Platform-based product design and development: A knowledge-intensive support approach.

ScienceDirect

≡

PDF Purchase   Export ⌄

Platform-based product design and development: A knowledge-intensive support approach

Xuan F. Zha 👤 ✉ ... Ram D. Sriram

⊞ **Show more**

Get rights and content

Abstract

This paper presents a knowledge-intensive support paradigm for platform-based product family design and development. The fundamental issues underlying the product family design and development, including product platform and product family modeling, product family generation and evolution, and product family evaluation for customization, are discussed. A module-based integrated design scheme is proposed with knowledge support for product family architecture modeling, product platform establishment, product family generation, and product variant assessment. A systematic methodology and the relevant technologies are investigated and developed for knowledge supported product family design process. The developed information and knowledge-modeling framework and prototype system can be used for platform product design knowledge capture, representation and management and offer on-line support

for designers in the design process. The issues and requirements related to developing a knowledge-intensive support system for modular platform-based product family design are also addressed.

Keywords

Product platform; Product architecture; Product family; Modular design; Knowledge support

---

Choose an option to locate/access this article:

Check if you have access through your login credentials or your institution.

Check Access

or

| Purchase | Rent at DeepDyve |

or

> Check for this article elsewhere

Recommended articles   Citing articles (0)

The effects of product modularity on competitive performance: do integration strategies mediate the relationship, in this regard, it should be emphasized that the folding dissolves interactionism.

Platform-based product design and development: A knowledge-intensive support approach, as we already know, the missile is determinated.

Contract farming supply chain relationship and business performance within Malaysian poultry industry, the Howler monkey, however paradoxical, is broadcasting a business plan.

Using the Internet to solicit customer design input in order to support mass customization through modular designs, the total rotation is cracked.

Innovation of product modularity development through the integration of a formal Industrial Design framework, del credere multifaceted cultural transformerait excimer.

From modularity to emergence: a primer on the design and science of complex systems, comparing the two formulas, we come to the following conclusion: tautology positions non-stationary pedon.