Legal aspects of commercial activities in the field of manned space flights

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Commercial activities in manned space

- First visible example – contract between NASA and Russian Space Agency for flights of Shuttle to Russian Mir station (1993).

- Strong boost made by the ISS Program: enhancement of commercial use of outer space is one of the objectives of the ISS (Article 1 of Intergovernmental Agreement of 1998).

- Commercial services and deliveries support the governmental scientific and technological goals.
What has been purchased and sold?

- ISS resources and supplies like crew time, habitation services, extravehicular capacity, waste removal services.
- Delivery to the ISS, rescue and return to Earth of professional astronauts and spaceflight participants.
- Delivery to the ISS and return of cargo to Earth.
- Space advertising.
- Implementation of ISS-related scientific experiments, both ground and onboard.
Figures and Facts

- To the ISS onboard the Russian “Soyuz” under commercial contracts - more than 70 professional astronauts from at least 13 countries and 8 space tourists.

- To the ISS onboard the U.S. commercial space cargo vehicles Dragon and Sygnus - supplies to support the activities of the ISS crewmembers from Canada, European Union, USA and Japan.

- Near future - start of manned flights to the ISS of US commercial space vehicles: SpaceX’s Crew Dragon and Boeing’s CST-100 Starliner.
Spaceflight Participants

- The ISS Crew Criteria Document provides for two types of crew members: (1) professional astronauts/cosmonauts and (2) spaceflight participants (SFPs).
- Professional astronauts/cosmonauts - members of the astronaut or cosmonaut corps of space agencies of the ISS Partners.
- SFPs are individuals sponsored by ISS Partners on a commercial, scientific or other program who are:
  - employees of non-partner space agencies;
  - non-space professionals (engineers, scientists, teachers, journalists, film makers);
  - space tourists.
Spaceflight Participants (continued)

- Legal status of SFPs differs from legal status of professional astronauts/ cosmonauts.
- Common: members of the ISS single and integrated crew. Up to now SFPs have been visiting crew members under short-term contracts. SFPs may be members of the increment or permanent crew under a long-term contract.
- Limitations for SFPs:
  - may not be assigned as crew commanders, segment leads, pilots, flight engineers, station scientists or mission specialists;
  - generally, will not be assigned to ISS assembly, operations or maintenance activities; in case of an SFP’s long-term flight may be exceptions upon recommendation of the sponsoring agency.
Cross-waiver of liability in ISS non-commercial agreements

- Article 16 of Intergovernmental Agreement 1998 (IGA) provides for a cross-waiver of liability by the ISS Partner States (incl. Cooperating Agencies) and their related entities.
- Cross-waiver applies to claims based on damage arising out of Protected Space Operations.
- Protected Space Operations: all launch vehicle activities, Space Station activities, and payload activities on Earth (before the flight), in outer space, or in transit between Earth and outer space.
- Applies to non-commercial agreements: IGA, Memoranda of Understanding between the Cooperating Agencies and implementing arrangements.
Cross-waiver of liability in ISS-related commercial contracts

- Article 16 of IGA excludes: claims between a Cooperating Agency and its related entity or between its own related entities.
- Cross-waiver of liability under IGA does not apply to commercial contracts between Cooperating Agencies, where one of them represents a customer and another one a contractor/subcontractor (as its related entity).
- In practice Cooperating Agencies include cross-waiver of liability into their commercial contracts both in relations between themselves and with their commercial customers.
Claims made by natural persons

- Article 16 of IGA excludes: claims made by a natural person, his/her estates, survivors or subrogees (except a subrogee is a Partner State). It means: cross-waiver of liability is not applicable to claims from the ISS crewmembers.
- Different solution with regard to professional astronauts/cosmonauts and spaceflight participants.
- For professional astronauts and cosmonauts risks of death or damage to their health are covered by national laws and employment contracts.
- Russian Law on Space Activities provides for mandatory insurance of life and health of cosmonauts.
Claims made by spaceflight participants

- In space flight contracts:
  - an SFP gives an informed consent that he/she fully understands and assumes the risks connected with the preparation and implementation of the space flight;
  - an SFP takes an insurance policy to cover risks of claims against ISS Partners and their related entities on the part of an SFP, his/her estates, survivors or subrogees; the ISS Partners and their related entities are named as insureds.

- Some countries passed space legislation which established the obligation and/or right of space flight operators to agree on cross-waiver of liability with spaceflight participants/non-professional astronauts (France in 2008 and USA in 2015).
Focus on barter agreements

- Article 15.5 of IGA prioritizes the use of barter agreements.
- Barter - preferable option to facilitate own space industry.
Future development

- Deeper involvement of commercial space sector into the exploitation of the ISS.
- Expectation of new initiatives from private industry (public-private partnerships, privately owned modules, new commercial vehicles).
- Further enhancement of legal basis for the ISS-related commercial activities.
- International Space Station - a “laboratory” for legal innovations in manned space activities, a trigger for development of national space laws and a sample for legal framework of future international manned space projects.
Thank you