Feature Orientation Considered Harmful?

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Abstract

A feature-oriented description of a telephone switching system is attractive but also promotes undesired feature interactions. We introduce to the current feature-oriented view and to feature interaction problems. We identify the need for a more modular requirements structure in the sense of information hiding. We propose a formal requirements specification methodology that avoids some of the feature interaction problems from the beginning, and that converts some more into type errors. We maintain all the variants and versions of such a system together as one family of formal specifications. For this, we define a formal feature combination mechanism. We present a tool and also report on a quite large case study.