Product Packaging Study

• Consumable products such as foods, drinks and pharmaceuticals cannot be differentiated using visual features.
• Most rely on packaging to differentiate one product offering from the next.
• Goal:
  – Examine the use of commonality metrics to assess packaging.
  – Develop new metrics for product packaging.

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Shooter Study

• Apply Product Family Concepts & Metrics
  – Medication Labels
  – Consumer Products
Four Faces of Customization

- **Collaborative customization**: individual needs customers are directly taken into the design process
- **Adaptive customization**: one customizable product that customers can change according to their needs
- **Cosmetic customization**: standard product packaged differently to attract different customers
- **Transparent customization**: analyzes individual customer needs and produces the without letting them know explicitly

**Book Reading**

**COMMONALITY INDICES FOR ASSESSING PRODUCT FAMILIES**

- **Commonality index**
  - Tool to measure the degree of commonality within a product family.
  - Measured based on “unique”, “variant” and “common” parts.
- **Commonalities indices can be used for**
  - Product family benchmarking - high values for these indices show a good design for the family, however, there is a tradeoff with differentiation among the products.
  - Product family re-design - combining this indices with optimization algorithms as GA, allows having ranking solutions for redesign.

**MEASURING SHAPE COMMONALITY**

- **Approach Diagram**
  - Allow to measure and identify common geometries for similar components, from their CAD solid models.
  - Includes the use of a Rooted Attribute Labeled Tree representation, called IPG, to convert 3D CAD models.
  - Use of a Solid Model Commonality Index to measure shape commonality.
Group Plan Forward

• Quantitative Study of Packaging Labels:
  – Use Idea from the Shooter Tylenol Study and Build on Idea.

• Qualitative Study of Packaging Labels:
  – Ideas From 1999 Tylenol Work in Drug Store News Article
  – How do the companies Unify the product line/ product family ?
  – How does the company differentiate between products ?

• Quantitative and Qualitative Results Comparisons:
  – Between Product Pairs
  – Between Different Products

• Delivery
  – Summary of Ways to Measure Commonality
  – Summary of How companies/ marketers Differentiate Products with Product Packaging

Shooter Example

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