

# 8th Space Law Symposium at the Keio University of Tokyo, 13th March 2017

## UNISPACE+50:

Space law developments and global space governance –  
expectations for the LSC Working Group  
on the Status and Application of the 5 treaties

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## **A. The overall context:**

**UNISPACE+50 (2018)**

**50th anniversary of the Outer Space Treaty (2017)**

**WG Status and Application of the 5 Treaties**



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# UNISPACE+50 - Background

The year 2018 will mark fifty years of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (1968 - 2018): UNISPACE+50

- **UNISPACE I (1968):**
  - Benefit of developing nations.
  - Creation of the post of Expert on Space Applications within UNOOSA
  
- **UNISPACE II (1982):**
  - Peaceful purposes and prevention of an arms race in outer space
  - Strengthening the United Nations' commitment to promoting international cooperation
  
- **UNISPACE III (1999):**
  - Blueprint for the peaceful uses of outer space
  - The Space Millennium: Vienna Declaration on Space and Human Development ([Vienna Declaration](#))



# Seven UNISPACE+50 Thematic Priorities

01 Global Partnership in space exploration and innovation

02 Legal regime of outer space and global space governance: current and future perspectives

03 Enhanced information exchange on space objects and events

04 International framework for space weather services

05 Strengthened space cooperation for global health

06 International cooperation towards low-emission and resilient societies

07 Capacity-building for the twenty-first century



# UNISPACE+50 thematic priorities – and the context of the legal regime for outer space

1. Global partnership in space exploration and innovation
- 2. Legal regime of outer space and global space governance: current and future perspectives**
3. Enhanced information exchange on space objects and events
4. International framework for space weather services
5. Strengthened space cooperation and global health
6. International cooperation towards low-emission and resilient societies
- 7. Capacity-building for the 21<sup>st</sup> Century**



## Thematic priority 2: **Legal regime of outer space and global space governance: current and future perspectives**

Objective: Promote the universality of the 5 UN Space Treaties

State of affairs / Relation to other international instruments / Effectiveness /

Identifying areas of additional regulation

**Developing the questionnaire** - perspective up to 2018

**Studying potential future legal and institutional initiatives** –

space law as a relevant part of global space governance

**Studying legal mechanisms to foster an internat. regime of responsibility/liability**

- Challenges for safety / security / sustainability
- enhanced information on objects and events
- avoidance of in-orbit-collisions and interference

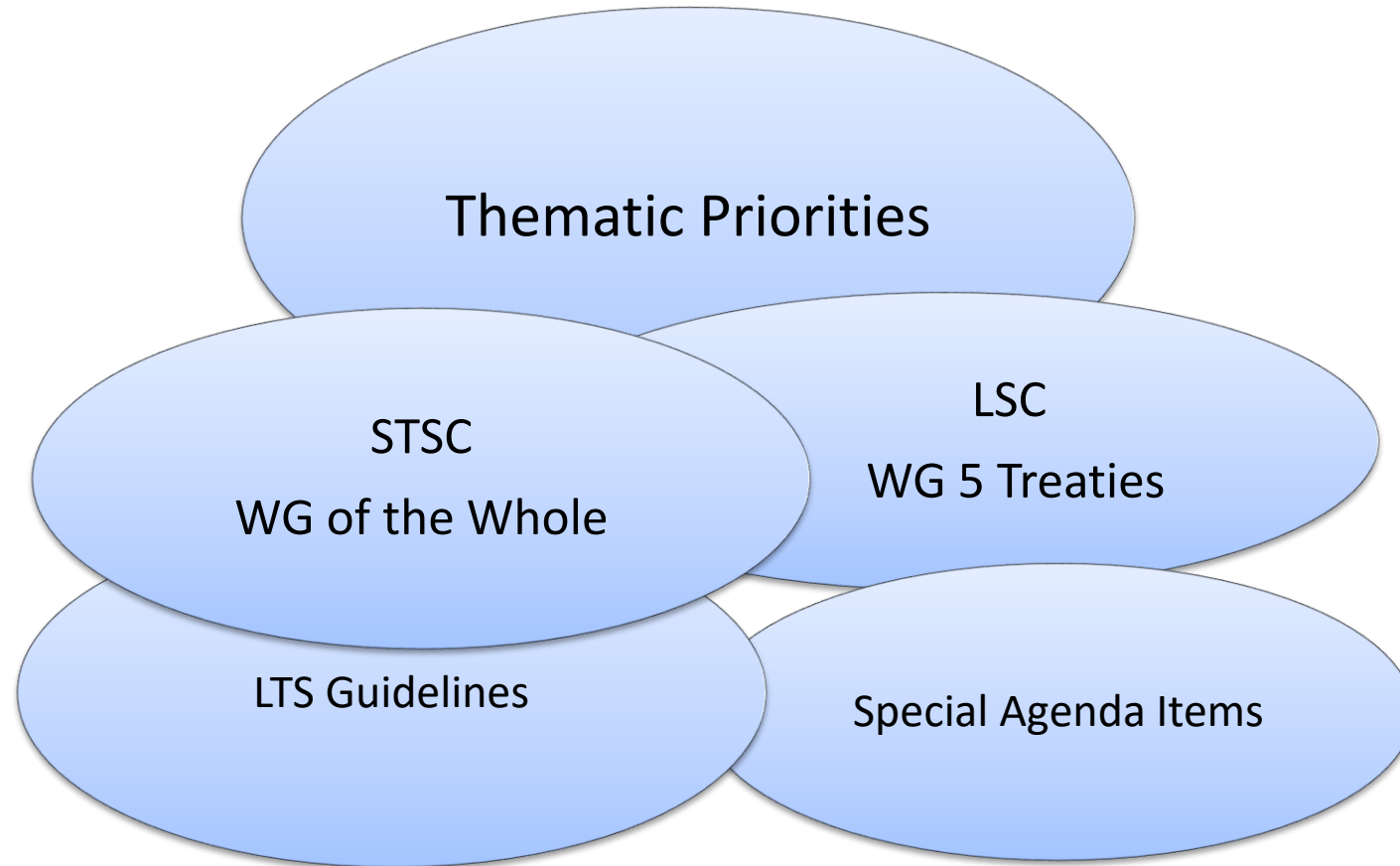
**Identifying by 2018 criteria for a guidance document 2020**

