

— *Working Group Outbrief* —

# Ground Systems Standardization and Commonality: Continuing the Dialogue

*Session 10B*

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Ground System Architectures Workshop



# Session Goals

- Share experience with standards and commonality in ground systems
- Identify lessons learned from real world projects
- Discuss innovative approaches to increasing standardization
- Recommend ways to do things better

# Presenters/Panelists

- Jonathan Gal-Edd, NASA Goddard Space Flight Center
- Mike Hogan, The Aerospace Corporation
- Mario Merri, European Space Agency
- Deane Sibol, The Johns Hopkins University / Applied Physics Laboratory
- Joe Wysocki, The Scitor Corporation

# Key Points - 1

- **Standards and commonality are not the same thing**
  - Different types of standards
  - Can be standards compliant with no commonality
- **Leadership is critical to being able to implement standards and commonality**
  - Advocate needs to be supported and empowered
  - Culture is biggest barrier and can only be changed if supported from the top
  - Mandates are often needed
  - Accountability to be sure mandates are followed

## Key Points - 2

- **Education and knowledge capture are key area to address**
  - Implementations are often shared via word of mouth
  - Users group / formalized lessons learned would help capture user perspective on CCSDS (and other standards), as well as providing feedback to standards organizations
- **Need to be more specific about what standards should be used**
  - Specify versions and / or past implementations, e.g. CFDP vs. CCSDS
  - Providing software libraries, not just books, may be a solution but need to pay attention to licensing issues

# What Wasn't Discussed

## ■ Testing

- How to minimize time, effort associated with regression testing of common ground systems

## ■ Information assurance

## ■ Metrics

- Touched on question of whether everything boils down to cost

# Conclusions

- Projects are using standards and developing common ground software despite obstacles
- Bridging gaps between standards developers and users would help both sides
- Culture change requires leadership, discipline and accountability