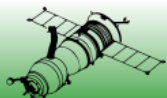


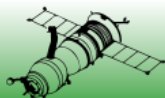
Disclaimer

This presentation comprises the thoughts of the presenter and does not reflect positively or negatively on the presenter's employer, clients, or professional affiliations.



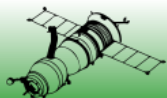
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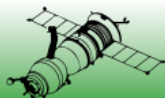
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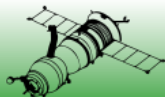
Introduction

- 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.

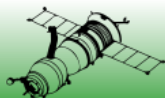


Doing it Right

- Zenith Electronics Corporation had it right!



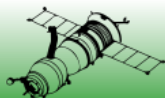
- Translating to security: Let's plan security measures the right way, up front, **BEFORE** we do all the cool stuff!



Program Protection, aka...

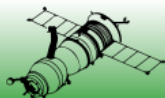
- System security
- System protection
- Program security

- Bottom line – all similar terms, all with the same end state in mind



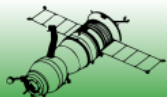
For Systems Engineers?

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



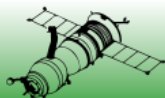
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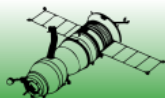
An Obligatory Definition

- 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"!



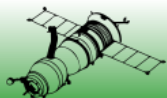
Anti-Definitions

- 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

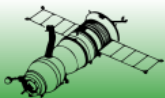
Theft of F-35 design data is helping U.S. adversaries:
Pentagon
– Cyber Threat

U.S. Lawmakers Say NASA May Have Given DOD Secrets To China
– Sensitive information presented at public venues

VA laptop goes missing
– Was PII compromised?

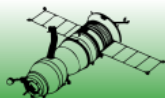
U.S. Watchdog Warns That FAA Pilot, Aircraft Information Is At Risk
– Potential to hack registry databases

C-130J Contractor Identifies Counterfeit Parts in Display Units
– Tipped Off by Increased Number of Circuit Board Failures



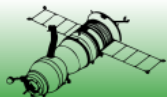
Espionage and Sabotage

- 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



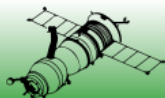
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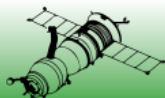
Current DoD Thinking

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



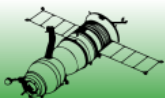
Current DoD Thinking

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



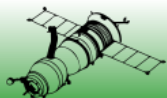
Current DoD Thinking

- Program Protection Planning:
 - Integrates
 - Balances
 - Defines



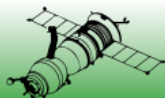
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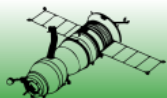
So What Does This Mean to Me?

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



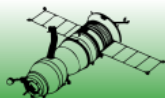
What's Going On Out There?

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



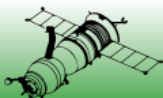
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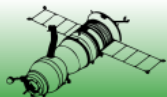
Take-aways

- 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