**Considering means of strengthen the LSC** – closer cooperation with STSC

**Mechanism: WG Status and Application of the 5 treaties**



# UNISPACE+50 process - 50 years Outer Space Treaty Space Law Development / Global Space Governance



## **B. The core legal working tools:**

# **UNISPACE+50: Thematic Priority 2 Questionnaire of the WG of the 5 treaties**



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## 02 Legal regime of outer space and global space governance: current and future perspectives

### Objectives:

Promote the **universality** of the five United Nations treaties on outer space. **Assess** the state of affairs of those treaties and their **relationship with other** relevant international instruments, such as principles, resolutions and guidelines governing space activities. **Analyse the effectiveness** of the legal regime of outer space in the twenty-first century, with a view to identifying areas that may require additional regulation.

Conduct an evaluation by:

a) **Developing the questionnaire** of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space to encompass an assessment of the **legal regime** of outer space as a pillar of **global space governance**. The questionnaire should be used in the period leading **up to 2018** to assist the Legal Subcommittee in addressing the status and scope of, and assessing and, as appropriate, addressing possible gaps in, the legal regime of outer space;



## 02 Legal regime of outer space and global space governance: current and future perspectives

(b) **Studying** potential future legal and institutional initiatives intended to ensure that outer space is explored and used for **peaceful purposes** and that **access** to outer space remains **open and free for the benefit of all countries**, in order to ensure that international space law is a relevant part of global space governance in the twenty-first century in the light of the **significant scientific developments and technical advances** that have affected space activities;

(c) **Studying** legal mechanisms to foster an international regime of **responsibility and liability** to cope with present and **future challenges** to the safety, security and sustainability of outer space activities and the safety of space operations, **perspectives of space traffic management** and an enhanced exchange of information on space objects and events. Specific consideration is to be given to current **practical concerns** of the international community, such as in-orbit collisions and interferences. In particular, there should be an assessment of the need for enhanced **registration and notification procedures** and their institutional requirements under the registration and notification platform maintained by the Office for Outer Space Affairs;



## 02 Legal regime of outer space and global space governance: current and future perspectives

(d) Identifying, **by 2018**, approaches and possible **criteria** for developing, **by 2020**, a **guidance document** to be issued by the Committee on the Peaceful Uses of Outer Space with essential information on the state of affairs of the legal regime governing outer space, including relevant instruments applied through national regulatory frameworks and international mechanisms for cooperation. Such a document **should serve as valuable guidance for States wishing to become a party to the five United Nations treaties on outer space**;

(e) Considering means to **strengthen the Legal Subcommittee** as the prime multilateral body with a mandate to promote the progressive development of international space law, **including procedural and institutional improvements** and closer cooperation with the Scientific and Technical Subcommittee.



