


- ABSTRACT -

大規模定制中基於相對特征的配置系統設計

Relative Attribute Based Configurator Design for Mass Customisation



Mass customisation aims to provide goods and services to meet each individual customer's needs with a level of efficiency close to that of mass production. It is considered to be a viable strategy for companies to gain a competitive advantage in the current business environment. Product configuration systems are one of the major toolkits enabling mass customisation. Configurators interact with customers and transform a customer's specific requirements into a set of tangible product specifications. They have been successfully implemented by companies in various industries, including Dell, Nike and BMW. Alibaba Group, one of the largest e-commerce companies in the world, envisions configurator-based customised product development as the next big opportunity for its consumer-to-business platform.

Current product configurators require customers to choose from a set of predefined attributes or a list of component alternatives. However, customers may not possess the necessary expertise regarding unfamiliar products. They often express their needs in an imprecise, vague, or even contradictory layman's language. Existing configurators are not capable of bridging this gap, so customers may feel confused when using such a configurator.

This proposal is prepared to improve the performance of product configurators by bridging the semantic gap between the customer's needs and the product's design parameters. Customers will simply need to indicate their preferences relative to the reference product for each product attribute. A fine-tuned product variant will be found to better fit the customers' needs. In this way, a more user-friendly navigation and selection process can be achieved.