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Paper Title:	**Commercial Dedicated Rideshare to Catalyze the Space Industry**

Abstract:

Recent debate has arisen about the viability of distributed space architectures as the solution to realizing the vision of more cost-effective, capable and resilient space systems. Idealistically, disaggregating large space systems from the current large, highly expensive programs of record should create a network of satellites with increased technology refresh rates, lower cost and risk spacecraft with architectures that would be more resilient to malfunction, disruption, or destruction. However, several recent government reports seem to cast doubt in the ability for distributed architectures of small satellites to effectively address the issues that plague the US and international space industries.

This paper begins with a summary of the findings of several studies on the feasibility of small satellites distributed architectures, highlighting some of the underlying assumptions that drive their conclusions. Subsequently, the paper evaluates the validity of the conclusions of the reports, presenting the case for how small satellite distributed are an integral contributor to the health of the US space industry. The paper will then outline how commercial dedicated rideshare missions comprised of both commercial and US Government small satellites will effectively catalyze the industry as a whole.

Several commercial third party integration providers have emerged in the US market that have been seeking to harness the benefits of aggregating launch opportunities for multiple spacecraft on a single mission to increase the frequency of launch and decrease the launch costs for small satellites. The paper contends that these small systems are the seed for future larger class systems, as well as start to provide useful operational and/or scientific missions themselves. This paper outlines the mechanics of setting up successful commercial dedicated rideshare missions and challenges the US space industry to embrace this low risk, low complexity, and cost-beneficial means to demonstrating the capabilities of small satellite distributed architectures.