Architecture-based Systems

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Abstract:
Sound architecture-based practices are critical to software-intensive systems. In large software-intensive systems, the achievement of non-functional quality attributes such as performance, availability, reusability, survivability, and modifiability depends more on the overall software architecture than on code-level practices such as language choice, detailed design, algorithms, data structures, testing, and so forth. The architecture is also key to any systematic reuse. Software product lines have emerged as the reuse strategy that yields results.

Many commercial organizations have experienced tremendous cost and schedule improvements and significantly decreased technical risk through architecture evaluations and product line practices. The Software Engineering Institute is working with these commercial organizations and translating their success into technology and practices in the areas of architecture and product lines that are applicable to the broad software community.

This talk will describe some of the SEI's efforts in this area of architecture-based systems and the benefits that have been achieved.