Challenges in Embedded System Simulation

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Abstract. As SoCs in the embedded space get more complex, integrating more processing units and peripherals, the job of providing the required software simulation tools necessarily get more complex. Adding the fact that there is increasing pressure to provide working software by first silicon, the time available to provide such tool support is shortened. At the same time, improving R&D efficiency drives a requirement that the same simulation platform be the basis for multiple divergent use cases, such as architecture evaluation, functional verification, software development and performance validation, each with different priorities when it comes to level of abstraction, cycle accuracy, and performance. This talk will address the demands on system simulation and discuss necessary approaches that will enable better meeting the emerging system simulation requirements.

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