



Systems Engineering Forum

Virtual Series

Digital Twin Lifecycle Applications

Presenters: Denver Smith, Dr. Robert Stevens, and Dexter Becklund, The Aerospace Corporation

Abstract:

Digital Twins provide the promise of intelligent virtual systems that can inform the user in all aspects of the physical system. However, the realities of current approaches fall vastly short of this. Modern applications tend to focus on a subset of models that look specifically at operational use cases. A lifecycle approach to Digital Twins is needed to fully achieve the potential of these new technologies. Aerospace Corporation is pursuing the development of a modular architectural framework for the application of a Digital Twin across the lifecycle of an acquisition program. This modular lifecycle approach is being applied to and validated against a current CubeSat program. As part of this effort, new tools are being created to modernize our processes around the integration and visualization of modeling and simulation at all stages of the lifecycle for satellite development programs.

