

Feature-Oriented Domain Requirements Analysis

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Overview

1. Terms and Definitions
2. Why Feature Orientation?
3. Feature Modelling
4. Limitations of Feature Modelling
5. Feature Diagrams
6. Examples

Terms and Definitions

Feature

— prominent or distinctive user-visible aspect, quality or characteristic of a software system. (Chastek et al.)

Feature Model

— represents the product line features in a hierarchy

Why Feature Orientation?

- [Features provide an abstract view of the interface between the stakeholders and the product line.
- [Features are easily understood by the stakeholders.
- [Features capture commonalities and variabilities as perceived by customers and users.

Feature Modeling

Feature-Driven Strategy

- discovering and modeling functional and quality features of the product line
- primary focus: feature, domain-centric
- more appropriate when domain experts are available

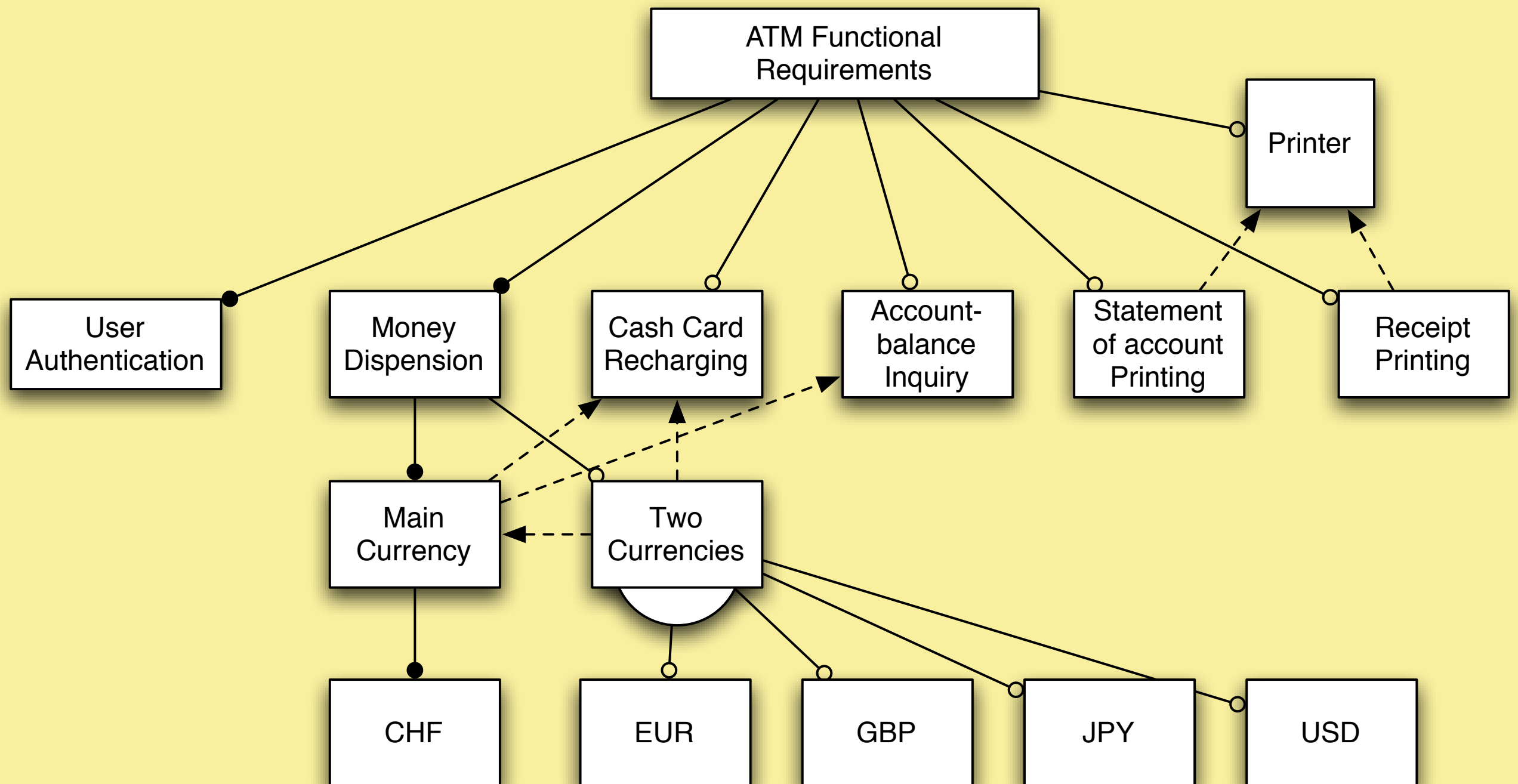
Use-Case-Driven Strategy

- capturing and commonalities and variability
- primary focus: system responsibilities, user-centric
- more appropriate when domain experts are not available

