

SPACE LAW AND POLICY
WITH SIMULATED NEGOTIATIONS
[13]

[5] COMMERCIAL USES OF OUTER SPACE:
SPACE TOURISM

11 JULY 2016
YURI TAKAYA (PH.D)
LECTURER, KOBE UNIVERSITY

North Korea 'jamming GPS signals' near South border

SPACE NEWS:

BBC News [9 July 2016]

New arrivals reach International Space Station

<http://www.bbc.com/news/science-environment-36755460>

A three-member multinational crew have arrived on the International Space Station (ISS) aboard a Russian Soyuz rocket. NASA TV captured American and Japanese astronauts Kathleen Rubins and Takuya Onishi, with Russian cosmonaut Anatoly Ivanishin as they entered the ISS. The trio lifted off from the Baikonur Cosmodrome on July 7 and will join NASA astronaut and station commander Jeff Williams and two Russian cosmonauts who have been aboard the orbital outpost since March.

OUTLINE

- ① Applicability of Air and Space Law
- ② Authorization
- ③ Registration
- ④ Liability
- ⑤ The Status of Space Tourists

(See, Stephan Hobe “Legal Aspects of Space Tourism”

Nebraska Law Review, vol. 86 (2), 2007)

① APPLICABILITY OF AIR AND SPACE LAW

◆ Type of launch vehicle for space tourism

- ① Aircraft + manned space launch vehicle
- ② Rocket + Capsule-type of launch vehicle
- ③ Aircraft for Parabolic Flight (0-g experience)

✂ Parabolic Flight by Airbus A300 in 2002

<https://www.youtube.com/watch?v=1ieR8hIXUlg>

✂ Virgin Galactic:

<https://www.youtube.com/watch?v=M-gxmQufQ80>



© Virgin Galactic: SpaceShipOne



© Virgin Galactic: SpaceShipTwo

① APPLICABILITY OF AIR AND SPACE LAW

◆ Problem 1: The lack of delimitation of airspace and outer Space

- Functionalism
- Spatialism
- Others (Hybrid / No definition)

... general understanding (not legal): at the height of 110km

✘ Australia national space law amended in 2002

defines space object reachable to the height of 100 (opinion juris?)

✘ the status of the zone between 80 km to 100 km is so vague

◆ Problem 2: Legal status of aircraft used for space mission

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② AUTHORIZATION

◆ Art. VI of the Outer Space Treaty of 1967

...“The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.”...

→ private entities need to obtain authorization and continuous supervision
from an appropriate state

Example : US FAA is in charge of licensing private launching activities

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③ REGISTRATION

◆ Application of national air law and international space law

depends on the registration of flight/launch vehicle as aircraft or spacecraft

→ "registration" enable the state of registry to retain

jurisdiction and control over the flight/launch vehicle

Example: SpaceShipOne

The spacecraft attached to the aircraft was registered as a part of aircraft

Appendix 7 Art. 17 of Chicago Convention gave the nationality to the aircraft

→ After the separation,

The spacecraft was registered as space object

under Art. II of the Registration Convention of 1975

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③ REGISTRATION

◆ Problem:

The state of registry needs to be determined among several launching states

However, the registration is required after the launch

→ in the case of SpaceShipOne, the separation needs to be regarded as "launch"

to avoid any lack/confusion of applicable law

→ in the case of the mode "Rocket + Capsule Type, both are space objects.

In PRACTICE.....

US does not register any aircraft in the UN registry which is used for space mission

④ LIABILITY

◆ Passenger Liability

[Case study: SpaceShipOne]

Before separation of aircraft and space craft

The Montreal Convention of 1999 and Convention on Rome of 1952



© Virgin Galactic: SpaceShipOne

After the separation

The Liability Convention of 1972 applies to the spacecraft

◆ Before separation, in the case of emergent landing on the High Sea,

what is the legal status of passenger ? ⁹

⑤ LEGAL STATUS OF SPACE PASSENGERS

◆ The state of registry of space objects retain jurisdiction and control over the personnel of a spacecraft

◆ No definition of “personnel of an aircraft” in international law

◆ Several terms to describe astronauts and private space passenger

The Outer Space Treaty of 1967

“astronauts are envoys of mankind” (Article V)

“use of military personnel” is allowed (Article IV)

...states are responsible for its nationals in outer space (Article VI)

(The state of registry) “retain jurisdiction and control “over any personnel thereof” (Article VIII)

The Rescue Agreement of 1968

“the personnel of a spacecraft” (Article 1, 2, 3 and 4)

The Registration Convention of 1975

...jurisdiction and control over “any personnel thereof. (Article II (2))”

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⑤ LEGAL STATUS OF SPACE PASSENGERS

◆ Inter-Governmental Agreement of International Space Station

① Professional Astronauts/Cosmonauts + Expedition Crewmembers
Governmental crew for ISS with official qualification

② Spaceflight Participants

Passengers in support of member states on contract
who stay in ISS in accordance with Code of Conduct for Space Passengers

◆ US SPACE Act of 2015

prohibits “governmental astronauts” to use FAA licensed launch vehicle.

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SIMULATED NEGOTIATION

Time Table:

16:00 ~ 16:15 Group Discussion

16:15 ~ 16:35 Presentation

THEME

"WHAT ARE POSSIBLE (BUSINESS) MODELS FOR SENDING PASSENGER/ASTRONAUTS FOR FREE TO OUTER SPACE?"

You are working in Department of Environment, in charge of monitoring space debris. Your country wants to send you for scientific research; however, it has no space agency. Please make a project model to let you go and work in outer space (example: ISS / Moon).

TEAM A

TEAM B

TEAM C

END