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Space Law

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Publication of the Interim Summary on the Review of the Space Activities Act

Part 2: New Rules for Re-entry and Manned Flights – and Other Issues

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1. Introduction

In January 2025, the "Basic Approach for the Revision of the Space Activities Act – Interim Summary" (hereinafter referred to as the "Interim Summary") was published, encapsulating discussions aimed at amending the *Act on Launching and Managing Satellites* (hereinafter referred to as the "Space Activities Act"). In the previous article, we provided an overview of the content related to space activities involving reusable rockets and suborbital flights. In this issue, we will summarize the proposed new rules concerning satellites and manned flights as highlighted in the Interim Summary, and finally, touch upon other important points not covered in the previous or current article briefly.

2. New Rules Concerning Satellites and Manned Flights

The Interim Summary presents the following approach for the formulation of new rules concerning satellites and manned flights:

2.1. Diverse Satellites

Regarding satellites launched into space by rockets, the Interim Summary has identified the following issues:

2.1.1 Inter-orbital Transporters and Other Devices

Traditionally, the term "satellites" has primarily referred to communication satellites, remote sensing satellites, and positioning satellites that are placed in orbit around the Earth and perform various functions in that orbit through radio communication with the Earth. However, recently, various devices such as inter-orbital transporters, asteroid probes, and lunar transporters, which are used in or beyond Earth's orbit, have emerged and are actively conducting space activities.

Under the current Space Activities Act, these are all categorized as "satellites." This means that the same regulations, such as permits for satellite management (hereinafter referred to as "satellite management permits"), are applied to all of these, in addition to which regulations various guidelines issued by the government have been provided for specific uses. Conversely, we have seen a growing view that these should not be uniformly treated as "satellites" but rather should have rules tailored to their specific uses under the Space Activities Act.

2.1.2 On-orbit Transfers

It is anticipated that we will witness more cases where ownership of satellites placed in orbit are transferred on-orbit, or where the entity managing the satellite changes during the transition from the initial operational phase to the subsequent phase. However, the current Space Activities Act does not clearly outline the procedures for the government to confirm the transferee of the satellite or for transferring satellite management to another party.

The Interim Summary suggests the need to clarify the concept of "satellites," including termination measures for their management, the procedures for transferring satellites or their management, and to consider the necessary measures to clearly define the scope of regulations under the framework for the satellite management permits.

2.2. Re-entry

Previously, satellites which were once released into space were either deorbited to burn up in the atmosphere or placed in orbits beyond Earth's orbit (commonly known as "graveyard orbits") to avoid interfering with other satellites' activities. That said, re-entering the satellites intentionally into the atmosphere to land or splash down, aiming at returning them to Earth substantially intact, as become more common.

Under the current Space Activities Act, the government is anticipated to review the "termination measures" for satellite management permits, including missions to recover parts of the satellite without burning them up (Article 22, Item 4 (i)). However, the center of discussions has been whether

re-entry activities should be regulated under a separate permit framework rather than as part of termination measures for satellite management. The Interim Summary suggests the need to consider specific rules to ensure public safety, including distinguishing re-entry activities from termination measures, under the current Space Activities Act.

2.3. Manned Flights

Lastly, we address issues related to manned flights, which are substantially different types of space activities from those discussed thus far.

2.3.1 Manned Flights

Manned flights to space have long been an aspiration of humankind. These days, endeavors aimed at the practical implementation of the manned flights have been accelerating. The term "manned flight" encompasses a wide range of flight types. Currently, while private companies are providing services to transport astronauts to the International Space Station (ISS) in the U.S., an increasing number of companies are geared to offer space travel services through suborbital flights involving stays in manned vehicles placed in or beyond Earth's orbit, including the ISS.

The current Space Activities Act does not have specific rules for manned flights. The question of how to regulate these diverse forms of manned flights and ensure their safety is being explored not only in Japan but also in other jurisdictions. Even in the United States, where the commercialization of manned space flights and transport is considered to be at its most advanced, specific safety standards for manned space flights and transport have not been established. The U.S. adopts an approach known as the "learning period," where the government limits its authority to regulate the launch vehicles to avoid hindering business progress through strict regulations while requiring obtainment of informed consent from participants to waiver of liability. The Interim Summary notes that, while the U.S. regimes of informed consent and the learning period do not have directly applicable counterparts in Japanese law, the underlying concept of phased standard development in line with technological advancements could be partially incorporated into Japanese law, indicating the need for continued examination of this issue.

2.3.2 Stays in Space

In addition to issues related to manned transport itself, much discussion is being held on the necessity for rules to ensure safety during the stay of transported individuals in space. However, if safety standards for passengers were to be formulated and applied in addition to existing permit standards (i.e. satellite management permits), this could result in overlapping review burdens with safety reviews by NASA or JAXA, potentially hindering manned activities in the ISS or the Artemis program. The Interim Summary suggests the necessity to consider the scope of regulations for manned space flight and transport systems, specifically on whether the scope of the regulations should extend to manned activities based on international arrangements such as those governing the ISS and the Artemis program.

In light of these challenging issues, the Interim Summary indicates the need to continue careful discussions with stakeholders such as JAXA, private companies, and experts, considering the state of technological development, referencing legislative examples from other countries as well as domestic manned transport laws such as aviation laws, to examine the feasibility and scope of regulatory framework of the manned space flight and transport.

3. Other Important Issues Raised in the Interim Summary

Thus far, we have focused on the approach for the new rules responding to the diversification of space business proposed in the Interim Summary. In addition to these, the Interim Summary also points the way forward for future revisions on the following points:

System to Strengthen International Competitiveness of the Space Industry

- Establishing a framework to appropriately regulate launches conducted by Japanese individuals or corporations <u>outside</u> Japanese territory;
- Establishing a system to appropriately regulate launches conducted by <u>foreign</u> individuals or corporations within Japanese territory; and,
- Establishing a comprehensive permit system for multiple launch activities.

Rules to Ensure the Safety and Reliability of Space Activities

- Expanding the scope of government compensation to accommodate diverse space transport types and large low-orbit satellites with low flammability;
- Establishing a reporting system for accidents such as those giving rise to third-party damages;
- Regulations governing the confirmation of payloads when carrying hazardous or lowflammability objects; and,
- Expanding rules related to the registration of space objects.

As regards some of these issues, a consensus between private businesses and the government has not been reached. It will be interesting to see how discussions progress towards the final summary, the release of which is planned soon.

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