Findings and Recommendations from recent Space Safety Technical Webinars co-organized by the IAASS & The Aerospace Corp.

Dr. Mark A. Skinner and Mr. Tommaso Sgobba
International Association for the Advancement of Space Safety
The Aerospace Corp.
19 April 2021
Advancing Space Safety awareness during a pandemic

- Lacking in-person conferences, seminars, symposia
  - Needed some way to further the conversation during the pandemic
  - Experiment with new venues (virtual)

- Aerospace and IAASS joined to produce two virtual events
  - *Current Topics in Space Traffic Management*
    - Half-day event,
    - September 2, 2020
    - 14 speakers
    - Sold out show (>500 participants)
  - *CubeSat Confusion ‘Industry Day’*
    - Two-day event,
    - 13-14 January 2021
    - 33 speakers
Webinar Goals & Objectives:

• During this time of COVID lock-down, work from home, and lack of usual meetings and conferences, find a way for an international group of participants to present their current thinking and experience with STM to an on-line audience
STM Webinar, speakers & titles

- Dr. Regina Peldszus *Space Surveillance & Tracking: A European Perspective*
- Mr. Christophe Bonnal *STM at IAF*
- Dr. Ruth Stilwell *There are no Good Actors without Good Rules*
- Dr. Francesca Letizia *Space Traffic Management through Environment Capacity*
- Mr. Ted J. Muelhaupt *The Special Challenges of PLEOs*
- Mr. Marlon E. Sorge *What is Large? Issues with Defining Good Practices for Everyone*
- Prof. Moriba Jah *Multi-factor Anthropogenic Space Object Recognition, Characterization, and Assessment (MASORCA)*
STM Webinar, speakers & titles, cont.

• Dr. Darren McKnight *STM – But Do Not Forget the Highways*
• Dr. Diane Howard *OADR Development*
• Dr. T.S. Kelso *STM Data Implications for New Space*
• Dr. Islam Hussein *Assuring Trust in Autonomy for Advanced STM*
• Dr. David Murakami *Creating an Ecosystem of Federated Services for Space Traffic Management – Near Term Development and Long Term Vision*
• Dr. Josef S. Koller *Organizational Options for Promoting Space Flight Safety*
• Dr. Peter Martinez *The UN COPUOS Space Sustainability Guidelines*
• Hosted by: Dr. Mark A. Skinner
STM Webinar recorded presentations:

• The 14 presentations are available for viewing on this YouTube site:

  https://www.youtube.com/playlist?list=PLFEXcXJhNDQ74-EiBz80MAKA3Zzv8qODP

Or search for “Aerospace STM Webinar Videos”
CubeSat Confusion Industry Day

• Brought together relevant stakeholders:
  • CubeSat & nanosat owner/operators
  • US government + International regulators
  • Space situational awareness data providers
  • Launch consolidators
  • ID and tracking technology developers
• Hosted by Dr. Mark A. Skinner & Dr. Andrew Abraham
The problem we were trying to address:

Trackability & identification

CubeSat Confusion Industry Day participants

- US Gov’t: FAA AST, DOC OSC, FCC, NASA CARA, NASA ARC, 18th SPCS, DARPA, NSDC, US Navy NAVWAR
- Int’l: NZ MBIE, UN OOSA, UK Space, ESA, CNES
- Academia: Univ. of Tokyo, CalPoly SLO, Univ. of Michigan
- Industry: ComSpOC, AXA XL, SpaceFlight Industries, LeoLabs, SpaceDA, Innoflight, Vulcan Wireless, Stellar Exploration, NearSpace Launch
- Non-profit/NGO: Secure World Foundation, SatNOGS, SKA, Space Environment Research Centre, SRI, LANL, Aerospace
Findings of the Industry Day

• The problem is real: solutions are important for space safety & sustainability
• Regulators, SSA Centers are concerned
• Owner/operators want to “do the right thing”
• Industry is developing technologies that can help
  • Technologies exist, but are perhaps low TRL or not available as a commercial product/service
• Regulators can signal their “intent”, allowing CubeSat/nanosat community to work with technology providers for multiple, useful solutions
Materials from the Industry Day...

- The recorded videos from the two days:
  - Day 1:
    - [https://www.youtube.com/watch?v=rUmAd9yUrTQ&feature=youtu.be](https://www.youtube.com/watch?v=rUmAd9yUrTQ&feature=youtu.be)
  - Day 2:
    - [https://www.youtube.com/watch?v=Zo98GLc047c&feature=youtu.be](https://www.youtube.com/watch?v=Zo98GLc047c&feature=youtu.be)

- The individual presentations from the two days:
  - [https://www.dropbox.com/sh/wyke423rvh8gpmr/AAD7vWzfgSjmLOcugq4pMwqva?dl=0](https://www.dropbox.com/sh/wyke423rvh8gpmr/AAD7vWzfgSjmLOcugq4pMwqva?dl=0)
For more information...

- Aerospace *Space Policy Show* Industry Day summary:
- Aerospace *Center for Space Policy & Strategy* CubeSat Confusion paper:
Questions? Feedback?

Contact Mark or Tommaso...

Mark.A.Skinner@Aero.org
Tommaso.Sgobba@IAASS.org