NGO Role in Promoting Best Practices for Emerging Space Stakeholders

Side Event on “Supporting Regional Development Efforts Using Space Technology”

Krystal Wilson
Secure World Foundation
Who We Are

• Secure World Foundation is a private operating foundation that promotes cooperative solutions for space sustainability

• Our vision: The secure, sustainable and peaceful uses of outer space contributing to global stability and benefits on Earth

• Our mission: SWF works with governments, industry, international organizations and civil society to develop and promote ideas and actions for international collaboration that achieve the secure, sustainable, and peaceful uses of outer space for the socioeconomic and environmental benefits to Earth
What We Do

• The Foundation acts as a research body, convener and facilitator to examine key space policy topics

  – To promote international cooperative governance for increased space sustainability
  – To increase human and environmental security by promoting improved governance of the delivery of information gathered from space systems in ways that promote its utility
  – To assist in the development of effective national and international space policies and laws both in established and emerging space nations
THE CHANGING NATURE OF SPACE ACTORS

A growing, diversifying, and rapidly innovating community
Space is Becoming More International

Adapted from IDA Global Trends in Civil and Commercial Space Study
Space is Becoming More Diverse

Share of Satellites Launched per Decade, by Operator Type

http://www.planet4589.org/space/log/stats2/own_categ.txt
Opportunities

- Lower costs of access to space technology
- Lower technical and scientific barriers
- Broaden and diversify actors and users
- Enable new and innovative applications and services
- Provide increased societal benefit

Challenges

- Regulatory fit, efficiency, and scale
- Diverse, heterogeneous set of actors
- Few standards for operations
- Spectrum, SSA, and potential space debris implications
BEST PRACTICES & NORMS OF BEHAVIOR

How can governments and the private sector work together to ensure sustainability of the space domain?
What are “Norms”?

- **Sociology**: informal understandings that govern the behavior of members of a society
- **International relations**: Standard of appropriate behavior for actors with a given identity

Historically –
- **Osaka**: stand on right, walk on left
- **Tokyo**: stand on left, walk on right
SWF regularly holds events and workshops discussing issues and best practices in several areas:

- Satellite operator best practices for minimizing collisions
- Space situational awareness (SSA)
- Cubesat launch and deployment best practices
- Cubesat post-mission disposal best practices;
- Principles for safe and responsible active debris removal
- Operations principles for large commercial satellite constellations
- On-orbit servicing
- Applications facilitation
HANDBOOK FOR NEW ACTORS IN SPACE
SWF Handbook for New Actors in Space

- **Goal**: Create a publication that provides an overview of fundamental principles, laws, norms, and best practices for safe, predictable, and responsible activities in space.

- **Two specific audiences**:
  - Countries developing space programs and/or having to oversee and regulate their first satellites.
  - Universities and start-up companies that are developing/operating satellites or applications.
Chapter 1 – International Framework

- Freedom and Responsibility
- Registration of Space Objects
- International Frequency Management
- Remote Sensing
- International Standards
- International Export Control
- International Liability
- Dispute Settlement
- Environmental Issues
- Advanced Issues
- International Organizations

UNOOSA International Registry Form
• Public Policy
  – Rationales, objectives, principles
  – Government roles and responsibilities
• Public Administration and National Oversight
  – National regulators and licensing
  – National frequency administration
  – Export controls
• Case Study: Remote Sensing Policy and Administration
Chapter 3 – Responsible Space Operations

- Pre-launch
  - Licensing
  - Launch vehicle selection and integration
  - Insurance
- Launch
  - Safety considerations
- On-orbit
  - Orbit determination, propagation, and tracking
  - Conjunction assessment and collision avoidance
  - Anomaly response
- End-of-life

Examples of close approach screening volumes
Next Steps

- The Handbook was officially released in February 2017
- Electronic copies are available through the SWF website, free of charge: www.swfound.org/handbook
- Printed copies are also be available at the MEDB booth (A1) at this conference
- SWF is exploring the development of online resources to compliment the text
- Feedback is welcome
Questions?

Thanks.

kwilson@swfound.org