Space Law in a Networked World

Space Law and the Internet: New Space Architectures, Connectivity and Cyber Security

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Joanne Wheeler MBE
Managing Director, Alden Legal
Co-Chair, Satellite Finance Network
Chair, National Space Academy

Over and Above
Space Law and the Internet: New Space Architectures, Connectivity and Cybersecurity

- Tasks of securing outer space and cyber space are converging.
  - Internet increasingly relies on space-enabled communications
  - Satellite operation relies on internet based networks and devices on the internet of things.

- New actors (governments, companies) and technologies are expanding and transforming space activities.

- Are space policies ready for these challenges?
- Do we need cybersecurity recommendations for space activities?
- What are cybersecurity best practices to be adopted by industry?
- How is the concept of cybersecurity evolving?
New space architectures and cyber security risks

• Commercialisation of space – can raise security concerns (incentives to lower costs and innovate quickly at expense of software/hardware security)

• “New space architectures”:
  • in-space transport, space tourism
  • smallsats, networks of linked satellites (providing internet access, communications, data storage, imaging)
  • supporting policy, commercial, agricultural, environmental, societal objectives etc

But - increasing targets for cybercrime
  - how does international law apply to cyberspace (Tallinn Manual)?
  - role of ITU?

• Cyber security not previously been a priority in government and private sector space activities
Space assets as critical national infrastructure and cyber security risks

- Need to understand cyber vulnerabilities that arise in space operations (satellites, transmissions and ground stations)
- UK space industry considering relevant “strap line”, to include: “security” (to include cyber security), “space enabled”, “critical national infrastructure” and “economic growth”
- International, national government and industry engagement is needed
- Need to extend cyber security practices into commercial space sector:
  - Need for cross-sector engagement
  - Importance of information sharing and encryption
- Need for new insurance models - “insurance linked security” (also used in the cyber industry) or “mutualisation” model
- Need for critical infrastructure cybersecurity activities
Thank you

Joanne Wheeler
joanne.wheeler@wearealden.com
joanne.wheeler@satellitefinancenetwork.org