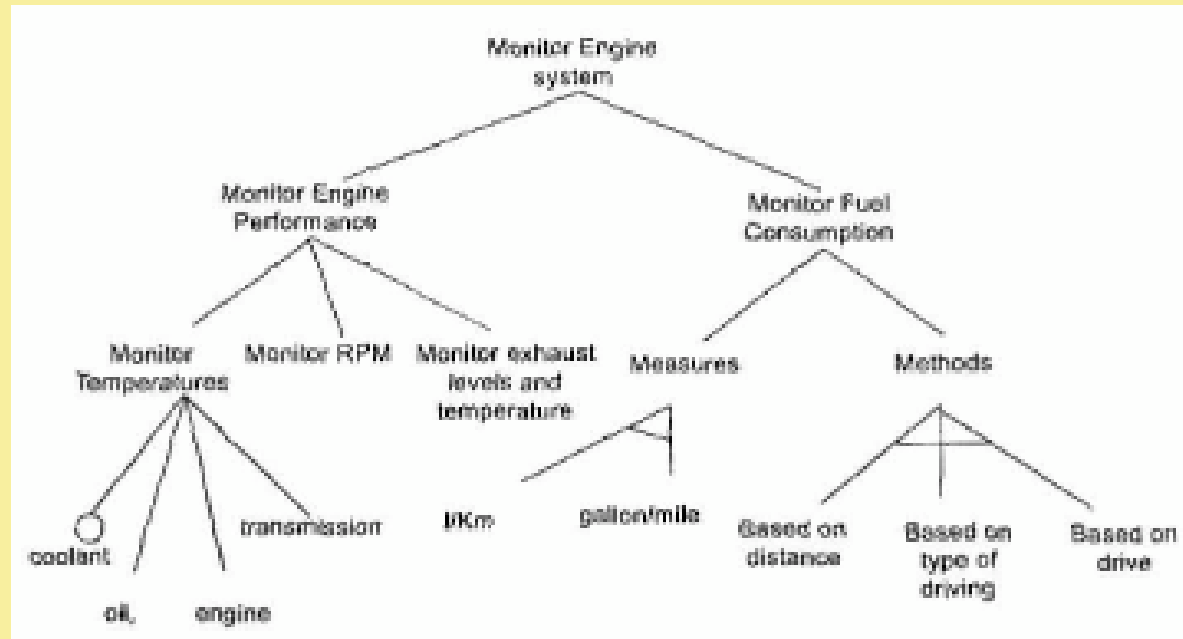
Limitations of Feature Modeling

- [Features do not provide insight into the internal responsibilities of the product line.
- [Features are not useful for exploring new or poorly understood system characteristics.

