

Ground System Architectures Workshop

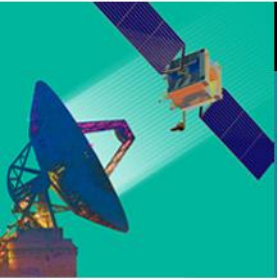


Session 15

“Imagining the Future”

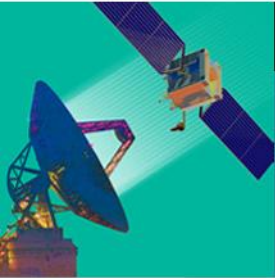
Plenary Session Summary

Samuel Cantrell, Judy Kerner
The Aerospace Corporation



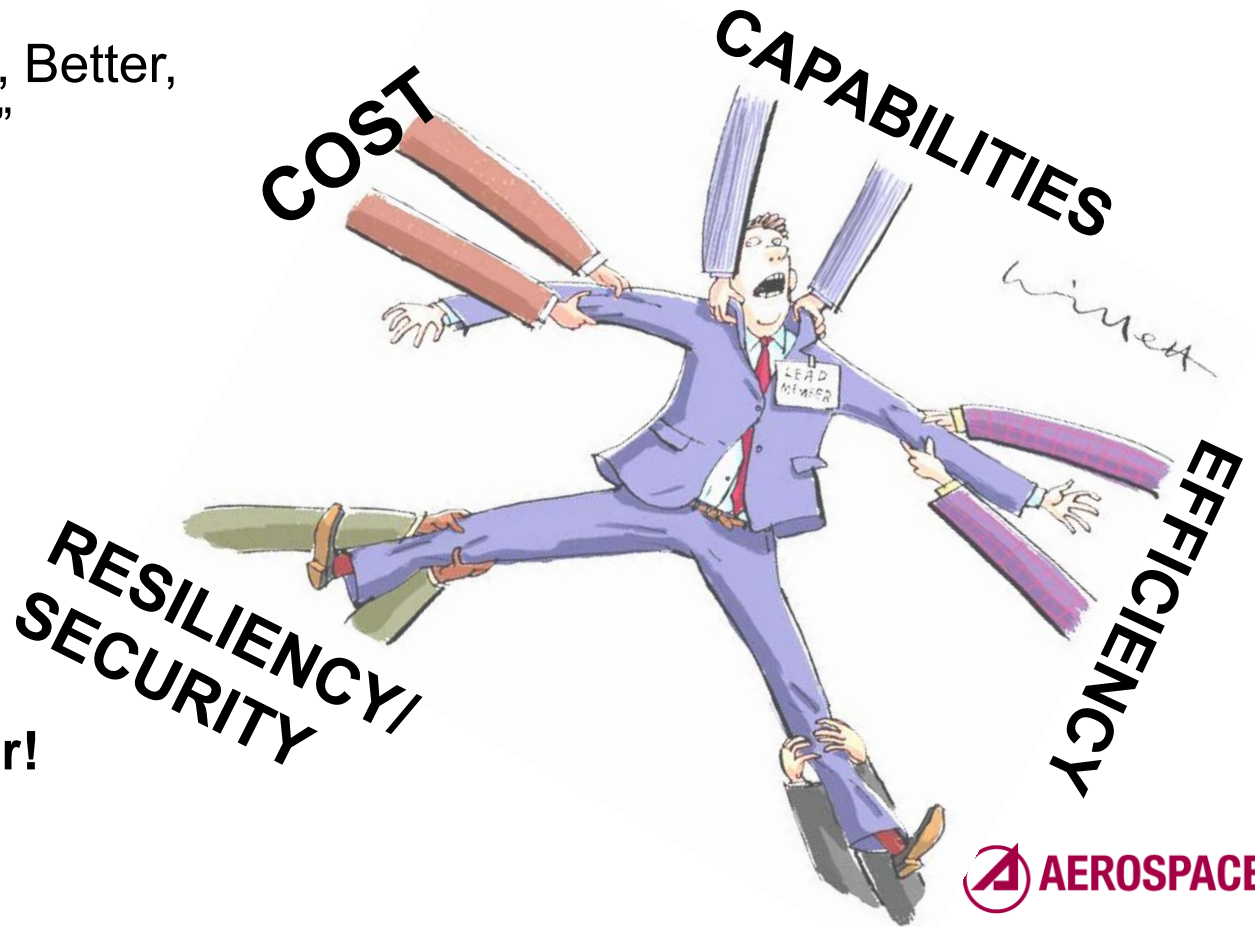
“Thinking Fast and Slow”

- 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*

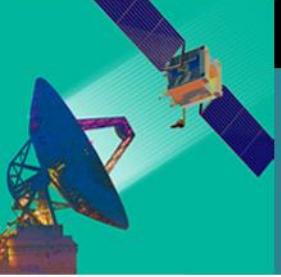


Balancing Competing Forces

- Remember “Faster, Better, cheaper: pick two?”

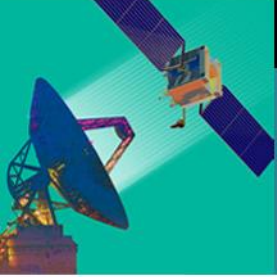


- How about pick Four!



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



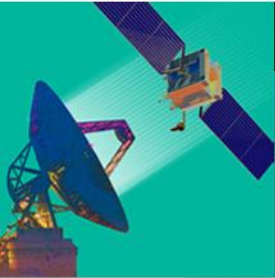
Crowdsourcing the Future?

“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”



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