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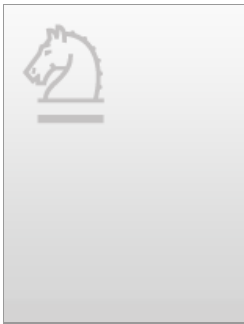
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Guide to Modeling and Simulation of Systems of Systems
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Flexible Modeling Support Environments

Abstract

In this chapter, we discuss a Modeling Support Environment (MSE) whose goal is to provide the flexibility to adapt its workflows, tools, and models, to diverse stakeholders. We outline the unique features of the MSE that support its use by a wide spectrum of potential users and developers of a system of fractionated spacecraft. These features include identification of user types to enable routing the user through relevant processing stages, automated generation of model artifacts adapted to selected pathways, conditioning of the solutions space to increase the opportunities to find suitable fractionated architectures, flexible simulation services, and consistent configuration across multiple abstraction models. and semantics-based orchestration of service oriented architecture. The approach taken in the design and development of the MSE is based on fundamental principles that have application much beyond spacecraft fractionated systems. This generic quality of the MSE concept suggests the applicability of DEVS Modeling Environments to virtual build and test of today's system of systems.



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3. Case Study: Fractionated Satellite Systems
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