Definition and evaluation of product configurator development strategies

Product configurators represent one of the most successful applications of artificial intelligence principles. Product configurators are a subtype of software-based expert systems with a focus on the creation of product specifications. The use of product configurators has resulted in many positive effects in engineering-oriented companies such as reduced lead times, fewer errors, shorter learning periods for new employees, etc. Unfortunately, many configuration projects also fail because the task of developing the configurator turns out to be much more difficult and time-consuming than anticipated. Thus, it is crucial to apply the appropriate strategy. However, the literature does not discuss different strategic alternatives in a detailed manner; it only provides generalised recommendations of single strategies. To deal with this issue, this paper defines and compares seven different strategies for the development of product configurators. The relevance of the defined strategies is supported by seven named case studies.