## IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7) Key Governance Issues in the New Space Age (4)

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#### PER ANTITRUST AD ASTRA: MONOPOLIES AND INTERNATIONAL SPACE LAW

#### Abstract

Space activities rely on capital-intensive assets, that benefit from deep technical expertise and from economies of scale. Because of these high barriers to entry, and because the practical operational space is ultimately limited, space actors enjoy an early mover advantage, allowing them to cement their leadership vis-à-vis others. This does not only apply to state actors but also the private entities that engage in space activities under their authorization and supervision. The ensuing dynamic can create a secondary barrier of entry for prospective space operators: not only do they enjoy a more limited domain to operate in; they might also be deterred by prohibitive conditions that come with the use of necessary technology. Within market environments, this risk of displacement is typically met through competition and anti-trust law. In the domain of outer space, likely due to the primacy of sovereign states as addressee of norms and the assumption of (commercial) space activities as inextricably linked with state action, there is no explicit equivalent.

At the present time, engagement in space activities is constrained mostly by the first of these obstacles: Sufficient know-how is hard to come by and the exorbitant costs hard to cover. Going forward, these barriers to entry that emerging space actors must overcome may shift to the point where expertise is readily available, financing and insurance becomes more accessible but the dominance of particular space actors may have shaped the available domain so as to affect emerging space actors, e.g. by de-facto mandating them to adopt certain procedures or technologies, comply with expansive safety zones or crowding available orbit space.

This text investigates if the safeguards of the Outer Space Treaty and other sources of international space law contain implicit market power limitations. In particular, analysis focuses on the potential emergence of mandatory access and contracting obligations for space service providers that hold factual monopolies. Special considerations are given if and to what extent the legal precepts of freedom of exploration and use, non-appropriation, freedom of access and due regard restrict overly dominant space actors. To this end, the paper will further take into account the work of UN COPUOS on the Space Benefits Declaration. This will demonstrate how reasonable market restrictions, immanent to a treaty built on the concept of equal access to space for all, strikes the balance between rewarding innovation and the promotion of space activities by emerging space actors.