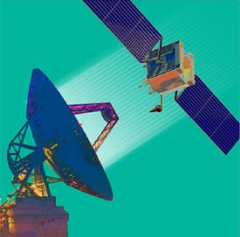**25th Ground System Architectures Workshop**
Adapting Critical Operations
Starts March 1, 2021 | Special Online Series of Events

Space Enterprise Integration to advance U.S. Leadership in Space: Strategic Framework and High-Profile Use Cases

Leads:
Mark Silverman and Ron Birk,
The Aerospace Corporation

**March 11, 2021**

OTR202100615

Session Goals

Identify Challenges and Best Practices for Enterprise Integration

- Address challenges, best practices, and opportunities associated with enterprise integration for high profile use cases for space and ground systems to advance national leadership in an era of Great Power Competition

- Examine 4 high profile use cases:
  - *Space Operational Architecture*
  - *Artemis Program for Moon to Mars Exploration*
  - *Space Based Environmental Monitoring (SBEM)*
  - *Establishing the National Defense Space Architecture*

- Segment to hear from experts and community engagement:
  - *Part 1 provided opportunity to hear from representatives of key agencies describing their critical national mission use cases advancing U.S. Leadership in space.*
  - *Part 2 town hall meeting community dialog with experts from National Oceanic and Atmospheric Administration (NOAA), Space Development Agency (SDA), National Aeronautics and Space Administration (NASA), U.S. Space Force (USSF)*

- Distinguished panel members addressed enterprise integration needs and benefits and exchanged information with the 70+ attendees

Working Group H
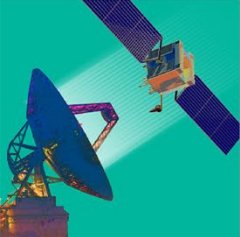
Presenters/Panelists

Ron Birk and Mark Silverman facilitated GSAW work group H session on Thursday, March 11th at 12:30pm-3:30pm PT // 3:30pm-6:30pm ET.

Working group addressed challenges, best practices and opportunities associated with Space Enterprise Integration for high profile use cases

- Space Operational Architecture
- Artemis Program for Moon to Mars Exploration
- Establishing the National Defense Space Architecture
- Space Based Environmental Monitoring (SBEM)

U.S. government agency panelists address high profile use cases:

Col. Brian Denaro	USSF // Space Development
Mike Hess	NASA // Commercial Crew and International Space Station
Col. Kalliroi Landry	SDA // National Defense Space Architecture
Vanessa Griffin	NOAA // Space-based Environmental Monitoring

The workshop will include a town hall.

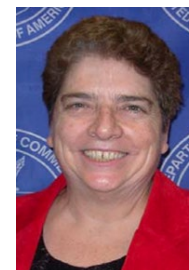Information @ link : Working Groups – Ground System Architectures Workshop (gsaw.org)
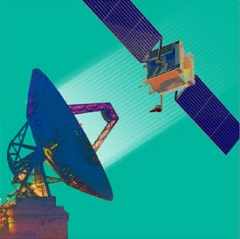

Col. Brian Denaro

Mike Hess

Col. Kalliroi Landry

Vanessa Griffin

Working Group H

Key Points

Driving Enterprise Integration for National Benefits

- **National Space Missions** – require current, accurate, timely data continuously flowing between multiple systems to operate effectively and deliver national benefits

- **ASOT** – Authoritative Source of Truth (ASOT) is essential to trust veracity of data and information to make decisions to protect life and property

- **Digital Engineering** – recognized for ability to maintain access to ASOT for systems throughout life cycle from architecture to acquisition to development to deployment and integration

- **Rapid Development, Deployment and Evolution** – step-wise build through frequent, efficient assimilation of hardware refreshes and software upgrades into overall ecosystem

- **Commercial** – enables broader array of innovative capabilities and need for flexibility in space architectures to accommodate interoperability with commercial solutions

- **Standards –** essential for enabling development of multiple commercial sources of systems and services interoperable in operational configurations

- **Culture** – enabling people and organizations to evolve from legacy of siloed, stand-alone space systems to integrated ecosystems benefits from cultural evolution to team of teams
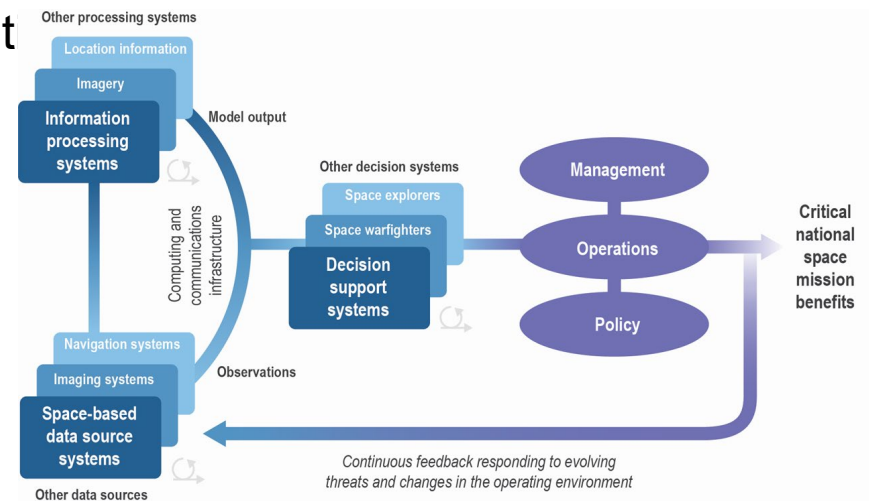
Working Group H
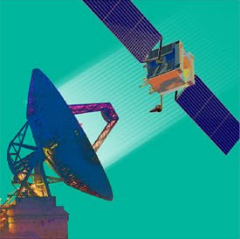
- **Participating Organizations –** U.S. Govt, FFRDC, UARC, industry, international, academia representing owners and operators of systems across the enterprise share equities in common national goals

- **Community Dialog** – mutually agreed upon protocols, processes, and tools enables efficient integration

- **Common Lexicon** – enabling common understanding and avoiding ambiguity

- **Culture** – establishing a team of teams mentality across the enterprise

- **Government** – establishing common nat[...] with diverse equities

- **Industrial Base** – contributing to and following common digital engineering processes and consensus standards enables interoperable solutions

Working Group H