## 02 Legal regime of outer space and global space governance: current and future perspectives

Mechanisms	Proposed Workplan:
<p>Existing Working Group on the Status and Application of the Five United Nations Treaties on Outer Space of the Legal Subcommittee, <b>which should coordinate its work with the Working Group on the Long-term Sustainability</b> of Outer Space Activities of the Scientific and Technical Subcommittee.</p>	<p><b>2017:</b> Further discussions on the Questionnaire in the Working Group</p> <p><b>2018:</b> Identifying and defining the Key Points for the UNCOPUOS Guidance Document</p> <p><b>2019:</b> Preparatory work on the UNCOPUOS Guidance Document</p> <p><b>2020:</b> The UNCOPUOS Guidance Document that will provide States wanting to become a party to the UN Space Treaties necessary information on the legal regime governing outer space</p> <p><b>Perspective 2030:</b> Implementing provisions for the UNCOPUOS Guidance Document thereby creating Space Traffic Management rules</p>



# C. Interrelation LTS / WG 5 Treaties

Requested closer cooperation LSC /STSC

Operational aspects / Universalisation

Positiv Developm. in the implementation of Guidelines



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UNOOSA



United Nations  
Office for Outer Space Affairs



**UNCOPUOS has 84 Member States** (24 in 1959, when started as permanent body)

Two basic tasks :

Session support of UNCOPUOS / Implementation of GA decisions / of UNCOPUOS  
and Support of developing countries in space applications

New task: technical assistance in implementing the treaties / Capacity Building

**Outer Space Treaty is ratified by 104 States**

15 UNCOPUOS Member States not yet ratified / signed the Outer Space Treaty

Effort necessary to close the gap / relevance for the mandate of space law development / space governance

# Universality of the UN Space Treaties

- **The Outer Space Treaty and the four special treaties as a comprehensive framework**

Assistance/ Return (Art. V)	→	ARRA	into force	03 Dec 1968
Liability (Art. VII)	→	LIAB	into force	01 Sept 1972
Registration (Art. VIII)	→	REG	into force	15 Sept 1976
Moon Regime (Art. IV, XII)	→	MOON	into force	11 July 1984

- **Status quo of ratification / signature** (April 2016)

OST	(1967)	>	104 Ratifications / 25 Signatures
ARRA	(1968)	>	95 Ratifications / 24 Signatures
LIAB	(1972)	>	93 Ratifications / 21 Signatures
REG	(1976)	>	62 Ratifications / 4 Signatures
MOON	(1984)	>	16 Ratifications / 4 Signatures

- **Open issue: Consensus by Resources and exploitation**

**Operative implementing instruments in specific areas**



## STSC WG on Long-term sustainability of Outer Space Activities: first set of guidelines agreed in 2016

### Between the 12 agreed upon guidelines are inter alia the following topics:

- Adopt, revise and amend, as necessary, national regulatory frameworks for outer space activities
- Supervise national space activities
- Promote the collection, sharing and dissemination of space debris monitoring information
- Sharing of operational space weather data and forecasts
- Research/support of ways to support sustainable exploration and use of outer space
- Investigate/consider new measures to manage the space debris population in the long term





# LTS open issues / further guidelines under discussion

## Guideline topics for further discussion are inter alia:

- Enhance the practice of registering space objects
- Commitments in national policy of conducting space activities solely for peaceful purposes
- No intentional modification of natural space environment
- Policies precluding interference with foreign objects (unauthorized access)
- Information on space objects and orbital events
- Safety and security of terrestrial infrastructure
- Criteria and procedures for active removal of space objects from orbit
- Criteria and procedures for active removal under exceptional circumstances (spec. non-registered objects)
- Normative and organizational frameworks for ensuring effective and sustained implementation of the guidelines



# LTS Guidelines and (national) implementation

## National Implementation of the first set of Guidelines, e.g.

The UK's implementation of the first set of guidelines on LTS of Outer Space Activities (STSC 2017, CRP. 21)

General presentation of French activities and views for LTS of outer space, in relation with the implementation of the first set of guidelines (STSC 2017, CRP. 26)

## LTS Guidelines – Implementation and updating

(A/AC.105/C.1/L.354 of 20 June 2016: Guideline 29 ; A/AC.105/L.308, unedited version of 15 Feb. 2017: Chapter E 23-26)

(24) The UN should be regarded...as the principal forum for continued **institutionalized dialogue** on issues related to the implementation of the guidelines.

(25) ...the guidelines should be **periodically reviewed and revised** to ensure that they continue to provide effective guidance to States...



