Using Domain-Specific Languages to Describe the Development Viewpoint of Software Architectures

The developers of a system are accepted as one of the most important stakeholders of an Architecture Description. The Development Viewpoint is suggested to satisfy the needs of the developers throughout the development process via code line organization descriptions, programming models, etc. However, the available models for such purposes, if any, barely cross informal natural language descriptions and checklists. This paper introduces the idea of enhancing the description of the Development viewpoint using lightweight Domain-Specific Languages and presents the application of such languages in two industrial case studies. This language enables the architect to provide the necessary guidelines that constrains the implementers during the development process and it is also used as a means to discover the deviation of the code from the architecture as the development goes on.

Keywords: Architectural views; Architecture conformance; Architecture description

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