北京航空航天大學
BEIHANG UNIVERSITY

Legal and Policy Aspects of OOS and ADR

Prof. Dr. Li Bin
Associate Professor, Associate Director
Beihang University Institute of Space Law
Singapore, 20 March 2013

Legal Aspects: *Outer Space Treaty*

- Art.1, para.2: Outer space…shall be free for exploration and *use* by all States … on a basis of equality and in accordance with *international law*…
- OOS is a "*use*" of outer space
- In principle, OOS is permissible as long as it is conducted in accordance with *international law*
- Unfortunately, "*International law*" is a very broad and complicated term

Legal Aspects: *Outer Space Treaty*

- Art.3: … in accordance with *international law*, including *the Charter of the United Nations*, in the interest of maintaining *international peace and security*...
- Art.9: … *with due regard to the corresponding interests* of all other States Parties to the Treaty.
- Art.11: … the *peaceful* exploration and use of outer space…
- Summary: *peaceful* & *due regard to the interests* of all other State Parties

Legal Aspects: *Outer Space Treaty*

- According to Art.8, the State of Registration shall retain *jurisdiction and control* over such object... *Ownership* of objects launched into outer space… and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth.
- "space object" includes component parts of a space object as well as its launch vehicle and parts thereof. （Liability Convention, Art.1）
- Space debris as space object?

Policy Aspects: LTS

- Long-Term Sustainability is a new terminology reflecting the international community's concern from the use of outer space in the context of space environment protection.
- OOS and ADR can be good examples for the sustainable use of outer space, particularly in cleaning GEO.

Policy Aspects: National Security

- National Security: an element in space activities
- "There is a large defense infrastructure for communication and surveillance that is based on many similar spacecraft (like Orbital Express). An ability to maintain this infrastructure is key to maintaining national security. Conversely, the ability of other agents to "maintain" these spacecraft could be deemed a threat." – from *OOS Study Project Report*, NASA Goddard Space Flight Center, 2010

A Chinese Perspective on OOS

- "The Chinese government makes the space industry an important part of the nation's overall development strategy, and adheres to exploration and utilization of outer space *for peaceful purposes*. Over the past few years, China's space industry has developed rapidly and China ranks among the world's leading countries in certain major areas of space technology. Space activities play an increasingly important role in China's economic and social development."
- ——*China's Space Activities in 2011*

A Chinese Perspective on OOS

- Like U.S and Russia, China also has a vested interest in terms of satellite.（UCS satellite database）, meaning “potential OOS”.
- Possible: Shenzhou spacecraft and Tiangong lab module

Satellite Quick Facts			
Total number of operating satellites: 1046			
LEO: 503	MEO: 73	Elliptical: 38	GEO: 432
United States: 455	Russia: 110		China: 107
Total number of U.S. Satellites: 455			
Civil: 11	Commercial: 200	Government: 116	Military: 128

includes launches through 11/30/2012

A Chinese Perspective on OOS

- Possibly, China would further develop the OOS capabilities for peaceful purpose（national defense）as well as to enhance space technologies' economic and social benefits.
- Particularly, loopholes in the current international legal regime and lack of mutual trust among nation states make China feel necessary to develop space technologies from the perspective of national defense.

- Thank you!
- Questions and Comments?