

OPERATING IN A SAFE, SECURE, AND SUSTAINABLE SPACE ENVIRONMENT

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The Pervasive Space

- Increased pervasiveness of space in the global society: →Dependency →Vulnerability
- A cradle for space-based critical infrastructures, necessary for national critical infrastructures, indispensable for billions of lay end-users
- Public and private space actors on the rise
- Active satellites and space debris on the rise too
- Massive LEO constellations to come
- Security of the space system is a complex rising issue

Extending International Law to Outer Space

- Outer Space Treaty - OST (1967)
- Rescue and return of astronauts, return of objects launched in outer space (1968)
- International liability for damage caused by space objects (1972)
- Registration of objects launched in outer space (1976)
- Activities of States on the Moon and other celestial bodies (1984)
- + 5 declarations including direct TV broadcasting (1982), remote sensing (1986), nuclear power sources (1992)
- *And the space debris mitigation guidelines, not legally binding (2007)*

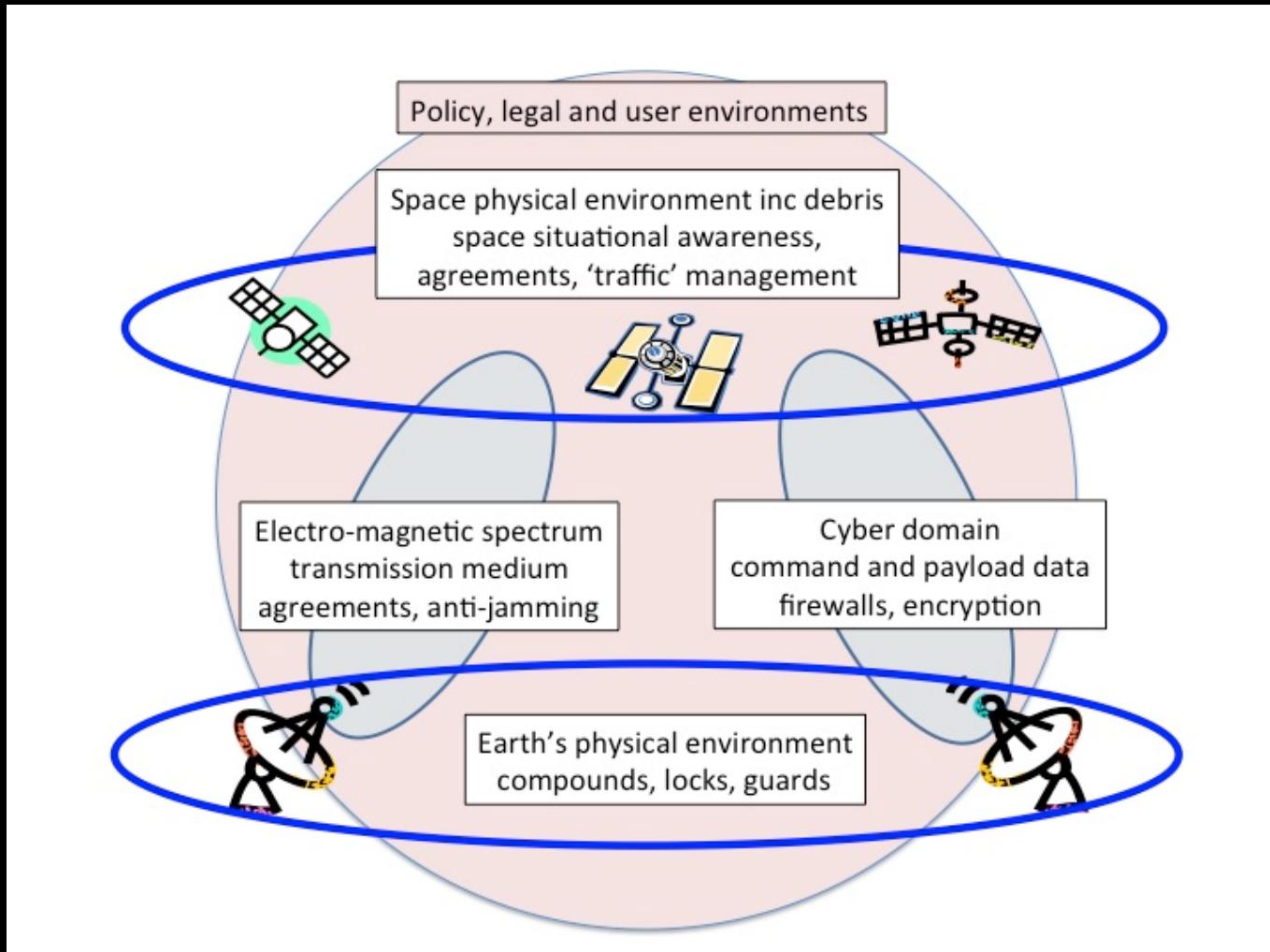
Safety and security of space activities 1/2

- UN Governmental Group of Experts on Transparency and Confidence Building Measures (TCBM) in outer space activities → norms + behaviours → best practices to mitigate space debris issues. **Only procedural implementation so far**
- WG of COPUOS on Long Term Sustainability of Outer Space Activities (LTSSA) → policy, regulatory mechanisms, international cooperation, management issues. Recommendations still under discussion at COPUOS: **tug of war between Russia and the US**
- International Code of Conduct (ICoC) for outer space activities. Draft released by EU in 2008, revised in 2014 calling for TCBM designed to enhance safety, security and sustainability of space activities relative to space objects and space environment. **Stalled since July 2015**

Safety and security of space activities 2/2

- PAROS (Preventing an Arms Race in Outer Space) on the CD agenda since the early 80s. **Deadlock despite (or because?) Russia and China push**
- PPWT (Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects), first proposed in 2008 by Moscow and Beijing, updated in 2014. Semantics change: From preventing an arms race in space → prevention of weapons in space. **No progress**
- Three major weaknesses pointed out by the US:
 - No credible means of verification,
 - Directed energy ground-based weapons & direct ascent ASATs not covered,
 - Space debris issues improperly addressed

Need for a Space Security System



Thank you!

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