SPACE LAW AND POLICY
WITH SIMULATED NEGOTIATIONS
[9]

[1] CIVIL USES OF OUTER SPACE: INTER-GOVERNMENTAL AGREEMENT OF ISS

13 JUNE 2016

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SPACE NEWS:

BBC News [3 May 2016]

Tim Peake: How my body changed in space

Astronaut Tim Peake has described how his body has adapted to being in space. He said he had noticed changes to his blood pressure, heart rate and eyesight.

http://www.bbc.com/news/science-environment-36195537

SciNews [27 April 2016]

DIWATA-1 microsatellite deployed from ISS Kibo Module

A small 50-kg class Microsatellite "DIWATA-1" was deployed from “Kibo” Japanese Experiment Module (JEM) onboard the International Space Station (ISS) on 27 April 2016. This was the first attempt to deploy a 50-kg class satellite by the Kibo's Small Satellite Orbital Deployer.

https://www.youtube.com/watch?v=jBI4rmi1iQw

NATIONAL SPACE LAW AND POLICY: RESCHEDULED + ASSESSMENT

RUSSIA	[MAY 9]
JAPAN	[MAY 16] MARINE
CANADA	[MAY 23] HARUKI
ESA AND EU	[MAY 30] AURELIEN
LECTURE CANCELLATION	[JUNE 6]
FRANCE	[JUNE 13] LING
UK	[JUNE 20] YAN
GERMANY	[JUNE 27] THOMAS
CHINA	[JULY 4] VERN
SOUTH KOREA	[JULY 11] ESHONKULOVA
US	[JULY 25] WEIXI

1 person for 1 state
15 mins

Please send the PPT before the day of lecture to:
takaya@rabbit.kobe-u.ac.jp

Assessment: by the report [A4, 3-4 pages, single line, font size 11, deadline: August 12]
E-mal to: takaya@rabbot.kobe-u.ac.jp

INTER-GOVERNMENTAL AGREEMENT OF ISS

AGREEMENT AMONG THE GOVERNMENT OF CANADA, GOVERNMENTS OF MEMBER STATES OF THE EUROPEAN SPACE AGENCY, THE GOVERNMENT OF JAPAN THE GOVERNMENT OF THE RUSSIAN FEDERATION, AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA

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1. WHAT IS SPACE STATION?

◆Space Station: a research laboratory in the Earth orbit at an altitude of between 330-410 km (LEO)

◆The micro-gravity environment enables various experiments in:

biology, human biology, physics, astronomy, meteorology, etc. (+ life science)

◆Unilateral space station: Salyut-1 (built in 1971 by USSR)

Skylab Space Station (built in 1973 by US)

1971-1986
Salyut (USSR)

1973-1979
Skylab (US)

1983-2001
Spacelab (US)

1986-2001
MIR (USSR)

1988-
ISS

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2. UNILATERAL VS. INTERNATIONAL SPACE STATION

◆Unilateral SS

Example: MIR (built by USSR)

Russia is the only state of registry that entitled to exercise

its jurisdiction on a quasi-territorial basis on board

(in accordance with the OST Art. VIII and the RC Art. II)

◆International SS

In 1984 at the G-7 meeting, US former President Reagan called on a member countries

to join the US in developing International Space Station

→Japan, Canada, ESA became ISS Partners

In 1990s, US invited Russia to join the ISS program.

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3. INTERNATIONAL SPACE STATION (ISS)

◆15 Partner States signed the Intergovernmental Agreement (IGA) in 1998.

◆Contributions

ESA: Columbia laboratory + Automated Transfer Vehicle (ATV)

Canada: Robotic Arms (Canadarm-2) + Special Purpose Dexterous Manipulator (known as Canada Hand or Dixtre)

Japan: H-II Transfer Vehicle (HTV) + KIBO (experimental module)

Russia: Zarya + solar arrays + Soyuz launch vehicle + Proton and Soyuz capsules

US: Unity and Harmony modules + solar arrays + Destiny research laboratory + Cygnnus and Dragon cargo vehicles (respectively provided by the Orbital Sciences and Space X Corps.)