## UN-Level

Treaties & Soft Law (Resolutions / Principles)

## Admin.-procedural Rules (int. level)

Living Best Practice Doc. / Adaption to technical developments

## National Implementation

National Space Legislation / Licensing / Space Administration



# Comparative Example

## Following the ITU mechanism for revisions of the Administrative Regulations by the World Conferences:



- By ratifying the Constitution the State accepts also the binding mechanism of the Administrative Regulations
- the revisions are only binding for those states which accept them in an explicit way
- For members states that do not agree to the revisions:
  - » the revision is applicable in a provisional manner to all member states which have signed the final act of the conference, except if they have explicitly contradicted them
  - » such provisional application shall continue for a Member State until it notifies the Secretary-General of its decision concerning its consent to be bound by any such revision
  - » if a Member State fails to notify the Secretary-General of its decision concerning its consent to be bound within thirty-six months following the date or dates of entry into force of the revision, that Member State shall be deemed to have consented to be bound by that revision

# There are three possible outcomes beyond provisional application:

- First, a member state has given its explicit consent and hence the revision has the character of an international agreement
- Second, a member state has signed the final act, and is bound to the revision, after a period of 3 years even without explicitly consenting to it
- Thirdly, a member state has not signed the final act, and is not bound by the revision but the Administrative Regulations remain having the character of international agreements.

**This system constitutes a sophisticated secondary hard law norms creation mechanism and it has proven to be very successful in getting member states to follow regulations in a binding manner**



# D. Specific aspects of the Questionnaire

## Discussion points 2017



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# Updated Questionnaire on Status and Application of the 5 Treaties

- **The legal regime of outer space and global governance**
- **UN Treaties / provisions related to Moon and other celestial bodies**
- **International responsibility and liability**

Is there a need for traffic rules in outer space as a prerequisite of a fault-based liability regime?

- **Registration of space objects**

Does the concept of mega constellations raise legal and / or practical questions?

Is there a need for an adapted registration form?

Is there a possibility to introduce a registration 'on behalf' of a State?



# Basic Rules of the Outer Space Treaty (OST) and the four Implementing Agreements

## Outer Space Treaty (OST)

Assistance/ Return (**Art. V**)

Liability (**Art. VII**)

Registration (**Art. VIII**)

Moon regime (**Art. IV, XII**)

## Implementing Agreements

Rescue Agreement (**ARRA**)

Liability Convention (**LIAB**)

Registration Convention (**REG**)

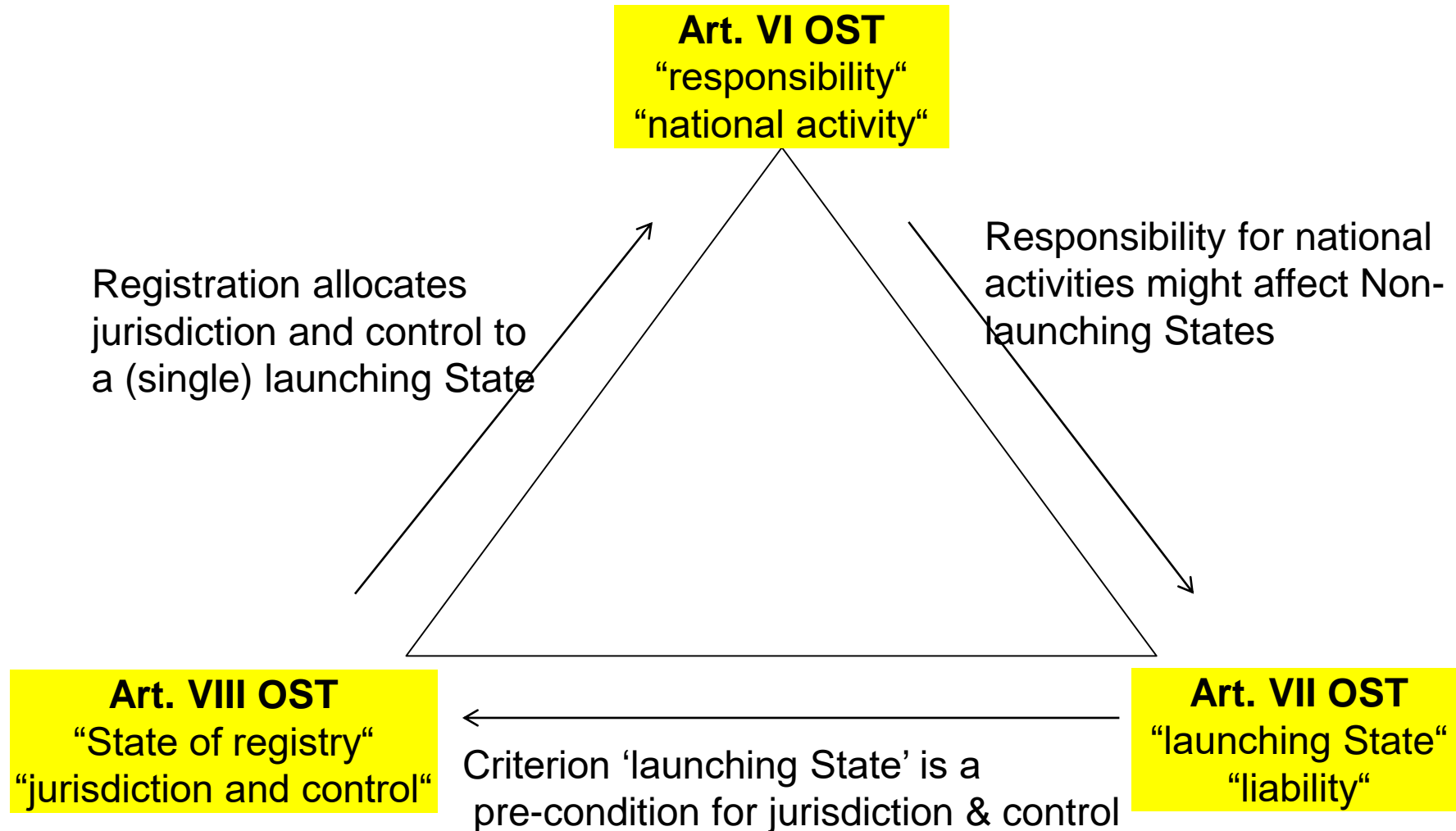
Moon Treaty (**MOON**)

