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A New Way of Herding Cats -- A Practical Architecture-Centric Analysis Process -- Models for Architecture Evaluation -- Embedded Systems Architecture: Evaluation and Analysis -- Parameter Dependent Performance Specifications of Software Components -- Architectural Evaluation -- Applying the ATAM to an Architecture for Decentralized Control of a Transportation System -- Towards an Integration of Standard Component-Based Safety Evaluation Techniques with SaveCCM.

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Sommario/riassunto

Although the quality of a system's software architecture is one of the critical factors in its overall quality, the architecture is simply a means to an end, the end being the implemented system. Thus the ultimate measure of the quality of the software architecture lies in the implemented system, in how well it satisfies the system and project requirements and constraints and whether it can be maintained and evolved successfully. In order to treat design as a science rather than an art, we need to be able to address the quality of the software architecture directly, not simply as it is reflected in the implemented system. Therefore, QoSA is concerned with software architecture quality directly by addressing the problems of: – Designing software architectures of good quality – Defining, measuring, evaluating architecture quality – Managing architecture quality, tying it upstream to requirements and downstream to implementation, and preserving architecture quality throughout the lifetime of the system. Cross-cutting these problems is the question of the nature of software architecture. Software architecture organizes a system, partitioning it into elements and defining relationships among the elements. For this we often use multiple views, each with a different organizing principle.

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