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LEGAL IMPLICATIONS OF SPACEX'S SPACEPORTS AT SEA

Abstract

On June 16th, 2020, Elon Musk tweeted that SpaceX is building “floating, superheavy class spaceports for Mars, moon, hypersonic travel around Earth.” The next month SpaceX purchased two deepwater oil rigs in Texas. As a result, this paper discusses and analyzes the legal implications of creating a spaceport at sea. The introduction of this paper explains one presumption for the purpose of presenting a thorough analysis. The presumption this paper makes is that these two rigs, named Deimos and Phobos, were purchased for the purpose of turning them into spaceports at sea. In this case, a spaceport for launch vehicles that is analogous to seaport for ships or airport for aircraft as opposed to a simple launchpad. While SpaceX will not be the first company to use a mobile maritime launch platform, it will be the first company to use them as spaceports. This paper then continues with an overview of seabased launches. One advantage a seabased launch system has over a land-based system is that it allows for launches to be fired from the Earth’s optimal position by the equator. This in turn allows for an increase in payload capacity and considerably increasing payload capacity and reducing launch costs. This section continues with an analysis on notable examples of seabased launches, including the multinational company Sea Launch and China’s 2019 Long March 11 launch. This section ends by creating a clear distinction between maritime launchpads and spaceports in terms of licensing and regulations. The next section focuses on analyzing whether the main space treaties, specifically the Outer Space Treaty, Registration Convention and Liability Convention, are consistent with the licensing process required for operating a spaceport at sea. Due to the fact that the United Nation Convention on the Law of the Sea (UNCLOS) governs the use of the ocean, this section continues with a discussion analyzing UNCLOS to determine what specific legal issues SpaceX’s spaceport at sea will trigger. One such issue includes whether the UN’s prescribed economic exclusive zones, an area of the sea in which a sovereign state has special rights to the use of marine resources, may conflict with SpaceX’s application of international space law. Lastly, this paper concludes with recommendations to ensure that moving forward SpaceX’s spaceports at sea and similar future seabased spaceports can protect themselves from third party liability issues.