Ground System Architectures Workshop

Session 15
“Imagining the Future”

Plenary Session Summary

Samuel Cantrell, Judy Kerner
The Aerospace Corporation
“Thinking Fast and Slow”

- GSAW is an opportunity to think slowly
- Not “Making do with less”, but “Making do with existing”
  - Don’t want new for $250M but adapt existing for $25M
  - Need to spend as much time on the connectors as the capabilities
- Whose stovepipe will pay for the cross program solution?
- Accept risks, expect failures, ensure recovery
- Preplan shedding of requirements (capabilities) throughout lifecycle
- “Space is not a normal IT problem”
- “If you want innovation, you have to give people freedom”
- Standards, COTS & Open Source used to be NO WAY, but now are OF COURSE
• Remember “Faster, Better, cheaper: pick two?”

• How about pick Four!
Cyber Security

• Cyber attacks no longer focused exclusively on spectacular targets.
• How can you reduce your attack surface?
  “Every dollar spent on security is one less spent on functionality”
• “Is compliance the best way to meet security?”
• Open source is safe because it’s Open …Right?
  – Reviewing source code is not the “fun” part of using open source
  – Plan for vulnerabilities
“Most of the smartest people work for someone else”

The hardest part of the problem is defining the problem

Every challenge can be a contest: testing, integration, security etc.

“Need to select the right kind of nerds”
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Solutions...

- Automation - “The best summer intern ever!”
  - Mitigates costs of human operators and human error
- Hosted Payloads
  - Schedule, Costs, Resiliency & Disaggregation
- CubeSats “I love them maybe you should too!”
  - Platform for testing new operational concepts
  - Education: “You want to reinvent the wheel”
- Clouds and Virtualization
  - New vs. Legacy
- Commercial Practices?
  - Small number of good people
  - Streamlined requirements
  - Minimal reporting
“What’s past is prologue…“
What’s Next?

Come See How it all Turns out!
Come to GSAW 2015!!!
March 2-5, 2015