



# Lunar Interoperability Forum

**7 May 2024**

**The Indian Treaty Room  
East Wing of the Eisenhower Executive Office Building  
White House, Washington DC**

**Bringing together members of the lunar exploration community to discuss drivers, opportunities, and means to foster development of secure interoperable communications and navigation systems.**

# Overall Agenda

- **8:00 AM**      **Check in**
- **8:15**        **Welcome by Forum Chair: Sami Asmar**
- **8:20**        **Remarks from White House, Dept. of Commerce, and NASA officials**
- **8:45**        **Keynote talks by Vint Cerf**
- **9:15**        **Panel 1: Space Agencies & IOAG**
- **10:15**      **Break**
- **10:30**      **Panel 2: CCSDS Engineering Steering Group**
- **12:00 PM**    **Lunch**
- **12:45**      **Panel 3: Industry & Academia**
- **2:30**        **Discussions & Concluding Remarks**
- **3:00**        **Exit building**

# Panel 1: Space Agencies & Organizations

Chair: S. W. Asmar

- IOAG (9:15 AM)
  - **Jim Schier**: “Cislunar Infrastructure: The Convergence of Architecture, Governance, and Interoperability”
- JAXA (9:30)
  - **Masaya Murata**: “Japan Lunar Navigation Satellite System and Its Contribution Towards Lunar Augmented Navigation Service”
- ESA (9:45)
  - **Javier Ventura-Traveset**: “Moonlight, LCNS, and Lunar Pathfinder: European contribution to lunar Communication and Navigation Services”
- CNES (10:00)
  - **Jean-Luc Issler**: “CCSDS frequency band recommendations related to lunar in-situ 3GPP 5G, WIFI and PNT”

# Panel 2: Areas of the CCSDS Engineering Steering Group

Chair: K.-J. Schulz

- System Engineering Area, **Peter Shames (10:30 AM)**
- Space Link Services, **Ignacio Aguilar Sánchez (10:45)**
- Space Internetworking Services Area, **Ivica “Vinny” Ristovski (11:00)**
- Cross Support Services Area, **Erik Barkley (11:15)**
- Mission Operations and Information Management Services Area, **Daniel Fischer (11:30)**
- Spacecraft Onboard Interface Services Area, **Jonathan Wilmot (11:45)**

# Panel 3: Industry & Academia

Chair: Masaya Murata

12:45 – 2:30 PM, ~10 minutes each

- **Thomas Marshall Eubanks (Space Initiatives Inc.): The new lunar position, navigation and timing reference system**
- **Alberto Montilla (Spatiam Corp.): Building DTN capabilities in LunaNet Service Provider Networks**
- **Ramy Kozman (Surrey Satellite Technology LTD): Interoperability Considerations for SSTL's Lunar Pathfinder**
- **Massimo Capozzi & Riccardo Petix (Telespazio): Moonlight LCNS European Industries Roadmap for Communication and Navigation Services**
- **Andrea Domenico Mourglia (Thales Alenia Spazio, Italy): Multi-Purpose Habitation (MPH): Enabling Lunar Exploration and LunaNet Services**
- **Farzana Khatri (MIT Lincoln Lab): Lunar Optical Communications**
- **Peter Shames (Jet Propulsion Laboratory, California Institute of Technology): Challenges for Secure Interoperability at the Moon**
- **Edward J. Birrane (Johns Hopkins Applied Physics Laboratory): Security and Management of DTNs in the Cis-Lunar Environment**
- **Jon Hamkins (Jet Propulsion Laboratory, California Institute of Technology): Technology considerations for PNT at the Moon**