

## CONFERENCE ON SPACE PROPERTY RIGHTS: NEXT STEPS

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In December 1998, the National Space Society held a successful conference on property rights in space. The decision was reached to hold this conference because the National Space Society perceived that the uncertainties in international space law were creating disincentives to private sector investment as well as public/private partnerships in space endeavors.

### Introduction

The international environment for space activity has changed considerably in the past 15 years. Not only has the Cold War rivalry ended, but two years ago, a space revolution of sorts took hold. Commercial space activities have replaced government space programs as the dominant source of space industry revenues. Furthermore, commercial space enterprises are increasingly diverse and substantially supported by multinational corporations operating in a global marketplace.

### Background

The question of space property rights is not new, nor is it new to the National Space Society. The issue itself figured in science fiction and scholarly papers as early as 1951. NSS was an active participant in discussions leading to the

1967 Outer Space Treaty and was instrumental in blocking ratification of the 1979 Moon Treaty in the U.S. Senate.

To date, several important principles have been established by customary law and treaty. First, national sovereignty stops where outer space begins, except to the extent that nations exercise jurisdiction and control over their own spacecraft. Second, that national appropriation of the Moon, other planets, asteroids, etc. is forbidden. And third, that private property rights are not forbidden.

This last point was controversial for some time. The 1967 Outer Space Treaty forbids "national appropriation" of the Moon and other celestial bodies (a term that includes both other planets and asteroids and comets). It does not forbid private property rights on those bodies.

### The 1967 Outer Space Treaty

The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, known as the Outer Space Treaty, was the first serious effort by the international community to establish ground rules for the exploration and development of space. Written during the Cold War, it reflects the concerns of the superpowers.

With the space race in full gear, fears of establishment of military advantage through territorial claims on the Moon and elsewhere are reflected by the terms of the treaty. This treaty has been ratified by more than 100 nations. The treaty places constraints on the establishment of private property rights but it allows for the recognition of them.

The Outer Space Treaty was written at a time when space activities were undertaken exclusively by government and is directed at the activities of governments. This fact, in and of itself, raises questions and causes some confusion as space entrepreneurs start to examine the existing statutes in an effort to apply them to their business plans.

Article I of the treaty declares that outer space is "the province of all mankind" and shall be developed "for the benefit and in the interests of all countries" and shall be "free for exploration and use by all States." These grandiose-sounding pronouncements are factually rather vague and have therefore been open to different interpretation by different states. The National Space Society concurs with the general opinion offered by the United States that Article I is a statement of general goals and does not create legally binding obligations.

The key provision, relative to property rights, is Article II, which declares that "outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." This provision prevents national governments from making claim to territory in space. However, the discussion continues. Article VIII states that a "State party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object." And further, "ownership of objects launched into outer space ...is not affected by their presence in outer space."

Thus, while governments may not appropriate space, they are required to retain legal jurisdiction over objects launched into space, be they rockets, satellites, or base infrastructure on a celestial body. If the objects are launched as private property, they remain private property in space.

Key to interpretation of Article II is the interpretation of the term "national appropriation." If one follows a narrow interpretation, which the National Space Society, after reviewing prior drafts of the treaty judges to be the intent, then "national appropriations" applies only to governments and not to private companies, individuals, etc. Previous drafts of the clause distinguished between national and private appropriation and prohibited both. The fact that the final Treaty does not include a reference to private appropriation is read to indicate that private appropriation is not covered by the Outer Space Treaty of 1967.

Thus the Outer Space Treaty of 1967 potentially permits the right to own vessels and facilities in space and the immediate surrounding area of operations if they are actively used; the right to ownership of "capture" minerals and resources (this applies the "rule of capture" so that minerals and resources cannot be claimed in their natural state which would be a claim to territory, but can be claimed when mined or "captured"); and the potential right to claim private property as long as sovereignty over the territory is not brought into question. Individuals and companies can make property claims in space and nations may recognize these claims. The only prohibition is against nations from appropriating space and claiming sovereignty to any portion of space or of a celestial body.

### The Moon Treaty

The 1979 Moon Treaty was intended, in part, to clarify the property rights issue by explicitly forbidding private exploitation of mineral resources on the

Moon and other celestial bodies. Where the Outer Space Treaty largely established general principles for the conduct of activities in space, the Moon Treaty sought to substitute an international regime in which a monopolistic international authority would conduct all exploitation, with a substantial share of the revenues going to less developed countries.

The Moon Treaty states, in Article II, that “neither the surface nor the subsurface of the moon, nor any part thereof or natural resources in place, shall become property of any State, international intergovernmental or non-governmental organization, national organization or non-governmental entity or any natural person.” In this clause, the Moon Treaty flatly prohibits both government and private property ownership on any celestial body in the solar system.

The Moon Treaty also addresses the provision, under Article VIII of the Outer Space Treaty, for the acquisition of a property interest in the area surrounding a vessel or facility. The Moon Treaty states that “the placement of personnel, space vehicles, equipment, facilities, stations and installations on or below the surface of the moon, including structures connected with its surface or subsurface, shall not create a right of ownership over the surface or subsurface of the moon or any areas thereof.”

