

Legal Concept of Space Object and State Responsibility

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Abstract

A more precise legal concept of a space object is needed. This should be a description broad enough to encompass further technological advances yet precise and concrete from a legal point of view. As a working hypothesis, and in connection with liability issues, it can be said that a space object is any man-made material, equipment, engine or appliance and its component parts, placed or deployed in outer space, loose or detached from other space objects, whatever its size. The task goes beyond the interpretation contained in the Registration Convention. It must be reflected in future protocols, especially the Registration Convention and the Liability Convention.

Damages caused by unidentifiable particles, space objects in orbit or traveling through outer space, or even tools escaped from astronaut control during an EVA mission may present an extraordinary legal paradox. There may be a loss of life, spacecraft, satellites, or payloads by an object placed in space by humans, yet no launching state will be considered liable.

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Another issue for the jurists attention is the need to create an international organism: to coordinate space activities in outer space especially space transportation; to administer the fund of compensation for damages caused by space objects or particles for which the launching State is unknown; and to settle controversies linked with space activities and their consequences.

Toward a Definition of Space Object

Why has the definition or the description of space object been delayed so much? Perhaps the reason was the fear of a concept that could rapidly become obsolete. This is the challenge for jurists trying to outline a legal framework for a technical activity.

Everyone agrees that space object means a man-made artifact, engine or device, deployed in outer space with the purpose of performing a space activity and which could have been built or assembled on Earth, a space station or a celestial body. The artificial nature of the object and its spatial purpose is decisive in recognizing it as the space object with which we are dealing from the legal point of view.

Therefore, we must exclude from the meaning any natural space object such as meteorites, asteroids, or celestial bodies. Should we consider that the parts of a space object share its nature? They do.

In accordance with the *corpus juris spatialis* the concept of space object includes its component parts.¹

Therefore, those parts that may be detached or lost by the principal space object continue to be a part of it nevertheless, separated and, therefore, continue to be a space object although they do not consist of a module or autonomous part of the space object.

Responsibility for Damages Caused by Space Objects or Their Component Parts

Any damage caused by a space object or its component parts is the responsibility of the launching state. The impossibility of determining the launching state when considering micro particles remains an unsolved juridicial problem.

The Need to Identify the Parts of the Space Object

The identification of the component parts is a legal need in order to establish the link between the launching state and the object. Therefore, it is necessary to implement a uniform system of identification for space objects and their component parts as exists for aircraft. Letters may indicate which is the state of registration.

To simplify the system it could be taken the letters assigned by ICAO to each state, for it is hard to imagine a launching state without aeronautical activity. This can make recognizing an object easier, especially if we take into consideration that space planes are going to be something common in the near future.

The Need to Register the Identifiable Parts of the Space Object

Once an object or its component parts are identified, the next step is to register them in the local registry and to send the pertinent information to the Secretary General of the United Nations, or an international organization to be created for that end.

Registration as a Legal Duty

The Convention on the registration of space objects does not establish as a legal duty said registration. The reasons that justified this decision in the past are no longer valid. Space activities are performed by a great number of states and international organizations, and security imposes the minimal precaution of global and open information regarding what is developing in outer space.

Conclusions

1. Space object is a man made artifact deployed in outer space or on a celestial body to accomplish a space activity decided by its launching state or authority.
2. The component parts, detachable or not, share the condition of space object and should be properly identified.
3. The registration of the space object and its component parts must be a legal duty, as well as the information to be transmitted to the Secretary General of the United Nations.
4. Identification marks of space objects must be established upon

the global system established by ICAO or a similar one.

Footnote

1. Convention on International Liability for Damage Caused by Space Objects, art. I, Para. (d), and Convention on Registration of Objects Launched into Outer Space, art. I, Para. (b).