- Strengthen the system
- Identify necessary developments for the liability and registration system
- New efforts for consensus in the area of space resources and non-appropriation





# The core system: Art. VI – VIII Outer Space Treaty



# Recall: Liability in the Context of UN Space Law

## UNGA Resolution on Principles 1962 (XVIII) of 13 December 1963

**8. Each State which launches or procures the launching of an object into outer space, and each State from whose territory or facility an object is launched, is internationally liable for damage to a foreign State or to its natural or juridical persons by such object or its component parts on the earth, in air space, or in outer space.**

## Article VII Outer Space Treaty (OST) 1967

## Liability Convention (LIAB) 1972



# UNGA Resolution 1721 B (XVI)

## First call for registration

- UNGA Resolution 1721 A (XVI)
  - Applicability of Public Int. Law and the UN-Charta in Outer Space and on Celestial Bodies (para. 1 lit. a)
  - Freedom of use and non-appropriation (para 1 lit. b)
  
- **UNGA Resolution 1721 B (XVI)**
  - Call upon States for the **registration of launchings** (para. 1)
  - Request on the UN Secretary-General to maintain a **public registry\*** (para. 2)

\* Wording today: [Register](#)

### Resolution 1721 B (XVI) of 20 December 1961

International cooperation in the peaceful uses of outer space

*The General Assembly,*

*Believing* that the United Nations should provide a focal point for international cooperation in the peaceful exploration and use of outer space,

1. *Calls upon* States launching objects into orbit or beyond to furnish information promptly to the Committee on the Peaceful Uses of Outer Space, through the Secretary-General, for the registration of launchings;

2. *Requests* the Secretary-General to maintain a public registry of the information furnished in accordance with paragraph 1 above;

3. *Requests* the Committee on the Peaceful Uses of Outer Space, in cooperation with the Secretary-General and making full use of the functions and resources of the Secretariat:

(a) To maintain close contact with governmental and non-governmental organizations concerned with outer space matters;

(b) To provide for the exchange of such information relating to outer space activities as Governments may supply on a voluntary basis, supplementing but not duplicating existing technical and scientific exchanges;

(c) To assist in the study of measures for the promotion of international cooperation in outer space activities;

4. *Further requests* the Committee on the Peaceful Uses of Outer Space to report to the General Assembly on the arrangements undertaken for the performance of those functions and on such developments relating to the peaceful uses of outer space as it considers significant.



