

CSSE 490 – Advanced Topics: Model-Based Software Engineering

Case Study 3

Objective

To understand how Systems Modeling Language (SysML) can be used to specify systems and communicate key information in developing these systems.

Due Date

1:35 p.m., Monday, Week 8

Tasks

1. Read the paper entitled, “SysML-based systems engineering using a model-driven development approach” by Hans-Peter Hoffman, and consider the implications of SysML in Model-Driven Systems Development.
2. Write a paragraph summarizing the major thrusts of the paper.
3. From a process perspective, what are the parallels between Unified Modeling Language (UML) and SysML?
4. Outline how the SysML can be used in the Systems Engineering process to produce Models for the Model/Requirement Repository and the Test Data Repository.
5. What do you think of SysML for specifying Black-box activity diagrams from use cases? What about modeling behaviors be conveyed down to the lower levels?
6. What do the authors say about SysML for articulating Architecture Design? Do you think that this is viable for software?
7. Be prepared to lead and participate in a discussion on these on Tuesday in class.

Submitting Your Work

Please submit your answers single document in class”. Please submit the file with a cover page containing your Name, Assignment Title, and Date.