※"Zero Gravity" (2014): https://www.youtube.com/watch?v=12ZRnBfASNA

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4. APPLICABLE LAW

◆Applying to all outer space activities

The Outer Space Treaty of 1967 (Freedom in Outer Space, Non-Appropriation, etc.)

(The Rescue Agreement of 1968)

The Liability Convention of 1972

The Registration Convention of 1975 (basically quasi-territorial basis)

◆Applying specifically to ISS Operation

① Intergovernmental Agreement (IGA) of 1998

② Memorandum of Understanding (MOU) between Cooperating Agencies of the State Parties to IGA

→The MOUs are <u>bilateral agreements</u> regulating the contribution of each Agency to the ISS project.

③ Implementing arrangements (example: intellectual property rights: IPR)

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5. IGA

Article I: Object and Scope

1. The object of this Agreement is to establish a long-term international cooperative framework among the Partners, on the basis of genuine partnership, for the detailed design, development, operation, and utilization of a permanently inhabited civil international Space Station for peaceful purposes, in accordance with international law. This civil international Space Station will enhance the scientific, technological, and commercial use of outer space. […]

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2. The Partners will join their efforts, under the lead role of the United States for overall management and coordination, to create an integrated international Space Station. The United States and Russia, drawing on their extensive experience in human space flight, will produce elements which serve as the foundation for the international Space Station. The European Partner and Japan will produce elements that will significantly enhance the Space Station's capabilities. Canada's contribution will be an essential part of the Space Station. This Agreement lists in the Annex the elements to be provided by the Partners to form the international Space Station with Article 14.

5. IGA

Article II: International rights and Obligations

1. The Space Station shall be developed, operated, and utilized in accordance with international law, including the Outer Space Treaty, the Rescue Agreement, the Liability Convention, and the Registration Convention.
2. Nothing in this Agreement shall be interpreted as:

(a) modifying the rights and obligations of the Partner States found in the treaties listed in paragraph 1 above, either toward each other or toward other States, except as otherwise provided in Article 16;

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(b) affecting the rights and obligations of the Partner States when exploring or using outer space, whether individually or in cooperation with other States, in activities unrelated to the Space Station; or

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(c) constituting a basis for asserting a claim to national appropriation over outer space or over any portion of outer space.

5. IGA

Article IV: Cooperating Agencies

2. The Cooperating Agencies shall implement Space Station cooperation in accordance with the relevant provisions of this Agreement, the respective Memoranda of Understanding (MOUs) between NASA and CSA, NASA and ESA, NASA and the Government of Japan, and NASA and RSA concerning cooperation on the civil international Space Station, and arrangements between or among NASA and the other Cooperating Agencies implementing the MOUs (implementing arrangements). The MOUs shall be subject to this Agreement, and the implementing arrangements shall be consistent with and subject to the MOUs.

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Q. What is MOU's legal status?

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5. IGA

Article V: Registration; Jurisdiction and Control

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In accordance with Article II of the Registration Convention, each Partner shall register as space objects the flight elements listed in the Annex which it provides, the European Partner having delegated this responsibility to ESA, acting in its name and on its behalf.

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2. Pursuant to Article VIII of the Outer Space Treaty and Article II of the Registration Convention, each Partner shall retain jurisdiction and control over the elements it registers in accordance with paragraph 1 above and over personnel in or on the Space Station who are its nationals. The exercise of such jurisdiction and control shall be subject to any relevant provisions of this Agreement, the MOUs, and implementing arrangements, including relevant procedural mechanisms established therein.

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5. IGA

Article IV: Cooperating Agencies and MOU

2. The Cooperating Agencies shall implement Space Station cooperation in accordance with the relevant provisions of this Agreement, the respective Memoranda of Understanding (MOUs) between NASA and CSA, NASA and ESA, NASA and the Government of Japan, and NASA and RSA concerning cooperation on the civil international Space Station, and arrangements between or among NASA and the other Cooperating Agencies implementing the MOUs (implementing arrangements). The MOUs shall be subject to this Agreement, and the implementing arrangements shall be consistent with and subject to the MOUs.

