

An effective common module mining method under cost considerations

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ABSTRACT

In current market-oriented business environment, product variation and customization is a critical way to satisfy customers' diverse requirements. In order to achieve customer's demand, production models in many enterprises are now changing to the mass customization production. Thus, modularity has played an important role in the development of the mass customization. It enables not only the ability to put the "mass" in mass customization, but also to configure the products according to the customer's demand.

To address this problem, this research proposed an effective common module mining system under cost considerations. The system can derive common module from various product structures and decide which project will execute and spend less cost to produce products. The framework of the proposed system consists of four phases: 1. Single level trees generation procedure. 2. Common module mining procedure. 3. Project generation procedure. 4. Cost analysis on each project. With the proposed method, enterprises not only can produce the variety and flexibility products, but also produce products effectively and spend less cost to obtain larger benefit.

Keyword: Product structure, Single level tree, Modularity, Cost analysis