

Digital Engineering Workflow

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Abstract:

A Digital Engineering (DE) workflow was proposed to support pre-acquisition processes and partially modeled within a model-based system engineering (MBSE) tool. Performed in December 2020, this exercise used a weather monitoring example to integrate SE and DE perspectives to refine how DE frameworks can support SE needs. In the SE perspective the workflow takes strategic inputs and elaborates requirements, concept of operations, and performance analysis. When modeled in the DE perspective, those same inputs and elaborations are decomposed into information components. The DE workflow thus becomes a methodology on how information at different stages of abstraction can be decomposed into and composed from the same core elements. This presentation will provide an introduction of the six steps within the DE workflow and how the inputs are used to evaluate multiple solution architectures to select a preferred alternative.

