Working Group Outbrief

# **Ground System Architectures Workshop**

#### S C C

Session 11C

Creating Smarter Ground Systems through Cybersecurity Prototyping, Testing, and On-Orbit Experiments

Scott Niebuhr, The Aerospace Corporation Michelle Yohannes, The Aerospace Corporation

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#### Session 11C Session Goals

- The Cybersecurity Working Group will offer presentations on tools and lessons learned, a commercial space perspective, a crowd sourced panel discussion, and a law enforcement brief.
- Discussion will include participants from the civil, commercial, defense and intelligence communities.
- The goal is to bring together cybersecurity experts to discuss real challenges, share contacts, resources, and/or tools.



#### Session 11C

### **Presenters/Panelists**

**Chuck Allen** Director Cyber Operations and Resilience, The Aerospace Corporation

Jonathon Doubleday Technical Staff, The Aerospace Corporation

**Zoltan Horvath** Director of Technology and Government Programs, Maxar Technologies

**Nicholas Cohen** Senior Engineering Specialist, The Aerospace Corporation

**Dr. Mohammad Mozumdar** Engineering Specialist, The Aerospace Corporation Caitlin Gremminger Special Agent, FBI Los Angeles

Brandon Baily Chief Technology Officer, TMC Technologies

Virginia Cevasco Program Manager, Booz Allen Hamilton

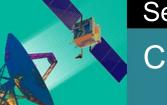
**Ryan Speelman** Director Cybersecurity Subdivision, The Aerospace Corporation

Marke Beasley Director Collateral Information Systems, The Aerospace Corporation

### Session 11C Key Points

- Tools & Resources
  - National Cyber Range
  - Cyber Qualification Framework (CQF)
  - Eirene Sceptre
  - Machine Learning Based Anomaly Detection for 1553 Bus
- Practical Cybersecurity Recommendations

What topic would you like the panel to address? formal automating actions 5 method attack break range 5 system realmfirmware 5 read h/w authentication a content of the system realmfirmware 5 system realmfirmware 5 read b/w authentication a content of the system of the syste sood h/w realm www exercises stop good h/w authoritation authentication ops `≂picture 2 what's .what's **)**sr abest **š**least en musing Sedefault Seconfigs Oprotect Sedefault Seconfigs Oprotect Classifie Center Way they're E eally a classified safe lead security/other defense sourcing centers hacking machineidea devsecops compliance



#### Session 11C Conclusions

- Defense in Depth is **STILL** the answer gemma123
  - Patch, except when you can't
  - Good Cyber Hygiene
- **STILL** a need for cyber training, specifically space cross-trained cyber people
  - Cyber Ranges can help with this too!
  - Hack-a-Sat, coming soon?
- Many good tools & resources available including help for legacy systems
- Strategies to speed up compliance & ATO
- Cloud is an option