Registering Lunar Activities

Solutions to the Shortcomings of Current Law and Practice

Moon Dialogs Research Salon #14 | June 2021

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About Moon Dialogs

The Moon Dialogs is a partnership focused on governance and coordination mechanisms for the lunar surface. It is convened by organizations and participating researchers exploring voluntary, multilateral mechanisms, norms, and economic arrangements that aim to grow ecosystems of lunar activity, both governmental and non-governmental.

The project is a collaboration between Open Lunar Foundation, Secure World Foundation, the MIT Space Exploration Initiative, Arizona State University, and For All Moonkind. The Dialogs bring stakeholders to the table on equal footing, with an emphasis on practical tools, operating models, and rights frameworks for the next 10 years. It is not a consensus forum, but a place to put forward ideas which will accelerate short-term activity and support bold plans for sustained presence.

The Moon Dialogs Research Salons

The Moon Dialogs research salons seek to cultivate thought leadership on lunar surface coordination mechanisms to accelerate peaceful and sustained presence on the Moon. We host monthly research salons on salient topics every full Moon.

If you would like to propose a topic or a speaker for our next salon, please contact victoria@moondialogs.org.

Missed a salon? Watch the videos and read the reports at moondialogs.org/events. To get involved with Moon Dialogs, visit our website at moondialogs.org.

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Introduction

Salon 14, Registering Lunar Activities: Solutions to the Shortcomings of Current Law and Practice was part of the Moon Dialogs' Sustainable Moon series and featured the first public workshop of The Registration Project with distinguished space law experts. The Registration Project was launched to address the shortcomings of existing law and practice regarding registration as humankind returns to the Moon. The Project is a joint venture of the Moon Village Association (MVA) and the Global Space Law Center (GSLC) at Cleveland State University.

This salon was a follow-up on Salon 5: Registration Mechanisms for the Moon, held in September 2020.

This Salon features an introduction to the Registration Project, a global working group, as well as a discussion with the expert group on the shortcomings of the existing registration law as well as the proposed solutions.

Featured Speakers

The Salon featured the following distinguished speakers:

Dr Mark Sundahl: Dr Mark Sundahl is a Professor at Cleveland-Marshall College of Law, where he teaches International Business Transactions, Commercial Law, Space Law, and Ancient Athenian Law. Prof. Sundahl is a leading expert on the law of outer space and focuses primarily on the business, legal, and policy issues arising from the recent increase in private space activity.

Antonino Salmeri: Antonino is a doctoral researcher in space law at the University of Luxembourg and co-lead of the Space Exploration Project Group at the Space Generation Advisory Council

Jessy Kate Schingler: Jessy Kate is the Director of Policy and Governance with the Open Lunar Foundation. Jessy Kate is a main stage TED speaker, and affiliate researcher at both the Berkman Klein Center at Harvard and the French Centre National de la Recherche Scientifique (CNRS).

The salon also featured participants from the industry, academia, and the civil society.

The Registration Project

Dr Mark Sundahl and Antonino Salmeri put together the Registration Project in February 2021 in order to address shortcomings that exist in the registration of space objects and activities — key issues that must be resolved as we move forward with lunar activity.

At the start of the salon, Dr. Sundahl explained that the registration of lunar activities is an important issue to examine from a policy perspective because competition for limited resources on the Moon—between both international actors and commercial organizations—increases the risk of conflict. Thus, policymakers should be focused on preventing conflict and interference.

Further, he explained that in the black letter of space law, registration is quite important. In a direct sense, registration determines which country has jurisdiction and control of a space object. Indirectly influences a number of areas of space law as it provides a lot of information through the process. Both the Outer Space Treaty and the Registration Convention discuss the registration of space objects. The question is, does that existing law suffice as we move forward from orbital activities to lunar activities? Or do we need to revise it?

The legal significance of registration lies in the information that is provided. It is important with the perspective of identifying liability and also with respect to the legal duty of rescue and returning astronauts as well as errant components of space crafts. It is also critical for ensuring transparency when it comes to peaceful uses of outer space and provides some information about the space activities of States.

Dr. Sundahl stated that one of the greatest implications of registration is that it enables other parties to properly fulfill their obligations to act with due regard and to consult in the event of a possibility of harmful interference. In a nutshell, the question that arises is what are the shortcomings of existing law and practice regarding the registration of space objects as it will be applied to lunar activities?

A major shortcoming of existing registration laws is that it is exclusive to objects and not activity. The Registration Project is suggesting that the existing law be amended so that it requires registration of lunar activity as well. To provide information pertaining to the lunar map as opposed to the present orbital parameters.

In addition, existing law and practice does not require registration of planned future activity or provide for the registration and protection of significant scientific or cultural sites, such as the sites of the Apollo landings. Finally, the registration convention does not provide any priority rights, it's simply informational. There is also a question of whether the lunar registration should incorporate a provision that gives registration a legal effect, a priority, so that future activities can be planned for.

During this salon, the group of experts and members of the Registration Project reflected on these questions in more detail.

