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STUDY OF THE PROJECT PORTFOLIO MODEL AND SYSTEM APPROACH IN SPACE ENGINEERING MANAGEMENT

Abstract

At present, for the leap-forward development, the aerospace engineering was faced with opportunities and challenges. Contradiction of the needs, capacities and resources highlighted, the traditional single aerospace project management methods cannot meet the requirements of space product development. At first, the achieving of the aerospace engineering overall strategic objective were set as the starting point and final destination for this paper, and the aerospace development plans and the overall planning of the model projects were semiarid. Secondly, the diamond model of space project was designed, which the targets were set from the following four dimensions: the task is important, system complexity, novelty and technical uncertainties of business, in order to analyze and identify characteristics and differences of the aerospace projects; for the aerospace project characteristics, the structure matrix (DSM) and domain configuration matrix (DMM) were designed to project portfolio and configure, and the aerospace project portfolio management mode was built which was strategy-oriented, models simultaneously, and the resource-constrained. Finally, the multilayer multidimensional organization management system was established, and the perspective and method of the systems engineering was applied to the all content and all aspects of the aerospace project portfolio management, business resources were efficiently organized and the good relationships between the projects were integrated handle, to enhance the overall aerospace capabilities and achieve the maximum global interests.