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5. IGA

Article VI: Ownership of Elements and Equipment

1.Canada, the European Partner, Russia, and the United States, through their respective Cooperating Agencies, and an entity designated by Japan at the time of the deposit of its instrument under Article 25(2), shall own the elements listed in the Annex that they respectively provide, except as otherwise provided for in this Agreement. The Partners, acting through their Cooperating Agencies, shall notify each other regarding the ownership of any equipment in or on the Space Station.

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5. The ownership of equipment or material provided by a user shall not be affected by the mere presence of such equipment or material in or on the Space Station.

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5. IGA

Article XVI: Cross-Waiver of Liability

1. The objective of this Article is to establish a cross-waiver of liability by the Partner States and related entities in the interest of encouraging participation in the exploration, exploitation, and use of outer space through the Space Station. This cross-waiver of liability shall be broadly construed to achieve this objective.

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3. (c) The term "damage" means:

(1) bodily injury to, or other impairment of health of, or death of, any person;

(2) damage to, loss of, or loss of use of any property;

(3) loss of revenue or profits; or

(4) other direct, indirect or consequential damage.

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5. IGA

Article XXII: Criminal Jurisdiction

1. In view of the unique and unprecedented nature of this particular international cooperation in space:

(1) concurs in such exercise of criminal jurisdiction, or

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(2) fails to provide assurances that it will submit the case to its competent authorities for the purpose of prosecution. 1. Canada, the European Partner States, Japan, Russia, and the United States may exercise criminal jurisdiction over personnel in or on any flight element who are their respective nationals. 2. In a case involving misconduct on orbit that: (a) affects the life or safety of a national of another Partner State or (b) occurs in or on or causes damage to the flight element of another Partner State, the Partner State whose national is the alleged perpetrator shall, at the request of any affected Partner State, consult with such State concerning their respective prosecutorial interests. An affected Partner State may, following such consultation, exercise criminal jurisdiction over the alleged perpetrator provided that, within 90 days of the date of such consultation or within such other period as may be mutually agreed, the Partner State whose national is the alleged perpetrator either:

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SPACE LAW AND POLICY OF FRANCE

PRESENTED BY MS. LING SONG

SIMULATED NEGOTIATION

Time Table:

16：00 ～ 16：15　Group Discussion

16：15 ～ 16：35　Presentation

THEME

"WHAT ARE PROBLEMS IN CONTROLLING NANO-SATELLLITE LAUNCHINGS CONDUCTED BY UNIVERSITIES?"

◆What is Nanosat?

	Mass	Cost	Time
Large	1000 kg+	USD 500M +	15 years +
Small	500 kg	USD 100 M	5 years
Mini	300 kg	USD 20 M	2-3 years
Micro	100 kg	USD 10 M	1.5 years
Nano (Cube)	5 kg	USD 1 M	> 1 year
Pico	100 gm	> USD 100 k	> 1 year

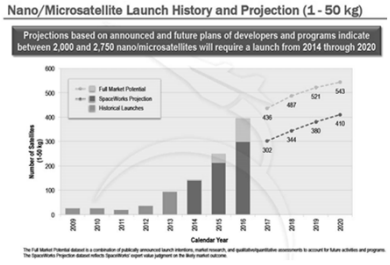
◆"The Nanosat Wars"

The number of Nansat by 1 launching

November 2013 29 Nano-satellites launched into LEO by Orbital Science Co.
32 launched by Kosmotras

January 2014 33 from ISS by Orbital Science Co.

April 2014 104 ("Sprite" the size of stamp) launched from ISS by SpaceX
(developed by US Carnegie Univ.)



THEME

"WHAT ARE PROBLEMS IN REGULATING NANO-SATELLLITE LAUNCHINGS CONDUCTED BY UNIVERSITIES?"

To enhance the skill and competitiveness of students,
your university has a program to launch nano-satellites for educational purposes.
Considering that there are many foreign students in a class,
please make a list of benefits and problems to regulate universities' launchings.

TEAM A

TEAM B

TEAM C

END