# Registration in the Context of UN Space Law

**UNGA Resolution 1721 B (XVI) of 20 December 1961**

**UNGA Resolution on Principles 1962 (XVIII) of 13 December 1963**

**Article VIII Outer Space Treaty (OST)**

**Registration Convention (REG)**

**Registration Practice Resolution 2007 (UNGA Resolution 62/101)**

- **A continuous development for more than 5 decades**
- **New challenges in the registration practice due to complex constellations**
- **Evolution of Registration Practice, based on the basic principles and functions**



## Art. VIII OST (Registration) Core Elements

Three legal terms: Registration/ Jurisdiction and control/ Ownership

Each State party is responsible for all its nationals (legal or natural person)

Non-functional objects are and remain space objects

Registration only by launching States (no genuine link principle)

Delivery in orbit versus transfer of ownership / operation

No distinction civil/ military object



# Some important aspects of registration

Attribution of space objects to States

Jurisdiction and control as a comprehensive legal concept

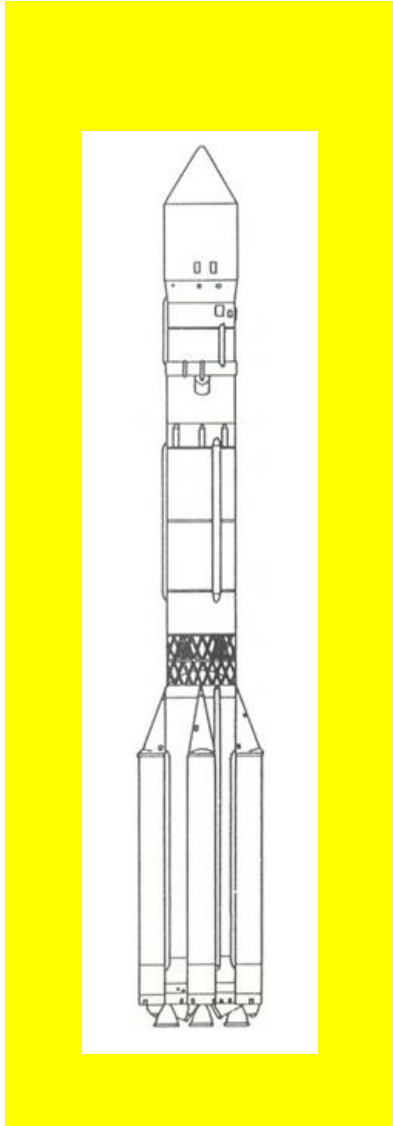
Registration by IGOs without full sovereignty

Solutions for cross border change of operator control

Space objects and component parts/ its launch vehicle (Art. I REG)

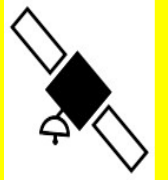


## (First) Registration



**Satellite 1**

**Satellite 2**

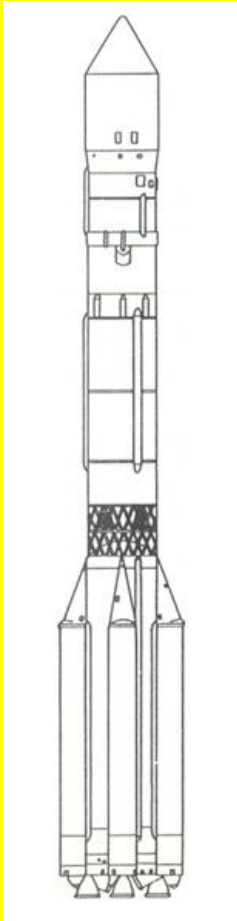


The registration by a (first registering) launching State covers all objects launched into outer space, such as the upper stage, the fairing, break-up parts, and the payload (satellites).

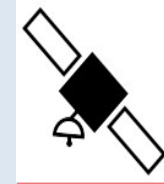


# Registration of Upper Stage & foreign Payloads

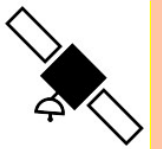
Launch Service Provider



**Satellite 1**  
Payload Customer 1



**Satellite 2**  
Payload-Customer 2

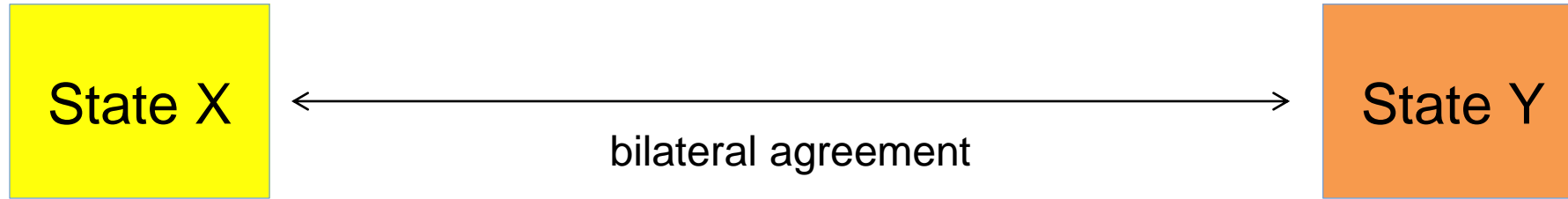


In case of a joint launch by a launch service provider of two payloads, procured by two payload customers, there should be, accordingly, three registrations.

