
Optimizing the simulators for rocket and space technology products under conditions of economic crisis

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The article considers the actual problem of reducing rocket and space technology (RST) product development costs using the example of the process of control system workout by performing “electronic launches” in terrestrial conditions on simulators of two types: mathematical modeling stands and semi-natural modeling stands. On the example of a simulator a short history of RCT product control system development is considered as well as a variant of their future state as a desirable optimization option. Risk management issues in optimizing the development of control systems for RST products on the simulator are also discussed. The possibility of developing algorithms of on-board digital computer in C ++ language, opening up new opportunities for reengineering the process of RST product control system workout on a simulator is presented as a key technology for simulator optimization. It is shown that some of the obtained results can be useful in developing an approach to optimizing the RSO, which are more acceptable than attempts to apply the concept of the Toyota production system “Lean Manufacturing” under fundamentally different conditions.

Keywords: *rocket and space technology, economic crisis, cost optimization, simulating stands, semi-natural modeling stands, mathematical modeling stands, control system, control system algorithms, on-board digital computer, C ++ language, lean manufacturing, Toyota*

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