



System of Systems Engineering Collaborators Information Exchange (SoSECIE)

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SysML Strategies to Characterize and Analyze Systems of Systems

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Abstract:

Through conversations with System of Systems (SoS) systems engineering (SE) teams, it is clear that traditional SE processes must be tailored at the SoS level to both guide the evolution of the SoS and at the same time allow the constituent systems to evolve to meet the needs of their stakeholders. To support this evolutionary process, several SoS SE teams have indicated that modeling tools and methods are needed to understand constituent systems and their relationships, assess constituent system changes, and address new requirements and options. This presentation describes some innovative ways of using the systems modeling language (SysML) tools to characterize SoS architectures and capabilities and provides examples illustrating these techniques.

Bio

Dr. Jo Ann Lane is currently a research assistant professor at the DoD-Stevens-USC Systems Engineering Research Center, conducting research in the area of systems engineering and system of systems engineering (SoSE). Current areas of research include SoSE processes, SoSE cost modeling, system development feasibility assessments, and innovation in systems engineering. Prior to her current work in academia, she was a key technical member of Science Applications International Corporation's Software and Systems Integration Group for over 20 years, responsible for the development and integration of software-intensive systems and SoSs.