The State behind the launch service provider (launched) and States behind the payload customers (procured) are launching States.



# Issues in relation to Transfer of Operation: Jurisdiction & Control (Art. VIII OST) / Operational Control



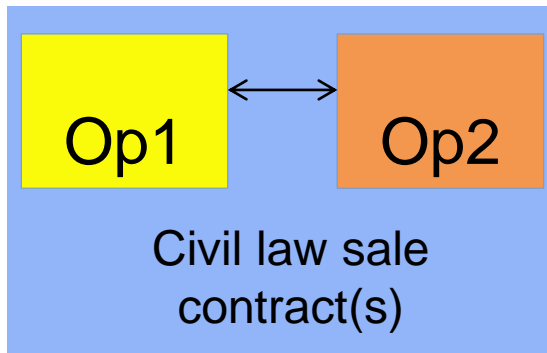
original launching State  
State of registry

jurisdiction and control

effectively exercising rights  
of the State of registry

Guarantor (Art. VII/VIII OST)

appropriate State (Art. VI  
OST)



## Reflections:

- Registration has a function, different from Space Traffic Management
- Future Mega-Constellations and Registration
- Launch of a space object in different steps: relevant 'launch' for the qualification as launching state
- Non-compliance with contractual obligations between launch service provider and payload customer: are there options for a ,registration on behalf' ?



# The international regime of responsibility / liability – Need for institutional / operative structures

- No fault liability without traffic rules
- Basic principles of responsibility/liability an element of international law –  
operative traffic rules a layer of administrative law
- How to implement traffic rules in the setting of international law?
- Comparative examples by ITU and ICAO
- Need for an administrativ-procedural setting of space law?
- Guidelines / best practice / soft law and operational aspects



# UNGA Resolution 1962 (XVIII) of 13 Dec. 1963 – Declaration of Legal Principles ...

- **Basic Principles governing the Activities of States in the Exploration and Uses of Outer Space:**
  1. Province of all mankind
  2. Freedom for exploration and use
  3. Non-Appropriation
  4. Use in accordance with international law/ UN Charter
  5. International Responsibility for national activities
  6. Cooperation, mutual Assistance, Consultations
  7. Registration as connecting point for jurisdiction and control
  8. Liability for launching States
  9. Assistance for astronauts in distress
  
- **Principles are implemented by the OST and generally accepted / customary international law**
  
- **Today's challenge: Safeguarding the consent on those Principles, strengthen awareness and knowledge, add operational tools for its adaptation to challenges of the 21st Century**



# **E. Expectations / Visions 2017 / 2018 ...2020...**

**Thematic priority 2 / Outcome of WG 5 Treaties  
and global space governance**



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## Cross-discipline perspectives

- Means to promote understanding, acceptance and implementation of the UN Treaties and Principles on Outer Space
- Objective to study trends and challenges to the progressive development of space law
- Identifying possible ways and innovative solutions for the progressive development of space law
- Assessment of the status of the legal regime / potential gaps / future regulatory perspectives



## Registration and space traffic information – two different legal regimes, goals and functions

- Registration is a prerequisite for jurisdiction and control over an space object in outer space (indicative orbit information, not real time)
- Traffic information is a prerequisite for safety, security and sustainability of outer space activities (real time information necessary)
- Registration system well established in the UN system (regular improvements possible)
- Traffic information / Information on objects and events remains an challenging open subject (information access for all space actors)



## The way forward to a 2020 Guidance Document

In the frame of the UNISPACE+50 process , until 2018,  
approaches and possible **criteria should be identified**

for an **UNCOPUOS Guidance Document** by 2020

with essential information

- on the state of affairs of the legal regime governing outer space
- incl. relevant instruments applied through national regulatory frameworks and international mechanisms for cooperation.

