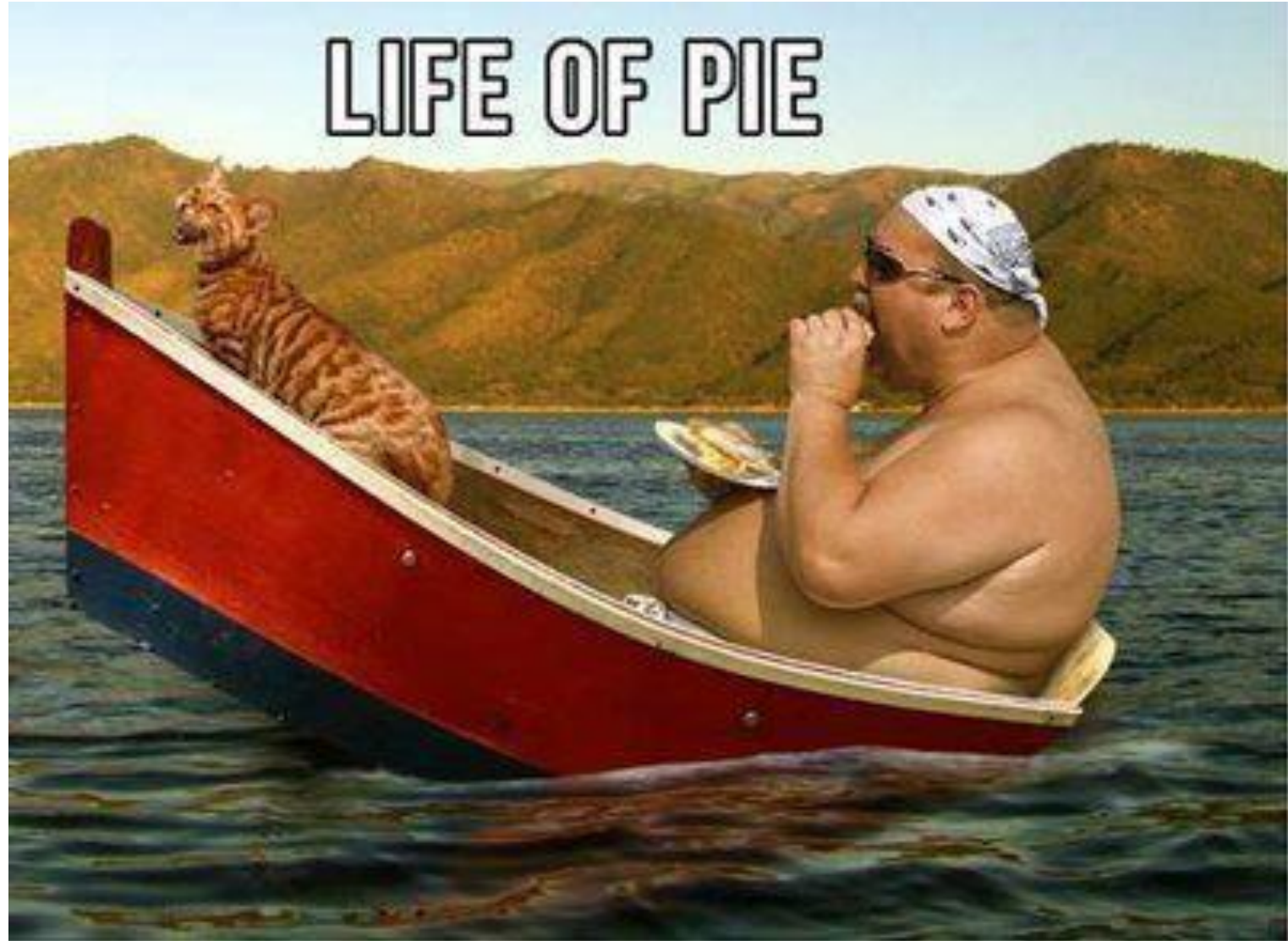
**There is no greater need among mankind than to edit the written word of another**

# 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. Jeff Wilcox, Vice President, Engineering, Lockheed Martin Company**
- **Mr. Paul Bailey, Chief Systems Engineer, Raytheon Company**
- **Dr. Mike Papay, Vice President, Information Security and Cyber Initiatives, Northrop Grumman**
- **Mr. Craig Miller, Vice President, Systems Engineering, Harris Corporation**
- ***Moderator: Bob Rassa, Director, Engineering Programs, Raytheon Space & Airborne Systems, and Chair Emeritus, NDIA Systems Engineering Division***