

# Disclaimer

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# Outline

- Introduction
- What IS Program Protection?
- Why Have Program Protection?
- What is Program Protection Planning?
- So What?
- Conclusion



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# Introduction

- We live in a very non-secure world today
  - July 2013 INCOSE Insight was dedicated to System Security
  - Countless accounts of damaging, counterfeiting, hacking, etc., of things and information



# A Few Examples

- Vice-President Dick Chaney's pacemaker
- Target department store chain identity theft
- U. S F-35 fighter sensitive data
- Possible identify theft via computers implementing U. S. Government's Affordable Care Act
- 2003 widespread power outage in northeastern U. S.



# Doing it Right

- Zenith Electronics Corporation had it right!



- Translating to security: Let's plan security measures the right way, up front, BEFORE we do all the cool stuff!



# Program Protection, aka...

- System security
- System protection
- Program security
- Bottom line – all similar terms, all with the same end state in mind



# For Systems Engineers?

- INCOSE function area (Risk and Opportunity Management)
  - Program Protection Planning is managing risk



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# An Obligatory Definition

- DAU's DAG, Chapter 4, defines Program Protection as:

*“...the integrating process for mitigating and managing risks to advanced technology and mission-critical system functionality from foreign collection, design vulnerability, or supply chain exploitation/insertion, battlefield loss, and unauthorized or inadvertent disclosure throughout the acquisition lifecycle.”*
- Key to this, for systems engineers, is “integrating”!



# Anti-Definitions

- Program Protection is not just:
  - Cybersecurity
  - Anti-Tamper
  - Supply chain protection
  - System security engineering
  - Anti-terrorism / force protection
  - Operations security



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# U. S. Government Interest Items

Theft of F-35 design data is  
helping U.S. adversaries:

Pentagon

- Cyber Threat

VA laptop goes missing

- Was PII compromised?

C-130J Contractor Identifies Counterfeit Parts  
in Display Units

- Tipped Off by Increased Number of Circuit Board Failures

U.S. Lawmakers Say NASA May Have  
Given DOD Secrets To China

- Sensitive information presented at public venues

U.S. Watchdog Warns That FAA  
Pilot, Aircraft Information Is At Risk

- Potential to hack registry databases



# Espionage and Sabotage

- Program Protection is all about keeping the “good stuff” in and the “bad stuff” out!
  - Critical Program Information – determining the “good stuff” and figuring out how to protect it
  - Critical Components – determining what are the most important components and figuring out how to prevent “bad stuff” from getting in



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# Current DoD Thinking

- Program Protection Planning includes:
  - Cybersecurity
  - Anti-Tamper
  - Supply chain protection
  - System security engineering
  - Anti-terrorism / force protection
  - Operations security



# Current DoD Thinking

- Program Protection Planning includes:
  - Communications security
  - Physical security
  - Personnel security
  - Industrial security
  - Transportation security



# Current DoD Thinking

- Program Protection Planning:
  - Integrates
  - Balances
  - Defines



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# So What Does This Mean to Me?

- I don't work in military-related industries.  
I work in:
  - Energy
  - Health
  - Transportation
  - Finance
  - Environmental Management



# What's Going On Out There?

- There's not a lot out there (without extensive research)
  - Is this due to lack of activity?
  - Is this due to existing security measures?



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# Take-aways

- Systems engineers – get out there and embrace Program Protection!
  - Help define requirements
  - Facilitate trade studies
  - Engage in system decomposition
  - Engage in integration and test



# Back to Basics

- Sometimes we need to go back to Step 1



# Thank You!

Thanks for your attention and participation

