



© Thomas Thüm

Seminar: Knowledge Compilation

Seminar Introductions | Thomas Thüm, Chico Sundermann, Tobias Heß | 10.02.2021

SoftVarE Working Group



Thomas Thüm



Chico Sundermann

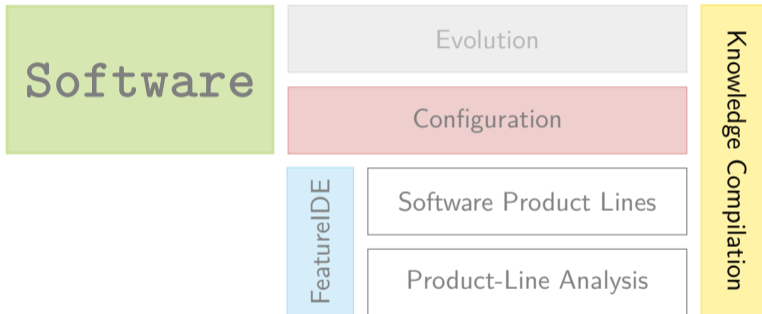


Paul M. Bittner

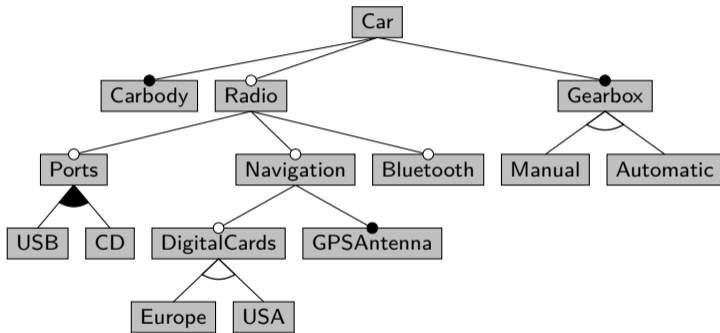


Tobias Heß

Our Research



Feature Models

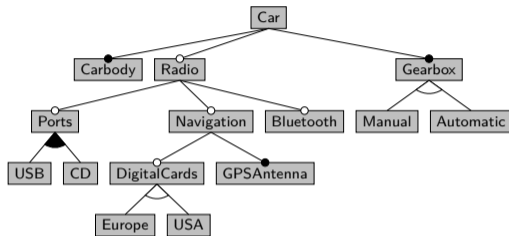


USA \Rightarrow \neg Manual

Feature Diagram

CTCs

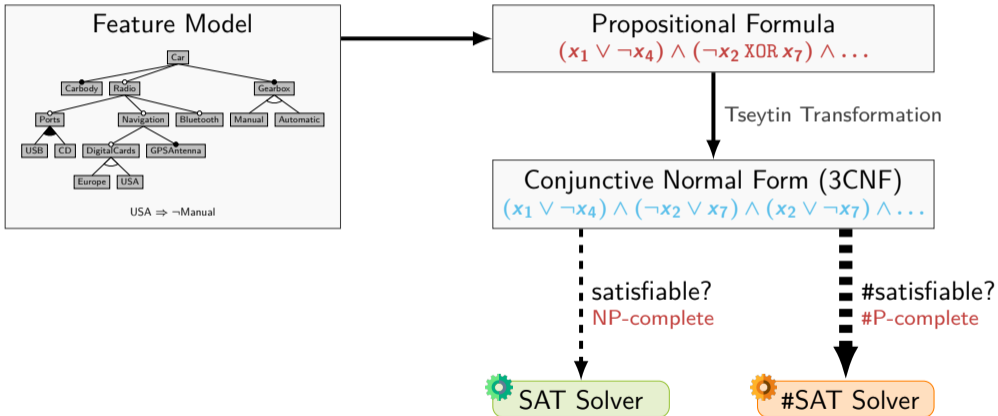
Product-Line Analyses



USA \Rightarrow \neg Manual



Analysis Process



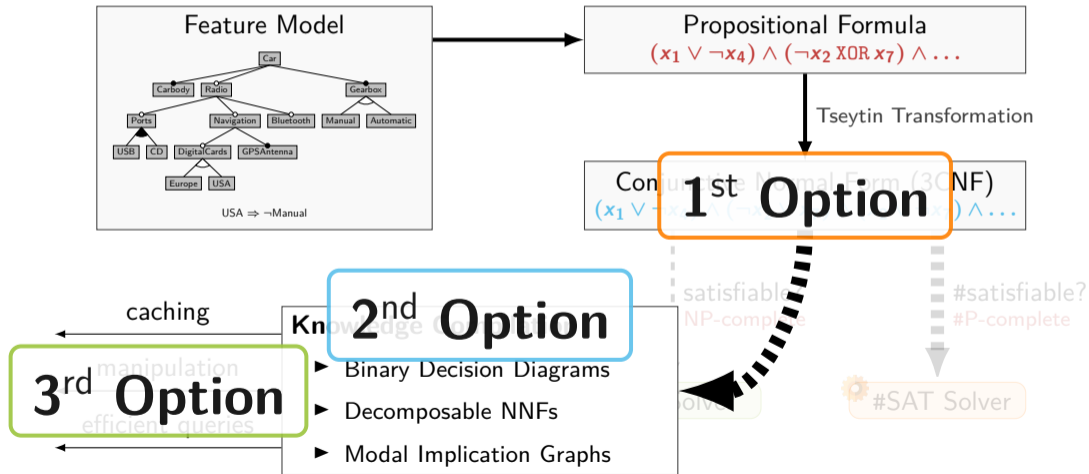
Problems

- ▶ many analyses \Rightarrow many solver runs
- ▶ Some solver runs are expensive (e.g., hours)
- ▶ Some analyses / applications require different formulations

Solution: Knowledge Compilation

- ▶ Perform an expensive computation once \rightarrow *knowledge compilation artifact*
- ▶ Run queries efficiently on the artifact
- ▶ Profit™

Product-Line Analysis with Knowledge Compilation



Further Information



<https://www.uni-ulm.de/in/sp/teaching/master-seminar-forschungstrends-softwaretechnik/>