

Feature-Oriented Modelling in BIP: A Case Study

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Abstract

In this paper, we investigate the usage of Behaviour-Interaction-Priority version 2 (BIP2), a component-based modelling framework, for specifying feature-oriented systems. We evaluate BIP2 in the context of the Feature Interaction Problem and quantify the amount of work needed to add features to an existing system (i.e., in terms of rework to existing features, and work to identify and specify interactions). We present the results of a case study on a telephony system with five optional features where we found that the amount of work depends heavily on how features are interconnected. We identify a number of different strategies for interconnecting features, and propose one that reduces the amount of work and rework needed to add new features to an existing system.