Key Themes

Listed below are the key themes identified during the discussion. These themes are summarized with insights provided by each featured speaker. To further understand these themes, please watch the published video of the salon.

Theme 1: Shortcomings of the Present Registration Regime

One of the perceived shortcomings of the registration regime that was brought up in discussion was that it doesn't serve the purpose it was intended to. Although it is meant to provide transparency for space activities, registration does not provide timely information about what is happening in space. Not all participants perceived this as a shortcoming, however. Some considered registration as merely a record of what has gone into space for the purposes of providing general transparency and acting as a confidence-building measure.

Two issues were highlighted with regards to what items fall under the Registration Convention. Firstly, should it apply to anything launched into the Earth's orbit and beyond? What about reusable space vehicles? Currently, the Registration Convention requires the registration of launched space objects but not reusable vehicles. The other issue is how would space objects be defined. Would something manufactured on the lunar surface be considered a space object? In light of these questions, Registration Project members were urged to think about registration in terms of defining what they want to do.

Another identified shortcoming of the Registration Convention is the assumed relationship between the State of registry, the liable State, and the launching State. Only one of the launching States can register a space object, meaning it will be held liable by default. This is one of the main reasons why many States do not want to register under the Convention. For example, the Netherlands does not want to assume liability for launches procured by private entities established in its territories. Instead, it uses Article XI of the Outer Space Treaty (OST) to notify the United Nations (UN). This defeats the purpose of identification, awareness, and transparency. It also highlights the lack of countries that have ratified the Convention. (As of July 2021, only 71 States have ratified it.) Finally, timeliness of registration was another flaw in the current system as it does not provide information for situational awareness—reiterating the need for additional means or registries to meet the current and future needs.

Theme 2: Relationship Between the Outer Space Treaty and the Registration Convention

Some participants expressed the view that the relationship between the OST and the Registration Convention is not clear. Based on registration, a State may exercise jurisdiction and control over a space object. However, in reality, jurisdiction and control are exercised by ownership. OST states that national registration gives the State jurisdiction and control.

From a national perspective, a discussant stated that we are asking a lot of registration. In his introduction, Dr. Sundahl presented a whole suite of purposes registration can fulfill. While those are useful goals, it is important to recognize that the more expectations and emphasis put on registration the more it will be relied upon to achieve policy or legal goals instead of utilized primarily as an administrative tool. Thus, it is safe to assume that State actors will be tempted to manipulate or take advantage of the registration system (more so than they already have).

An example provided during the discussion was that when the United States is one of multiple launching States, it is often more appropriate for other countries to register as it is just using a US launch vehicle. In practice, when there are multiple launching States, it is agreed that whoever registers does not automatically bear liability. Instead, the question of liability will be dealt with should a situation arise.

Further, it was stated that governments can divorce the questions of liability from registration. If liability is automatic, then there will be less registrations. Another important element to this is the fact that registration is often used for political purposes by countries wanting to claim “success” in space. (For example, some components built into the International Space Station are registered.) In sum, the more pressure is put on registration to achieve multiple goals, the greater potential policy tensions will be reflected in the registration activity. To this point, Dr. Sundahl replied that if a new registration system were to be created it should not be tied to the launching State and liability in order to obviate these concerns.

Theme 3: Information Sharing

Another participant noted that the notion that liability can be avoided by registration is, strictly speaking, not true. What may be avoided is drawing public attention and/or scrutiny as a liable State. Whether the object is registered or not, it does not take away the legal liability of the launching State. This is a major policy concern, and it suggests that if we were to develop an additional or second registration system for the Moon, we should avoid the pitfall of keeping the same definition of a “launching State” for both liable and registering entities.

Antonino Salmeri suggested that a workaround could be that registration or information sharing is not tied with the launching state but with the responsible State, under Art VI of the OST. Essentially, this is what is already done. Additional problems may arise with the creation of new objects on the lunar surface. A launch is regulated when it is from Earth, but once an object is made by crews on the Moon, can it be expected to fall under the national government for licensing, and exercising jurisdiction and control?

An additional question was raised during the discussion. Namely, are the policy goals aligned with what we’re trying to regulate from a legal point of view? Towards this question presented, the first thing that arises is the coordinate systems. From an enforcement perspective, if internally the regulatory system is carved out but does not have a centralized mechanism, what’s the point. From a company perspective, it creates hesitation to register and give information and brings up the question that is a system going to be created that regulates activity and not space objects when what is a space object is ambiguous? Mark Sundahl noted that the idea of comfortability is a concept that may help to create a culture of information sharing.

Theme 4: Solving the Problem

Jessy Kate Schingler underscored the idea of definitions and clarity, she stated that a distinction is made by certain scholars between “registration” and “catalog” from the Earth orbit perspective. A registration regime could include active and passive uses. The active uses are related to ongoing interactions. For example, registration would be useful if you are entering a safety zone or interfering with another activity on a timely basis. This is quite different from a registry that is passive and does not actively keep track of activities. Thus, it may make sense to think about these kinds of activities and registries separately. The question of space objects arises when the payload is shared by multiple parties, commercial or national.

