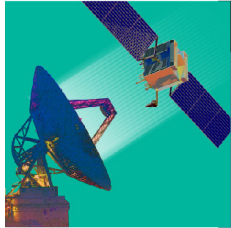


# Working Group Outbrief



## Ground System Architectures Workshop



Session 11A

### *The Making of “Smarter Ground Systems” - Brainstorming*

Donald Sather, The Aerospace Corporation

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Session 11A

## *Session Goals*

- Identify elements of a smarter ground station
- What does it take to build and sustain those elements especially over the long term in a world of constant change?
  - *Can one future-proof a ground station?*



Session 11A

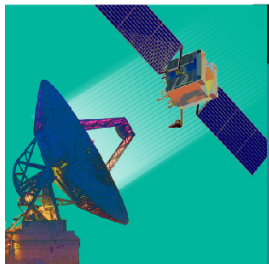
## *Presenters/Panelists*

- Dan Smith – NASA
- Dan Crouch – SMC/AD (MMSOC)
- Katherine Monson – KSAT
- Shayn Hawthorne – AWS Regional Services

*Thank you!*



## Key Points



- It is now possible to buy/lease (versus own) significant portions of the ground station as a service
  - *Trades need to be made according to mission/enterprise need*
  - *Cost for system stack refresh (lower levels) included in SLA price*
  - *Commercial vendors have economies of scale that the government does not*
- Mission “requirements/capabilities” need to be scrubbed for what is really needed vs wanted
  - *Many times commanders in the field and others are specifying how to build the system as opposed to what effect they really need*
    - Forces a custom solution when COTS could really meet need
- Regulatory processes have not caught up with the proliferation of space especially MEO/LEO



## *Key Points*

- Having more “flyoffs” between vendors would help deliver better product by forcing competition
- Processes need to be scrubbed to bring them in line with “time of need”
  - *Difficult when you don’t own the processes and many are cultural*
- The use of standards is key in an enterprise
- Leadership required to address issues



## Conclusions

- Architects now have options to lease/buy services as opposed to owning them
  - *Leasing can be public or private depending on what is being bought*
  - *Commercial vendors can usually offer more flexibility and performance at a lower price due to economies of scale*
- Leasing doesn't "future-proof" a system – somebody needs to refresh
  - *For lease, the effort and cost is transferred to the provider and their architecture is designed for constant upgrade with minimal/no impact to user operations*
  - *"Future resistant" architectures that do the same can be built and owned*
- Requirements specification/vetting and acquisition processes need work sooner rather than later
- Having more "flyoffs" between vendors would help deliver better product by forcing competition
- Leadership support required to form more efficient organizations, processes & culture change