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A 'Four Method Framework' for Fighting Software Architecture Erosion

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Abstract : Software Architecture is the basic structure of software that states the development and advancement of a software system. Software architecture is also considered as a significant tool for the construction of high quality software systems. A clean design leads to the control, value and beauty of software resulting in its longer life while a bad design is the cause of architectural erosion where a software evolution completely fails. This paper discusses the occurrence of software architecture erosion and presents a set of methods for the detection, declaration and prevention of architecture erosion. The causes and symptoms of architecture erosion are observed with the examples of prescriptive and descriptive architectures and the practices used to stop this erosion are also discussed by considering different types of software erosion and their affects. Consequently finding and devising the most suitable approach for fighting software architecture erosion and in some way reducing its affect is evaluated and tested on different scenarios.

Keywords : software architecture, architecture erosion, prescriptive architecture, descriptive architecture
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