Antonino called for operationalizing Article IX (“due regard”) and Article XI (informing the UN and the public of activities) of the OST through sharing voluntary information. This information could be stored and once it's made public, it could be used for “due regard” and as a starting point for consultations. Although the language of Article XI requires States to share certain information, that can be improved upon and used as a best practice. Another option is to leverage private actors through catalogs, as Jessy Kate mentioned earlier, what in the Hague Building Blocks are called databases.

An interesting question asked during this salon was if registration practices are utilized for the Moon, what governing body would approve them, and would any rights be created? If merely registering something confers a right, the other pitfall is who will approve them. Registration regimes could be created for the Moon that fosters international peace and security, as well as commercial development and solves gaps in space law.

Theme 5: Industry Perspective

For those working in the private sector, one pain point identified from a regulation standpoint is the lack of uniformity across nations. In particular, newer companies from emerging spacefaring nations do not have the infrastructure necessary to get licensed and registered. There is a need to make sure that every space actor is educated in what they need to do from a legal and safety standpoint, especially companies and countries that have not conducted space activities in the past.

During the discussion regarding possible incentives for private actors to go through the registration process, the question arose that if certain information is shared publicly, can it be claimed that the due regard principle was fulfilled?

Some participants brought up the Artemis Accords, particularly that signatory countries have committed to make the nature and location of their operations publicly available. That's an example of States coming together to do something consistent with Article XI. It could be imagined to build a practice derived from the Article XI obligation of the OST.

Aviation registries as an example of transparency surfaced during this discussion, and views were expressed that there are lessons that can be taken from the Cape Town Convention and Protocol procedurally without getting into what is protected in terms of interests or activities and objects.

Public Discussion

The second half of the salon consisted of an open discussion with attendees. During this discussion, it was highlighted that under the Roman law of jurisprudence, there must be multiple cases of a scenario in order to be applied as a law. As an example of State practice in terms of cataloging and registration, at the Mexican Space Agency (MSA) there is the obligation to have a record of what goes into space. However, when it comes to private entities who would like to send payloads with the MSA a catalog may be maintained. This is in keeping with the fact that registration is part of international law: as a state agency, there is an obligation of keeping a record of the registration of space objects.

It was mentioned that once notice is given, information is provided to the public—and once on notice, States have an obligation of due regard. One participant noted that the new Working Group on Space Resources actually deals with many of these aspects. This raised the idea that it's time to start taking stock of what has been done and bring it to the international community. UNOOSA, for example, is trying to work out a mechanism where all actors' views are taken into consideration. These actors include States, private entities, and civil society.

We have an opportunity to think about how the entire system can be made better, with the recognition that current space law and existing treaties were a product of their time. There are a lot of tools already in place that can and need to be utilized better, while also involving more of the international community in the development process.

Jessy Kate Schingler posed the question that outside of classified activities are there records in national registries not shared with the UN? She also asked if there is any reason not to make national registries public in a way that could facilitate third-party innovations. To which the response was that there is no legal obligation to make national registries public, the obligation is to keep one registry and to transmit that information to the UN for inclusion in their international database. Further, it was reiterated that different countries have different practices for their national registries. In general, there is a lack of transparent and consistent practices internationally with regard to national databases. Finally, there was skepticism about whether it would be good practice to make these databases public. Instead, it may be better for everyone to submit their information to the UN in addition to national registries. One participant brought up the example of Singapore, which has no official national registry and does not transmit any data to the UN. However, they do maintain a list of the objects.

Another question was raised as to whether or not there is a need to continue relying on national databases. To which it was expressed that there should not be too much reliance on the registration system to provide information. This was supplemented with the example of the registration system of ships, which is only national. The underlying questions are: 1) what information is necessary to record and share? and 2) when is a national registration the correct place for that information? If national registration requires private entities to provide information and is shared between, for example, Artemis Accords members, then that would be a good first step.

Finally, one attendee suggested we need to amend the Registration Convention. To that suggestion, another attendee noted that there are too many important values included in the Registration Convention and if we try to amend it, we may end up abrogating its core principles. Therefore, perhaps the Convention should be kept separate as is, and work should only be done on better implementation. In addition, perhaps we should create a separate mechanism of registration or cataloging activities on the Moon. In particular, we could look at aviation where there is a completely separate system for flights in the aircraft than the actual operational safety of the aircraft itself.

Policy Recommendations

Based on the discussion during this research salon, the following recommendations came to light in regard to registration practices.

- **Clear expectations from national governments:** Participants stated that suggestions should be given to the government and private sector as to what sort of information should be shared, thus also influencing practice in the short term.

- **Registration Convention to stay as-is:** The Convention serves an important purpose and should not be uprooted. Instead, something should be created to supplement it.

- **Operationalizing domestic registries:** By doing so, more States could be encouraged to share information of their activities with the public.

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