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COMMERCIAL HUMAN SPACE FLIGHT DEVELOPMENT AS A NEW MODEL FOR FIXED PRICE
RESEARCH AND DEVELOPMENT CONTRACTING

Abstract

This paper explores recent procurement strategies for the Commercial Orbital Transportation System (COTS) and the Commercial Crew Program (CCP) as a possible model for future research and development (RD) contracting. Over the past decade, NASA has utilized a combination of Funded Space Act Agreements and fixed price contracting to develop and deploy multiple new space systems. The same basic strategy is being used on Communications Services Program and the Commercial Low Earth Orbit Destinations Program; both now in different stages of development. Much focus has been on the programmatic innovations of these programs as their secret to success. Additional attention needs to be paid to the procurement innovations these programs represent. We will explore briefly the historical difficulties of fixed price RD on other programs. We will describe how the COTS and Commercial Crew program procurement strategies were structured. An analysis of the benefits of different aspects of the procurement strategy will be contrasted as needed with negative aspects of historical fixed price RD contracting. This will identify how the current method improves upon historical applications. A few alternative approaches will be identified, mostly as a mechanism for highlighting weaknesses in these approaches, and how the proposed strategy avoids those weaknesses. As part of the recipe for success, we will examine the characteristics of possible candidates for utilization of this procurement strategy. Characteristics that encourage success will be identified, as well as known non-selection characteristics for this strategy. In a practical exercise, we will apply these criteria to hypothetical space system development ideas and explore how decision making could be applied in a real world manner.