One of the most controversial provisions of the Moon Treaty is the declaration that the Moon is the “common heritage of all mankind.” The Treaty calls for agreement to “establish an international regime ...to govern the exploitation of the natural resources of the moon.” If the “common heritage of all mankind” is read to suggest worldwide communal ownership of space resources, then this provision bodes ill for the establishment of private property rights in space. If a broader and vaguer interpretation is applied, treating celestial bodies more like Antarctica or a National Park, the private property regime remains unclear.

The approach taken by the Moon Treaty was initially popular with many Third World countries. However, it has been ratified by only a few countries, and has not been signed by the leading space powers, the United States and Russia. Its ratification in the United States was blocked by a diverse coalition including space advocates, aerospace and mineral companies, and B'nai B'rith. Because of its limited adoption, especially compared to such widely accepted agreements as the Outer Space Treaty of 1967, the Moon Treaty is viewed as a document of passing technical interest, and is generally regarded today as a dead letter.

#### A Call for a Space Property Rights System to Meet Today's Space Exploration and Development Environment

The question of revisiting the issue of space property rights is coming up with increasing frequency. There are two reasons for this. The first is the obvious failure of the Moon Treaty. The second is the imminence of private commercial activity in space that will raise legal questions regarding private property rights. At least one American company, SpaceDev, has already announced plans to claim an asteroid as private property. Other companies - not necessarily American - are likely to follow suit.

Participants attending the National Space Society's 1998 Conference on Space Property Rights agreed that an internationally accepted legal regime is needed to efficiently allocate, enforce, and redistribute private property rights according to due process. In particular, there is a need for a widely accepted set of definitions, rules, and enforcement procedures to reduce uncertainties associated with private investments in space projects involving non-terrestrial materials and celestial locations. In short, in order to avoid a protracted period of investor uncertainty, and to limit the risk to other important interests, the governments of spacefaring nations need

to establish a legal regime for the commercial development of space.

Consultation among academics, space advocacy groups, and industry members has produced the following guidance on characteristics of a successful space property rights system. Such a system should possess the following characteristics:

- Clear standards for filing claims, determining priority and granting claims that are accepted by all parties.
- Claims that may be filed by governments, international organizations, corporations, and private individuals.
- Claims that may be filed for both commercial and non-commercial purposes (e.g. scientific research or environmental preserves).
- Incentives for innovative and early claimants, somewhat similar to the “pioneer preferences” for frequency licenses granted by the Federal Communications Commission.
- Claims that can be broad or narrow in scope - that is, for exclusive use, or just for mineral rights.
- Claims that require positive efforts by the claimant, such as “working the claim through telerobotics or actual on-site possession within a reasonable time.”
- Claims that are transferable in order to create a secondary property market and thus promote capital formation.
- A system that encourages competition by discouraging the formation of public or private monopolies.
- Privacy and property of claimants should be protected subject to due process of law.
- Home or “flag” nations of claimants should have authority to enforce health, safety, and environmental laws, impose taxes (though a moratorium on such taxes might be appropriate in the early stages, as

with the Internet), and protect intellectual property rights.

- There should be a dispute resolution mechanism, or a provision for reciprocal recognition of judicial decisions

### Implementation of a New Space Property Rights Regime

The principles outlined above obviously represent a substantial departure from the Moon Treaty. They could be pursued in one of three ways. The best course of action would be through a new multilateral agreement reached through the United Nations and the Committee On the Peaceful Uses of Outer Space (COPUOS) similar to, but superseding, the Moon Treaty. Such an agreement should establish a property rights system that rewards discoverers, investors, and risk takers for their contributions - unlike the 1979 Moon Treaty regime, which was seen as statist and confiscatory. A property rights system should also encourage early development, in order to offset concerns about political and technical risk that might otherwise frighten investors. Such an agreement could be reached through the United Nations (COPUOS) process, or as an agreement purely among spacefaring nations.

Going through COPUOS offers the familiarity of a well-established process and institution, and the likelihood that an acceptable agreement, if reached, will be widely regarded as legitimate. The disadvantage of COPUOS, which operates by consensus, is that it has been largely paralyzed by the lack of consensus since the 1970s, and tends to operate with painful slowness where controversial issues are involved.

A multilateral agreement among space powers is likely to be easier to reach. First, the number of participants would be much smaller. Second, there would be far more overlap in interests among the

space powers. The disadvantage of this approach is that it would be subject to criticism from non-spacefaring nations who feel left out.

Should the above approaches prove unworkable, individual nations could proceed unilaterally to adopt a program of recognizing claims to space resources by its citizens. In doing so, the nation could make it clear that it was not claiming sovereignty over such resources, but simply recognizing the claims of its citizens. Such an approach might mirror that of the United States' Deep Seabed Hard Mineral Resources Act, which recognized similar claims to mineral resources under the high seas, subject to various conditions. The advantage of this approach is that it could be put in place almost at once, (possibly even by Executive Order in the United States.) The disadvantage is that it would likely be controversial and might inspire a backlash.

### Conclusion

History demonstrates that in time of exploration, unclear property rights systems breed uncertainty, hostility, and even war. The time is now ripe to promote the development of a space property rights system that will promote development, free enterprise, and the rule of law. Such an effort would lay the foundation for peace and prosperity in the next millennium, on the Earth and beyond.

### Further Reading

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