### **Goal:**

Guidance for States wishing to become a party to the 5 UN Space Treaties





## LSC as the prime multilateral body with a mandate for the progressive development of international space law

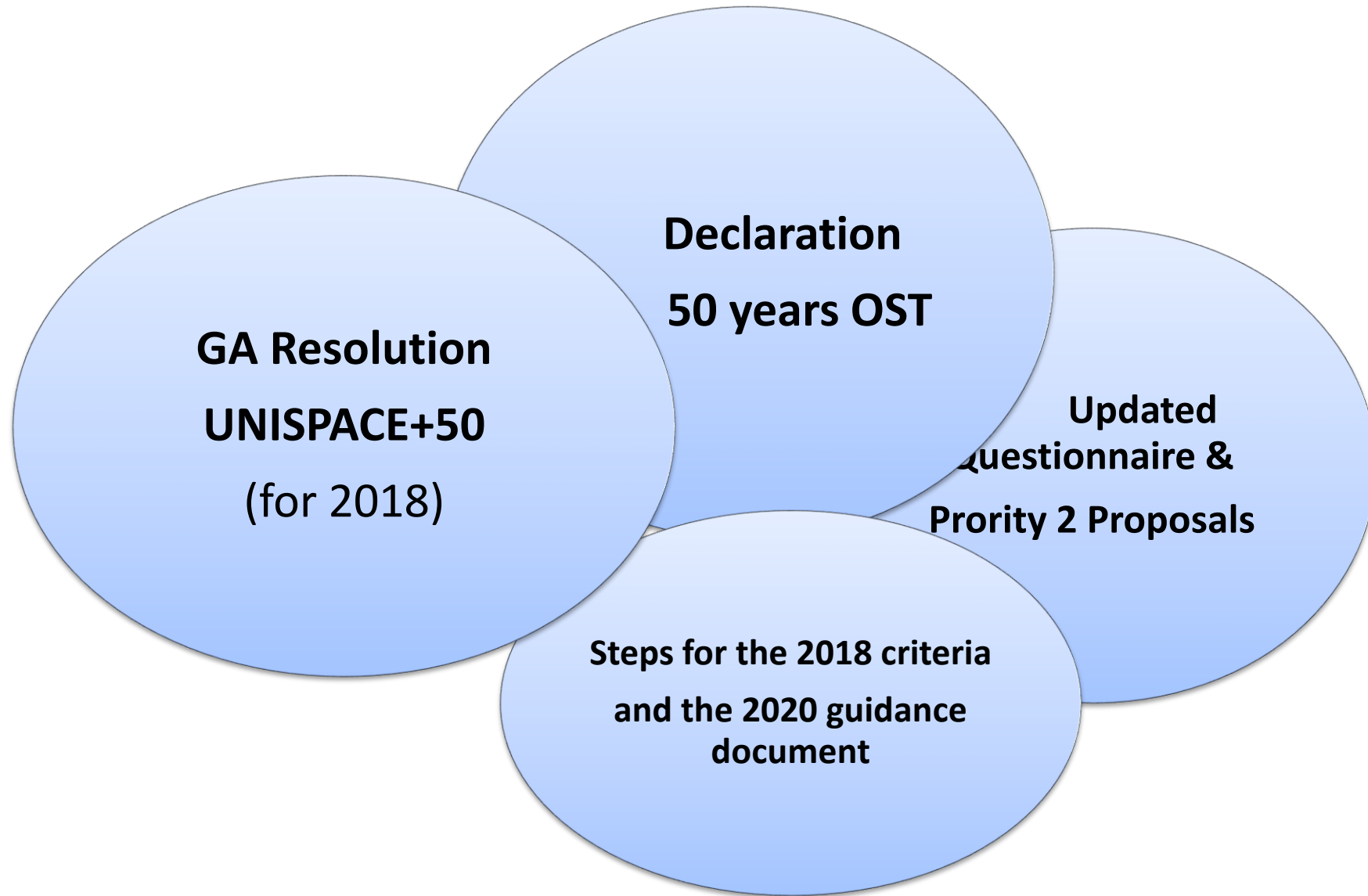
UNCOPUOS Report of its 59<sup>th</sup> Session, June 2016

GA Official Records A/ 71/20

(284.) The Committee agreed that it served, together with its two Subcommittees, as a unique common platform for promoting international cooperation in the peaceful uses and exploration of outer space on a global scale, facilitating rule of law in outer space and capacity-building in space technology and its applications, for the benefit of all nations, in particular developing countries.



# Work and Objectives for LSC 2017



# UNISPACE+50 – the way forward

The preparatory work for UNISPACE+50 and its final outcomes should be shaped throughout the period towards 2018 by taking into account the:

- ❖ work carried out by the Committee and its subsidiary bodies,
- ❖ the role of symposiums being held regularly during the sessions of the two Subcommittees,
- ❖ contributions by States members of the Committee and permanent observers,
- ❖ the series of the High-Level Forum organized by the Office,
- ❖ the programme of work of the Office for Outer Space Affairs and its Subcommittees.

A final draft of a dedicated General Assembly resolution should be presented for endorsement at the UNISPACE+50 segment during the sixty-first session of the Committee in June 2018. The negotiations on a draft resolution should start during the 2017 cycle of the sessions of the Committee and its Subcommittees.



Thank you for your attention