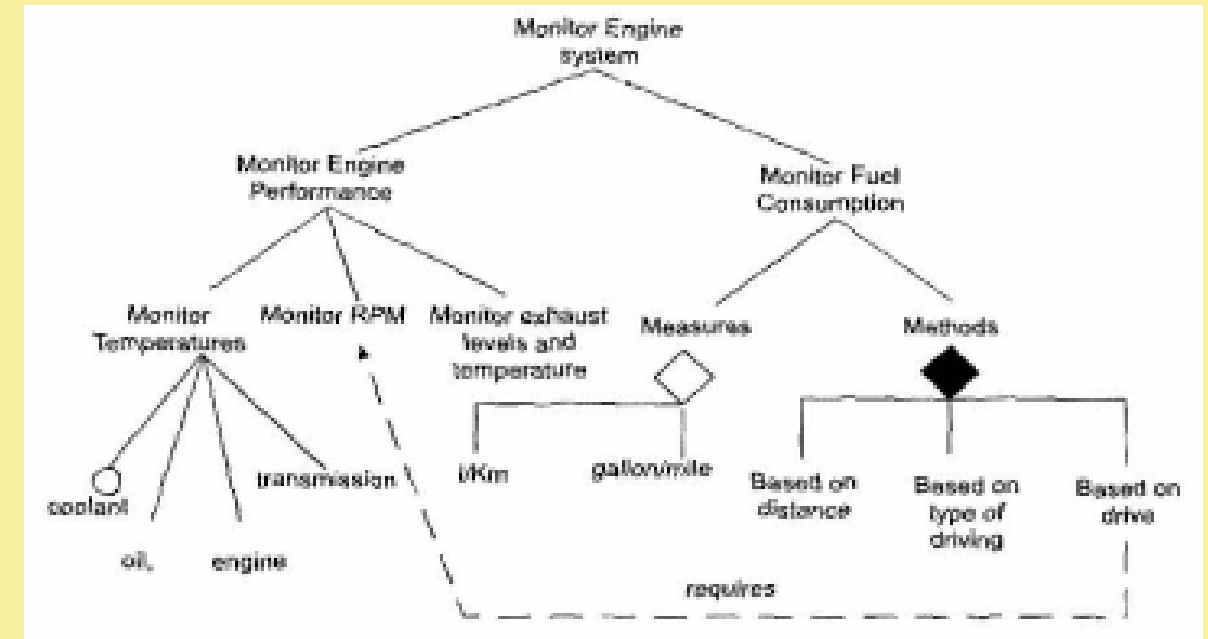
Feature Diagrams



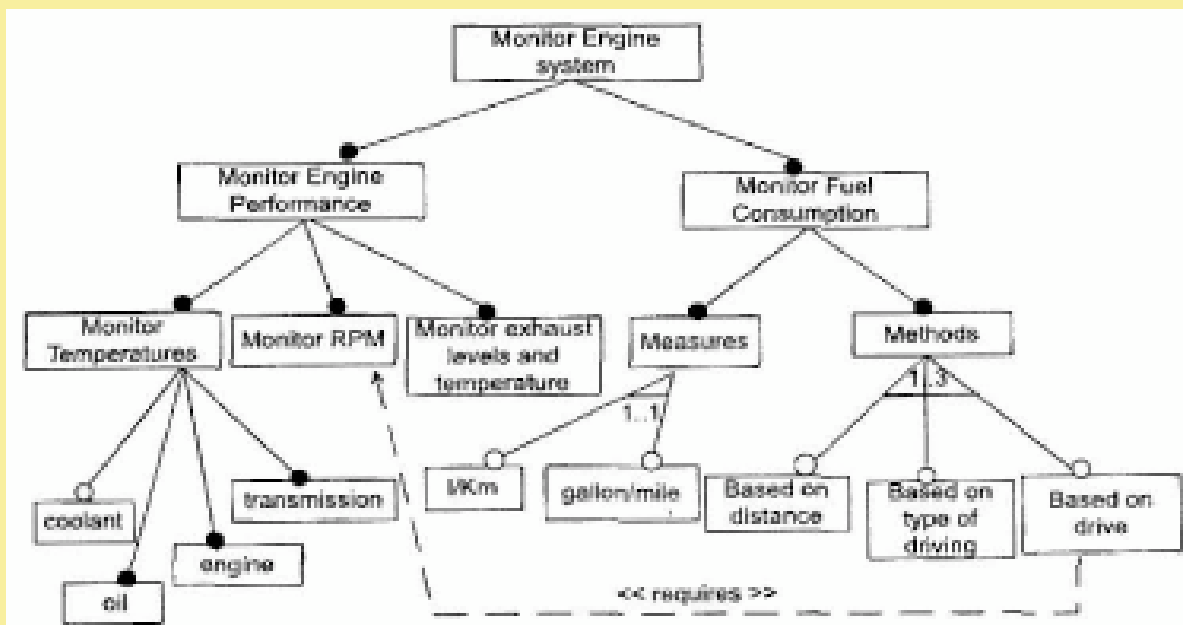
Examples of Feature Models



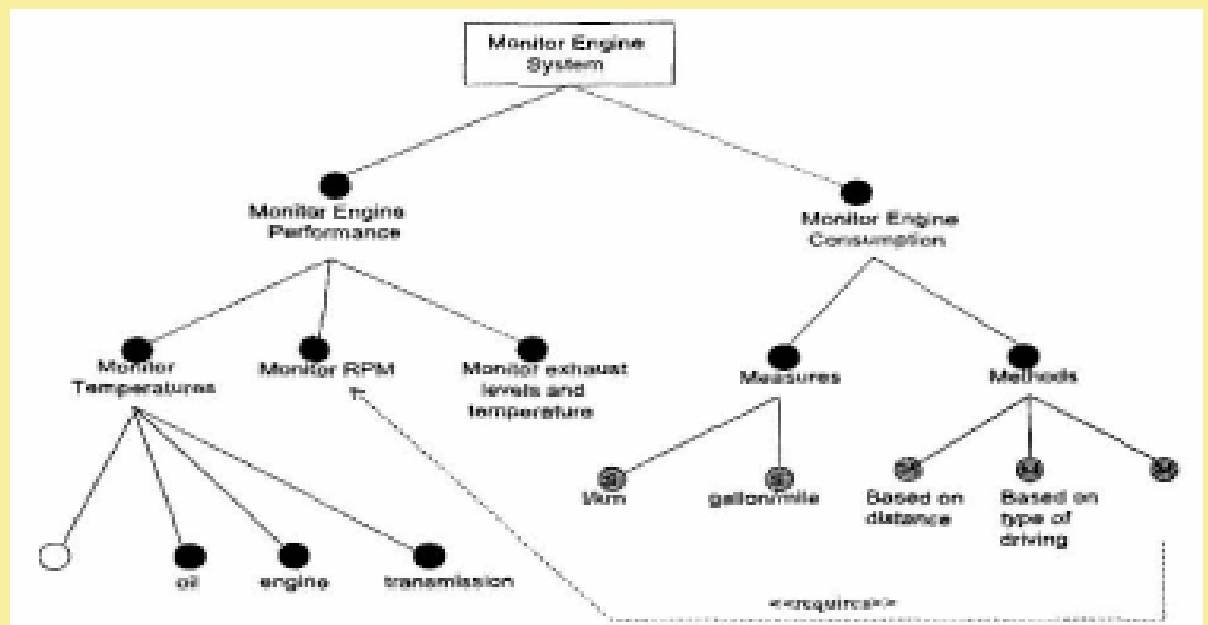
FODA - Feature-oriented Domain Analysis



FeatuRSEB - Reuse-driven Software Engineering Business



EFD - Extended Feature Diagram



PFT - PLUSS Feature Tree

Q&A

Thank you.

